



The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at wvOASIS.gov. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at WVPurchasing.gov with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

Header 1

[List View](#)

General Information

[Contact](#)[Default Values](#)[Discount](#)[Document Information](#)

Procurement Folder: 481611

Procurement Type: Statewide MA (Open End)

Vendor ID:

Legal Name: HP INC

Alias/DBA:

Total Bid: \$8,876,984.00

Response Date: Response Time:

SO Doc Code: CRFQ

SO Dept: 0212

SO Doc ID: SWC1900000001

Published Date: 9/21/18

Close Date: 9/28/18

Close Time: 13:30

Status: Closed

Solicitation Description:

Total of Header Attachments: 1

[Apply Default Values to Commodity Lines](#)[View Procurement Folder](#)

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Standard PC	4000.00000	EA	\$682.500000	\$2,730,000.00

Comm Code	Manufacturer	Specification	Model #
43210000			

Extended Description :	3.1.2 Standard PC
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Comments: HP's pricing for both standard proposed products and alternate proposed products is provided in section Exhibit_A Pricing Page - Revised 9-10-2018 of HP's proposal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	Power PC	1000.00000	EA	\$907.500000	\$907,500.00

Comm Code	Manufacturer	Specification	Model #
43210000			

Extended Description :	3.1.3 Power PC
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Comments: HP's pricing for both standard proposed products and alternate proposed products is provided in section Exhibit_A Pricing Page - Revised 9-10-2018 of HP's proposal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	Fixed Workstation	500.00000	EA	\$2,635.250000	\$1,317,625.00

Comm Code	Manufacturer	Specification	Model #
43210000			

Extended Description :	3.1.4 Fixed Workstation
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Comments: HP's pricing for both standard proposed products and alternate proposed products is provided in section Exhibit_A Pricing Page - Revised 9-10-2018 of HP's proposal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	Standard Laptop	2000.00000	EA	\$899.500000	\$1,799,000.00

Comm Code	Manufacturer	Specification	Model #
43210000			

Extended Description :	3.1.5 Standard Laptop
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Comments: HP's pricing for both standard proposed products and alternate proposed products is provided in section Exhibit_A Pricing Page - Revised 9-10-2018 of HP's proposal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
5	Power Laptop	1000.00000	EA	\$1,082.500000	\$1,082,500.00

Comm Code	Manufacturer	Specification	Model #
43210000			

Extended Description :	3.1.6 Power Laptop
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Comments: HP's pricing for both standard proposed products and alternate proposed products is provided in section Exhibit_A Pricing Page - Revised 9-10-2018 of HP's proposal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
6	Tablet PC	500.00000	EA	\$1,352.250000	\$676,125.00

Comm Code	Manufacturer	Specification	Model #
43210000			

Extended Description :	3.1.7 Tablet PC
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Comments: HP's pricing for both standard proposed products and alternate proposed products is provided in section Exhibit_A Pricing Page - Revised 9-10-2018 of HP's proposal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
7	20" Monitor	1000.00000	EA	\$81.000000	\$81,000.00

Comm Code	Manufacturer	Specification	Model #
43210000			

Extended Description :	3.1.8.1.1 20" Monitor
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Comments: HP's pricing for both standard proposed products and alternate proposed products is provided in section Exhibit_A Pricing Page - Revised 9-10-2018 of HP's proposal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
8	24" Monitor	500.00000	EA	\$125.000000	\$62,500.00

Comm Code	Manufacturer	Specification	Model #
43210000			

Extended Description :	3.1.8.1.2 24" Monitor
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Comments: HP's pricing for both standard proposed products and alternate proposed products is provided in section Exhibit_A Pricing Page - Revised 9-10-2018 of HP's proposal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
9	27" Monitor	500.00000	EA	\$150.000000	\$75,000.00

Comm Code	Manufacturer	Specification	Model #
43210000			

Extended Description :	3.1.8.1.3 27" Monitor
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Comments: HP's pricing for both standard proposed products and alternate proposed products is provided in section Exhibit_A Pricing Page - Revised 9-10-2018 of HP's proposal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
10	Docking Station for Standard Laptop	100.00000	EA	\$156.500000	\$15,650.00

Comm Code	Manufacturer	Specification	Model #
43210000			

Extended Description :	3.1.8.2 Docking Station for Standard Laptop
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Comments: HP's pricing for both standard proposed products and alternate proposed products is provided in section Exhibit_A Pricing Page - Revised 9-10-2018 of HP's proposal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
11	Docking Station for Power Laptop	100.00000	EA	\$156.500000	\$15,650.00

Comm Code	Manufacturer	Specification	Model #
43210000			

Extended Description :	3.1.8.3 Docking Station for Power Laptop
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Comments: HP's pricing for both standard proposed products and alternate proposed products is provided in section Exhibit_A Pricing Page - Revised 9-10-2018 of HP's proposal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
12	Docking Station for Tablet PC	100.00000	EA	\$156.500000	\$15,650.00

Comm Code	Manufacturer	Specification	Model #
43210000			

Extended Description :	3.1.8.4 Docking Station for Tablet PC
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Comments: HP's pricing for both standard proposed products and alternate proposed products is provided in section Exhibit_A Pricing Page - Revised 9-10-2018 of HP's proposal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
13	Optional: External DVD/RW Drive	100.00000	EA	\$30.000000	\$3,000.00

Comm Code	Manufacturer	Specification	Model #
43210000			

Extended Description :	3.1.8.5 Optional External DVD/RW Drive
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Comments: HP's pricing for both standard proposed products and alternate proposed products is provided in section Exhibit_A Pricing Page - Revised 9-10-2018 of HP's proposal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
14	Accidental Damage Coverage	100.00000	EA	\$153.000000	\$15,300.00

Comm Code	Manufacturer	Specification	Model #
43210000			

Extended Description :	3.1.8.6 Accidental Damage Coverage
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Comments: HP's pricing for both standard proposed products and alternate proposed products is provided in section Exhibit_A Pricing Page - Revised 9-10-2018 of HP's proposal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
15	512GB SSD 2.5"	100.00000	EA	\$105.840000	\$10,584.00

Comm Code	Manufacturer	Specification	Model #
43210000			

Extended Description :	3.1.8.7 512GB SSD 2.5"
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Comments: HP's pricing for both standard proposed products and alternate proposed products is provided in section Exhibit_A Pricing Page - Revised 9-10-2018 of HP's proposal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
16	Upgraded Video Card	100.00000	EA	\$699.000000	\$69,900.00

Comm Code	Manufacturer	Specification	Model #
43210000			

Extended Description :	3.1.8.8 Upgraded Video Card
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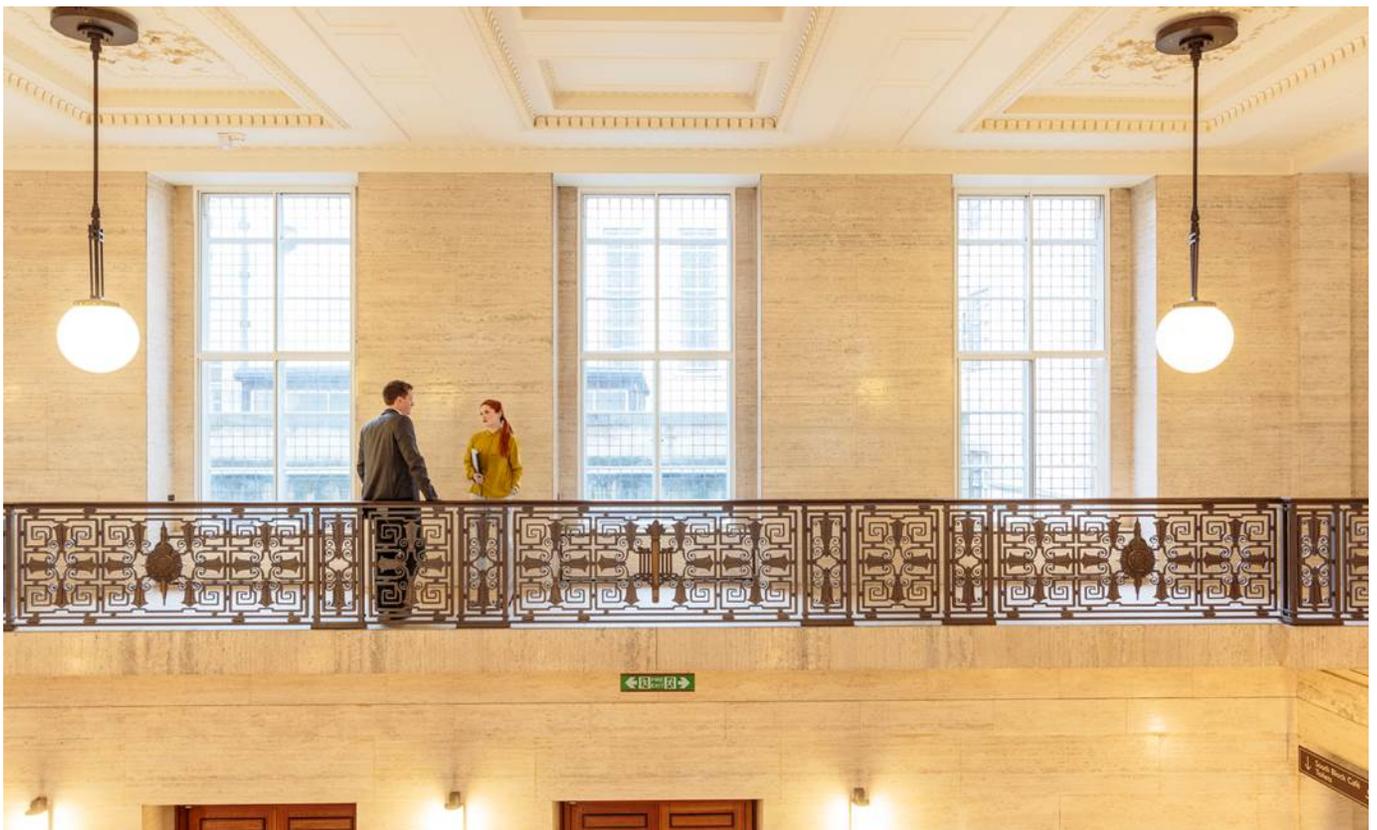
Comments: HP's pricing for both standard proposed products and alternate proposed products is provided in section Exhibit_A Pricing Page - Revised 9-10-2018 of HP's proposal.

Response to State of West Virginia's Solicitation IP19 for Computers and Peripherals from HP Inc.



Continuing the relationship of excellence enabled by innovation and leading-edge technology.

September 28, 2018
Solicitation Number: CRFQ 0212 SWC1900000001



HP Inc.
1501 Page Mill Road
Palo Alto, CA 94304-1126
www.hp.com



September 27, 2018

Mr. Mark Atkins
Senior Buyer
West Virginia Department of Administration
2019 Washington Street, East
Charleston, WV 25305-0130

Kristen Reed
Account Manager
Tel.: +1.859.338.9286
Kristen.reed@hp.com

Dear Mr. Atkins:

HP Inc. ("HP") is pleased to submit the enclosed proposal in response to the State of West Virginia's (the "State"), Request for Quotation IP19 for Computers and Peripherals. Our proposal illustrates the many reasons why HP should be the State's vendor of choice.

HP has long been recognized as a leading global computer equipment manufacturer. Our commitment to quality and reliability, product stability, security and manageability will help the State reduce the cost of ownership that will benefit the State's bottom line.

No other vendor in this industry can offer the State all of the following benefits that meet the State's mandatory requirements:

- Consistent, competitive pricing
- A single point of contact through the HP Account Team
- Support network with consistent delivery capabilities in the State of West Virginia
- Leadership in quality and customer satisfaction, two longstanding HP business imperatives
- Long product lifecycles with transition support to future new technologies
- EPEAT Gold rated desktops, notebooks and monitors
- Strong alliances with leading technology providers such as Intel[®] and Microsoft[®]
- Technology leadership backed by a \$4 billion annual investment in research and development

As one of the recognized leaders in computing products, HP welcomes the opportunity to demonstrate why we are the best choice for the State's computers and peripherals acquisition. HP is committed to West Virginia's success and is confident that our solution addresses your business requirements.

We look forward to a strong and mutually beneficial business relationship. Please contact me directly at 859.338.9286 or kristen.reed@hp.com if you have any questions regarding HP's proposal.

Sincerely,

Kristen Reed

Kristen Reed
Account Manager

Important Notice

If HP's proposal is submitted in both electronic and hard copy formats and the contents differ, only the hard copy will constitute the valid HP proposal. If no hard copy is submitted and if the content differs between the PDF version and any other electronic format, only the PDF version will constitute the valid HP proposal.

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Table of Contents

CRFQ Bid Form	6
Executive Summary	7
Instructions to Vendors Submitting Bids	11
1. Review Documents Thoroughly	11
2. Mandatory Terms	11
3. Prebid Meeting	11
4. Vendor Question Deadline	12
5. Verbal Communication	12
6. Bid Submission	12
7. Bid Opening	13
8. Addendum Acknowledgement.....	14
9. Bid Formatting.....	14
10. Alternate Model or Brand	14
11. Exceptions and Clarifications	19
12. Communication Limitations	19
13. Registration	19
14. Unit Price.....	20
15. Preference.....	20
15A. Reciprocal Preference.....	20
16. Small, Women-Owned, or Minority-Owned Businesses.....	20
17. Waiver of Minor Irregularities	21
18. Electronic File Access Restrictions	21
19. Non-Responsible.....	21
20. Acceptance/Rejection.....	21
21. Your Submission Is a Public Document	21
22. Interested Party Disclosure	22
23. With the Bid Requirements.....	22
General Terms and Conditions	23
1. Contractual Agreement	23
2. Definitions	23
3. Contract Term; Renewal; Extension.....	24
4. Notice to Proceed.....	25
5. Quantities	25
6. Emergency Purchases	25
7. Required Documents.....	26
8. Insurance	27
9. Workers' Compensation Insurance	27
10. [Reserved].....	27
11. Liquidated Damages	28
12. Acceptance	28
13. Pricing	28
14. Payment in Arrears.....	28
15. Purchasing Card Acceptance.....	29
16. Taxes	29
17. Additional Fees	29
18. Funding	29
19. Cancellation	30
20. Time	30



21.	Applicable Law	30
22.	Compliance	30
23.	Arbitration	30
24.	Modifications	31
25.	Waiver	31
26.	Subsequent Forms	31
27.	Assignment	32
28.	Warranty	32
29.	State Employees	32
30.	Privacy, Security, and Confidentiality	32
31.	Your Submission is a Public Document	33
32.	Licensing	33
33.	Antitrust	34
34.	Vendor Certifications	34
35.	Vendor Relationship	34
36.	Indemnification	35
37.	Purchasing Affidavit	35
38.	Additional Agency and Local Government Use	35
39.	Conflict of Interest	36
40.	Reports	36
41.	Background Check	36
42.	Preference for Use of Domestic Steel Products	37
43.	Preference for Use of Domestic Aluminum, Glass, and Steel	37
44.	Interested Party Supplemental Disclosure	38
	CRFQ 0212 SWC1900000001 Statewide Contract – IP19 Computers and Peripherals	40
	Specifications	40
	1. Purpose and Scope	40
	2. Definitions	40
	3. General Requirements	42
	4. Contract Award	60
	5. Ordering and Payment	61
	6. Delivery and Return	62
	7. Vendor Default	65
	8. Miscellaneous	66
	Ethics Disclosure	68
	Purchasing Affidavit	69
	Exhibit_A Pricing Page – Revised 9-10-2018	70
	Standard Products	70
	Alternate Products	71
	HP Attachments	72
	Attachment 1 – HP Hardware Support Onsite Service	73
	Attachment 2 – Absolute Data & Device Security Support Service	74
	Attachment 3 – HP Priority Access and Priority Management Services for Commercial Customers	75
	Attachment 4 – HP Documentation for Standard Proposed Products	76
	Attachment 5 – HP Documentation for Alternate Proposed Products	77
	Attachment 6 – Addendum Acknowledgement Form	78
	Attachment 7 – HP Certificates of Insurance (2)	79
	Attachment 8 – HP Customer Terms	80
	Attachment 9 – HP Inc. Certificate of Authorization	81



CRFQ Bid Form

HP's completed and executed CRFQ Bid Form is included on the following pages.





Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25306-0130

State of West Virginia
Request for Quotation
21 – Info Technology

Proc Folder: 481611

Doc Description: ADDENDUM_4: (IP19) Statewide Contract: Computer Equip. & Acc

Proc Type: Statewide MA (Open End)

Date Issued	Solicitation Closes	Solicitation No	Version
2018-09-21	2018-09-28 13:30:00	CRFQ 0212 SWC1900000001	5

BID RECEIVING LOCATION

BID CLERK
 DEPARTMENT OF ADMINISTRATION
 PURCHASING DIVISION
 2019 WASHINGTON ST E
 CHARLESTON WV 25305
 US

VENDOR

Vendor Name, Address and Telephone Number:
 HP Inc.
 1501 Page Mill Road
 Palo Alto, CA 94304-1126
 Corporate Office: (650) 857-1501
 CRFQ Contact: Kristen Reed (859) 338-9286

FOR INFORMATION CONTACT THE BUYER

Mark A Atkins
 (304) 558-2307
 mark.a.atkins@wv.gov

Nicole L. Hadley
 Signature X Nicole Hadley, Contract Administrator

FEIN # 94-1081436

DATE 09/25/2018

All offers subject to all terms and conditions contained in this solicitation

ADDITIONAL INFORMATION:

ADDENDUM_4: Is issued for the following:

1. To move the bid opening date from 09/26/2018 to 09/28/2018 at 1:30pm EDT.
2. To publish revised specifications (Specifications Revised 9-21-2018).

No other changes made.

The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Office of Technology (WVOT) to establish an open-end Statewide Contract for the purchase of Computers and Peripherals per the attached documents.

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Standard PC	4000.00000	EA	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Comm Code	Manufacturer	Specification	Model #
43210000	HP Inc.	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Extended Description :

3.1.2 Standard PC

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	Power PC	1000.00000	EA	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Comm Code	Manufacturer	Specification	Model #
43210000	HP Inc.	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Extended Description :

3.1.3 Power PC

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
3	Fixed Workstation	500.00000	EA	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Comm Code	Manufacturer	Specification	Model #
43210000	HP Inc.	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Extended Description :
3.1.4 Fixed Workstation

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
4	Standard Laptop	2000.00000	EA	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Comm Code	Manufacturer	Specification	Model #
43210000	HP Inc.	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Extended Description :
3.1.5 Standard Laptop

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
5	Power Laptop	1000.00000	EA	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
8	24" Monitor	500.00000	EA	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Comm Code	Manufacturer	Specification	Model #
43210000	HP Inc.	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Extended Description :
3.1.8.1.2 24" Monitor

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
9	27" Monitor	500.00000	EA	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Comm Code	Manufacturer	Specification	Model #
43210000	HP Inc.	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Extended Description :
3.1.8.1.3 27" Monitor

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
10	Docking Station for Standard Laptop	100.00000	EA	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
13	Optional: External DVD/RW Drive	100.00000	EA	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Comm Code	Manufacturer	Specification	Model #
43210000	HP Inc.	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Extended Description :

3.1.8.5 Optional External DVD/RW Drive

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
14	Accidental Damage Coverage	100.00000	EA	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Comm Code	Manufacturer	Specification	Model #
43210000	HP Inc.	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Extended Description :

3.1.8.6 Accidental Damage Coverage

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
15	512GB SSD 2.5"	100.00000	EA	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

SWC1900000001	Document Phase Final	Document Description ADDENDUM_4: (IP19) Statewide Contract: Computer Equip. & Acc	Page 9 of 9
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ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

Executive Summary

With the ever-changing pace of technology, HP Inc. (HP) understands the State of West Virginia's (the State) desire to establish standards for a laptop and desktop computing platform that offers leading edge products and services in an effective and productive environment. This platform should provide high performance and reliability for the end-user community, while offering ease of management for the IT staff and streamlined procurement for administrative personnel.

Choosing a laptop and desktop platform can be a complex decision. It requires the careful consideration of several key factors, including price, stability, performance, security, manageability, and reliability. HP's response describes our ability to meet the State's requirements with products that incorporate leadership technologies and are backed by world-class support services and strong alliances. HP's history of developing and supporting superior, reliable products is demonstrated by our rapid growth and recognition in the personal computer industry.

HP Understands West Virginia's Requirements

HP's strategy of providing personal computing products that lead the industry in price, performance and reliability enables us to provide a solution that addresses all facets of the State's requirements.

During acquisition, HP can simplify the procurement process by providing the State with a single source for hardware, support, and services. The State can reduce administrative costs and improve order cycle times by taking advantage of HP's advanced supply-chain systems.

With regard to support, HP's flexible, responsive, and innovative programs can help to increase end-user satisfaction, which includes HP's Self Maintainer program available to the State in order to maximum uptime.

Meeting the State's Requirements

HP's proposed solution aligns with your laptop and desktop computer requirements. The following is an overview of our proposed solution:

Warranty/Maintenance/Service

Four (4) years of Next Business Day Onsite coverage with disk retention is included in our offering. Please refer to **Attachment 1 – HP Hardware Support Onsite Service** for more information.

Additionally, HP offers Absolute Data & Device Security (DDS) complete for five (5) years along with HP Priority Management, which includes HP Second Level Technical Support (HP 2LS) on all devices. For more information, please refer to **Attachment 2 – Absolute Data & Device Security Support Service** and **Attachment 3 – HP Priority Access and Priority Management Services for Commercial Customers**.



Proposed Hardware

Standard Proposed Products

- **Standard PC:** HP ProDesk 400 G5 Microtower
- **Power PC:** HP ProDesk 400 G5 Microtower
- **Fixed Workstation:** HP Z4 G4 Tower Workstation
- **Standard Laptop:** HP ProBook 650 G4
- **Power Laptop:** HP ProBook 650 G4
- **Tablet:** HP EliteBook x360 1030 G2
- **20-inch Monitor:** HP N223 21.5-inch Monitor
- **24-inch Monitor:** HP VH24 23.8-inch Monitor
- **27-inch Monitor:** HP VH27 27-inch Monitor
- **Dock for Standard Laptop:** HP Elite USB-C G4 Docking Station
- **Dock for Power Laptop:** HP Elite USB-C G4 Docking Station
- **Dock for Tablet:** HP Elite USB-C G4 Docking Station
- **Adapters for Docking Station:** HP DisplayPort DVI-D Adapter and HP DisplayPort VGA Adapter
- **DVD/RW Drive:** HP External USB DVD-RW
- **512 GB SSD 2.5-inch:** SanDisk X600 3D NAND SATA External SSD Drive
- **Upgraded Video Card:** AMD Radeon Pro WX 7100 8BG Graphics Card

Alternate Proposed Products

- **Alternate Standard PC:** HP EliteDesk 705 G4 Microtower (AMD)
- **Alternate Power PC:** HP EliteDesk 705 G4 Microtower (AMD)
- **Alternate Standard Laptop:** HP ProBook 650 G4 (with Integrated DVD-RW Drive)
- **Alternate Power Laptop:** HP ProBook 650 G4 (with Integrated DVD-RW Drive)
- **Alternate Upgraded Video Card:** NVIDIA Quadro P4000 8BG Graphics Card
- **Alternate Adapters for Docking Station:** C2G DisplayPort Dongle (DVI-D and VGA) Adapters (to be used with the above Standard Proposed HP Elite USB-C G4 Docking Station for laptops and tablets)

HP product specification documents that correspond to the products proposed are provided in **Attachment 4 – HP Documentation for Standard Proposed Products** and **Attachment 5 – HP Documentation for Alternate Proposed Products**.

The HP Difference

The State will benefit from this HP solution that provides the following strengths:

- Services by HP are composed of thousands of technical professionals worldwide. The global capabilities of HP encompass numerous data centers, solution centers, over 10,500 service desk professionals, and the industry's largest channel partner network.
- As the only vendor authorized by Microsoft®, Novell, Netscape, and Cisco to perform worldwide service and support, HP can implement best-in-class products from its partners and then act as a single point of contact for support of the entire solution.
- HP desktop products incorporate consistent components, configurations, and drivers to simplify maintenance, reduce costs and promote stability over the full model life cycle.



- HP's open, comprehensive, and multilayered software management offerings—including the industry-standard Desktop Management Interface (DMI)—will enable the State's IT staff to manage the environment proactively. They will be better able to anticipate end-user needs for increased functionality or performance and will be well equipped to diagnose and correct any problems that may arise.
- HP's careful integration of design and manufacturing processes, coupled with a thorough understanding of customer needs, results in superior product quality and exceptional customer satisfaction.
- HP conducts 120,000 hours of testing on all its business class machines.
 - We design our commercial products to pass MIL-STD-810G most extreme reliability and durability tests
 - 26 drops are performed from 30 inches on to every side, angle, and edge, on to 2 inches of plywood over steel cover concrete
- HP has an established reputation as one of the best technology companies with which to partner. HP's account team will work hard to create a healthy collaborative environment with the State and any third-party technology providers participating in solution design or delivery.

At HP, we want to make choosing the right technology for your environment an easy and fulfilling experience. The demands on state and local governments are greater than ever. The health and safety of citizens is increasingly costly and difficult to protect. At the same time, constituents are demanding that services be personalized, delivered on time and available at their convenience. Government must satisfy these rising expectations with shrinking budgets.

HP has a longstanding dedication to helping state and local governments and their agencies accomplish their goals, and streamline government operations through advances to new customers, as well.

For more than a decade, HP Labs and HP Business Personal Systems R&D Engineers worked together to develop an innovative solution for security enhancement and platform protection—directly integrated into the hardware.

HP BIOSphere Gen4¹ is the industry-leading firmware ecosystem which shields the BIOS against attacks by requiring cryptographically signed BIOS for updates. Security features include:

- Compliant with the standards below:
 - NIST Special Publication 800-193 (Platform Firmware Resiliency Guidelines)
 - NIST 800-147 (BIOS Protection Guidelines)
 - NIST 800-155 (BIOS Integrity Measurement Guidelines)
 - UEFI Secure Boot
 - Trusted Computing Group
- Detection of Master Boot Record (MBR) or GUID Partition Table (GPT) corruption or deletion and recovery to a known good version.
- Device Guard enablement: Enhances system security by supporting the latest antimalware protection features of Windows[®] 10 and allows compliance testing

¹ Requires Intel® or AMD 8th generation processors.



- Microsoft System Center Configuration Manager (SCCM) based Remote Manageability via HP Manageability Integration Kit (MIK). All policies are remotely configurable.
- HP LAN-WAN Protection to protect enterprise LAN from unauthorized wireless bridging access by turning off wireless LAN on LAN insertion.
- Enterprise asset management.
- Port control options. Enables/Disables ports, providing additional security to disallow devices to be connected to the PC. This includes disabling USB storage devices and hubs – which helps mitigate unauthorized copying of data onto removable media.
- Enabling/disabling fingerprint and smart card readers.
- Secure Boot Configuration/Option ROM launch policy.

HP Sure Start Gen4² is the industry's first and only self-healing PC BIOS with run-time intrusion detection³. HP Sure Start Gen4 detects an attack and recovers the BIOS in less than one (1) minute, resulting in zero (0) productivity loss. HP Sure Start Gen4 provides a robust level of cyber-resiliency unique to HP platforms, while conforming to the following guidelines:

ISO/IEC 19678:2015 (Information Technology – BIOS Protection Guidelines)

Malicious attacks on BIOS firmware presents a significant threat to a personal computer's security, due to the privileged position of the BIOS within the PC architecture. There is no AntiVirus product on the market today, which can detect a compromised BIOS firmware. Further, a successful attack cannot be detected or stopped—even after reimaging or replacing the internal storage device.

HP Sure Start Gen4 builds on prior implementations of HP Sure Start technology and provides additional protection for the run-time memory, also known as SMM or System Management Mode. A portion of the BIOS code remains in DRAM while the OS is running and has the highest level of privilege inside the Microsoft Windows architecture. Increasingly, malicious attacks are focused on the BIOS code, including the run-time BIOS. HP Sure Start Gen4 can protect, detect, and recover against attacks on this run-time BIOS code.

HP Sure Start Gen4 provides the following capabilities:

- Run-time intrusion detection for attacks on HP BIOS code in SMM memory.
- Self-healing. Automatic repair of HP BIOS and HP firmware corruption using a hardware isolated backup copy of HP BIOS and HP firmware. This also includes HP BIOS in SMM memory.
- BIOS Configuration and Policy Protection enables BIOS setup variables, policies, and data to be protected and restored, in the event of an attack.
- Firmware Health Monitoring and Compliance. Logging of firmware health related events via isolated HP Sure Start hardware auditing exposes platform firmware state along with any anomalies that could be indicative of thwarted attacks.
- Coupled with HP MIK for Microsoft SCCM, HP Sure Start Gen4 settings can be managed remotely and HP Sure Start event logs can be retrieved remotely for further analysis.

² Available on all HP Elite and Pro (600 series only) products equipped with Intel® 8th generation processors.

³ Based on PC competitors as of December 1, 2017 with >1m units annually with BIOS level detection and self-healing, attack detection in runtime memory, BIOS configuration and policy protection.



Instructions to Vendors Submitting Bids

1. Review Documents Thoroughly

The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.

Response:

HP agrees.

2. Mandatory Terms

The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.

Response:

HP agrees.

3. Prebid Meeting

The item identified below shall apply to this Solicitation.

- Ⓐ A pre-bid meeting will not be held prior to bid opening
- ⋯ A NON-MANDATORY PRE-BID meeting will be held at the following place and time:
- ⋯ A MANDATORY PRE-BID meeting will be held at the following place and time:

All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one person attending the pre-bid meeting may represent more than one Vendor.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. The State will not accept any other form of proof or documentation to verify attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing.

Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in, but are charged with knowing all matters discussed at the pre-bid.



Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

Response:

HP agrees.

4. Vendor Question Deadline

Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below in order to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are nonbinding.

Submitted e-mails should have solicitation number in the subject line.

Question Submission Deadline: September 06, 2018 due by 2:00pm EDT

Submit Questions to: Mark Atkins, Senior Buyer
2019 Washington Street, East
Charleston, WV 25305
Fax: (304) 558 4115 (Vendors should not use this fax number for bid submission)
Email: Mark.A.Atkins@wv.gov

Response:

HP agrees.

5. Verbal Communication

Any verbal communication between the Vendor and any State personnel is not binding, including verbal communication at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.

Response:

HP agrees.

6. Bid Submission

All bids must be submitted electronically through wvOASIS or signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via e-mail. Acceptable delivery methods include electronic submission via wvOASIS, hand delivery, delivery by courier, or facsimile.



The bid delivery address is:

Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

A bid that is not submitted electronically through wvOASIS should contain the information listed below on the face of the envelope or the bid may be rejected by the Purchasing Division.

SEALED BID: IP19 Computers and Peripherals
BUYER: Mark Atkins, File#42
SOLICITATION NO.: CRFQ 0212 SWC 1900000001
BID OPENING DATE: 09/18/0218
BID OPENING TIME: 1:30pm EDT
FAX NUMBER: 304-558-3970

The Purchasing Division may prohibit the submission of bids electronically through wvOASIS at its sole discretion. Such a prohibition will be contained and communicated in the wvOASIS system resulting in the Vendor's inability to submit bids through wvOASIS. Submission of a response to an Expression of Interest or Request for Proposal is not permitted in wvOASIS.

For Request For Proposal ("RFP") Responses Only: In the event that Vendor is responding to a request for proposal, the Vendor shall submit one original technical and one original cost proposal plus N/A convenience copies of each to the Purchasing Division at the address shown above. Additionally, the Vendor should identify the bid type as either a technical or cost proposal on the face of each bid envelope submitted in response to a request for proposal as follows:

BID TYPE: (This only applies to CRFP)

- .. Technical
- .. Cost

Response:

HP agrees.

7. Bid Opening

Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when confirmation of delivery is provided by wvOASIS (in the case of electronic submission) or when the bid is time stamped by the official Purchasing Division time clock (in the case of hand delivery).

Bid Opening Date and Time: September ~~18~~ **28**, 2018 @ 1:30pm EDT **[Addendum 4]**

Bid Opening Location: Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

Response:

HP agrees.



8. Addendum Acknowledgement

Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

Response:

HP agrees. The signed Addendum Acknowledgement Form has been provided as **Attachment 6 – Addendum Acknowledgement Form.**

9. Bid Formatting

Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

Response:

HP agrees.

10. Alternate Model or Brand

Unless the box below is checked, any model, brand, or specification listed in this Solicitation establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.

.. The Solicitation is based upon a standardized commodity established under W. Va. Code §5A-3-61. Vendor are expected to bid the standardized commodity identified. Failure to bid the standardized commodity will result in your firms' bid being rejected.

Response:

HP agrees. HP's proposed alternate products are identified below. Pricing for the proposed alternate models can be found in **Exhibit_A Pricing Page – Revised 9-10-2018**, subsection Alternate Products.

HP offers the HP EliteDesk 705 G4 Microtower (AMD) as an alternate for the State's Standard PC. Please refer to Table 1 below for HP's Configured-to-Order (CTO) build.



Table 1. Alternate Standard PC: HP EliteDesk 705 G4 Microtower (AMD)

The model number provided in the table below is for CTO build purposes only. The wvOASIS single part number will be provided upon award.

Category	Tag/Description	Model No.
Base Unit	HP EliteDesk 705 G4 Microtower PC	3AB55AV
Energy Star Compliance	ENERGY STAR Certified Label	W6N52AV
Chassis	HP EliteDesk 705PLA MT 250W Chassis G4	3PL32AV
Operating System	Windows 10 Pro 64 US	3AT89AV#ABA
Processor	AMD Ryzen5 Pro 2400G 4C 65W APU	3AB57AV
System Memory	8GB (1x8GB) DDR4 2666 DIMM Memory	3AC46AV
Internal Storage	500GB 7200RPM 2.5in	3AB92AV
Keyboard	HP USB ME Wired Keyboard US	3CF93AV#ABA
ID/Mechanical	HP VGA Port	3AC33AV
Mouse	HP Optical Wired Mouse USB	3AC22AV
Add On Selections	HP DisplayPort to DVI-D Adapter	3AC09AV
Slim Bay	9.5mm DVD-Writer	3AC41AV
Warranty	3/3/3 (material/labor/onsite) MT Warranty US	3AP61AV#ABA
Packaging Options	Single Unit (Microtower) G4 Packaging	3AC36AV
Country Kit	HP 705 G4 MT Country Kit US	3AP65AV#ABA
Technical AVs	2.5 BAY SATA Cable Kit 2	4HH09AV
Account Operations Services – AV	Custom Reporting AY161AV	AY161AV
Account Operations Services – AV	Project Management Rollout AY162AV	AY162AV
HP Priority Management Services, 2LS Support Access	HP 4-year Priority Management Service (includes 2LS Support Access) for PCs (Attachment 3)	U1PV8E
HP Care Pack Services - CTO/BTCO only (E)	HP 4-year Next Business Day Onsite Hardware Support w/Defective Media Retention for Desktops (Attachment 1)	UE333E
Absolute Standalone	HP 5-year Absolute DDS Premium (Attachment 2)	U8UK3E



HP offers the HP EliteDesk 705 G4 Microtower (AMD) as an alternate for the State's Power PC. Please refer to Table 2 below for HP's CTO build.

Table 2. Alternate Power PC: HP EliteDesk 705 G4 Microtower (AMD)

The model number provided in the table below is for CTO build purposes only. The wvOASIS single part number will be provided upon award.

Category	Tag/Description	Model No.
Base Unit	HP EliteDesk 705 G4 PNR Microtower PC	5EG32AV
Energy Star Compliance	ENERGY STAR Certified Label	W6N52AV
Chassis	HP EliteDesk 705PLA MT 250W Chassis G4	3PL32AV
Operating System	Windows 10 Pro 64 US	3AT89AV#ABA
Processor	AMD Ryzen7 Pro 2700 8C 65W CPU	3AB59AV
System Memory	16GB (2x8GB) DDR4 2666 DIMM Memory	3JQ94AV
Internal Storage	256GB SATA Three Layer Cell Solid State Drive	3AC66AV
Graphics	AMD Radeon R7 430 2GB LP 2DP PCIe x16 GFX	3AB67AV
Keyboard	HP USB ME Wired Keyboard US	3CF93AV#ABA
ID/Mechanical	No need for optional ports	3AC39AV
Mouse	HP Optical Wired Mouse USB	3AC22AV
Add On Selections	HP DisplayPort to VGA Adapter	3AC14AV
Add On Selections	HP DisplayPort to DVI-D Adapter	3AC09AV
Slim Bay	9.5mm DVD-Writer	3AC41AV
Warranty	3/3/3 (material/labor/onsite) MT Warranty US	3AP61AV#ABA
Packaging Options	Single Unit (Microtower) G4 Packaging	3AC36AV
Technical AVs	HP 705 G4 MT Country Kit US	3AP65AV#ABA
Technical AVs	2.5 BAY SATA Cable Kit 2	4HH09AV
Account Operations Services - AV	Custom Reporting AY161AV	AY161AV
Account Operations Services - AV	Project Management Rollout AY162AV	AY162AV
HP Priority Management Services, 2LS Support Access	HP 4-year Priority Management Service (includes 2LS Support Access) for PCs (Attachment 3)	U1PV8E
HP Care Pack Services - CTO/BTCO only (E)	HP 4-year Next Business Day Onsite Hardware Support w/Defective Media Retention for Desktops (Attachment 1)	UE333E
Absolute Standalone	HP 5-year Absolute DDS Premium (Attachment 2)	U8UK3E



HP offers the HP ProBook 650 G4 (with integrated DVD-RW Drive) as an alternate for the State's Standard Laptop. Please refer to Table 3 below for HP's CTO build.

Table 3. Alternate Standard Laptop: HP ProBook 650 G4 (with integrated DVD-RW Drive)

The model number provided in the table below is for CTO build purposes only. The wvOASIS single part number will be provided upon award.

Category	Tag/Description	Model No.
Base Unit	HP IDS UMA i5-8250U no WWAN 650 G4 Base NB PC	2GN03AV
OS & Documentation	Windows 10 Pro 64 US	2GN90AV#ABA
Integrated Camera	Integrated HD 720p DualAryMic Webcam	2GN61AV
Display	15.6 HD AG LED SVA 220 fCAM slim	2GN17AV
System Memory	8GB (1x8GB) DDR4 2400	2GN43AV
Internal Storage	500GB 7200RPM SATA-3	2GN08AV
Optical Device	DVD-Writer	2GN37AV
Input/Output Device	VGA port	2GN60AV
Near Field Communication	No Near Field Communication (No NFC)	2GN25AV
Communication WLAN and Bluetooth	Intel 8265 ac 2x2 nvP +Bluetooth 4.2 WW with 2 Antennas	2GN64AV
Wireless WAN	No WWAN	2GN33AV
Fingerprint Reader	No Fingerprint Reader	2GN24AV
Smart Card Reader	Active SmartCard	2GN46AV
Battery	3 Cell 48 WHr Long Life	2GZ43AV
AC Adapter	45 Watt Smart nPFC AC Adapter	2GM94AV
Power Cords	C5 1.0m Power Cord US	2GN74AV#ABA
Warranty	1/1/0 Warranty US	2GN69AV#ABA
Out-Of-Band Manageability	No vPro AMT supported	X9H42AV
Country/Hardware Kit	Country Localization US	2GN79AV#ABA
Keyboard	Clickpad spill-resistant US	2GN78AV#ABA
Technical AV	eStar Enable IOPT	X7B43AV
Processor Labels	Core i5 G8 Label	1QE37AV
Account Operations Services - AV	Custom Reporting AY161AV	AY161AV
Account Operations Services - AV	Project Management Rollout AY162AV	AY162AV
HP Priority Management Services, 2LS Support Access	HP 4-year Priority Management Service (includes 2LS Support Access) for PCs (Attachment 3)	U1PV8E
HP Care Pack Services - CTO/BTCO only (E)	HP 4-year Next Business Day Onsite Hardware Support w/Defective Media Retention for Notebooks (Attachment 1)	UE340E
Absolute Standalone	HP 5-year Absolute DDS Premium (Attachment 2)	U8UK3E



HP offers the HP ProBook 650 G4 (with integrated DVD-RW Drive) as an alternate for the State's Power Laptop. Please refer to Table 4 below for HP's CTO build.

Table 4. Alternate Power Laptop: HP ProBook 650 G4 (with integrated DVD-RW Drive)

The model number provided in the table below is for CTO build purposes only. The wvOASIS single part number will be provided upon award.

Category	Tag/Description	Model No.
Base Unit	HP IDS UMA i7-8550U for WWAN 650 G4 Base NB PC	2SG59AV
OS & Documentation	Windows 10 Pro 64 US	2GN90AV#ABA
Integrated Camera	Integrated HD 720p DualAryMic Webcam	2GN61AV
Display	15.6 HD AG LED SVA 220 fCAM slim	2GN17AV
System Memory	16GB (1x16GB) DDR4 2400	2GN39AV
M.2 Storage	256GB PCIe NVMe Value Solid State Drive	2GN53AV
Optical Device	DVD-Writer	2GN37AV
Input/Output Device	VGA port	2GN60AV
Near Field Communication	No Near Field Communication (No NFC)	2GN25AV
Communication WLAN and Bluetooth	Intel 8265 ac 2x2 nvP +Bluetooth 4.2 WW with 2 Antennas	2GN64AV
Wireless WAN	No WWAN	2GN33AV
Fingerprint Reader	No Fingerprint Reader	2GN24AV
Smart Card Reader	Active SmartCard	2GN46AV
Battery	3 Cell 48 WHr Long Life	2GZ43AV
AC Adapter	45 Watt Smart nPFC AC Adapter	2GM94AV
Power Cords	C5 1.0m Power Cord US	2GN74AV#ABA
Warranty	1/1/0 Warranty US	2GN69AV#ABA
Out-Of-Band Manageability	No vPro AMT supported	X9H42AV
Country/Hardware Kit	Country Localization US	2GN79AV#ABA
Keyboard	Clickpad spill-resistant US	2GN78AV#ABA
Technical AV	eStar Enable IOPT	X7B43AV
Processor Labels	Core i7 G8 Label	1QE44AV
Account Operations Services - AV	Custom Reporting AY161AV	AY161AV
Account Operations Services - AV	Project Management Rollout AY162AV	AY162AV
HP Priority Management Services, 2LS Support Access	HP 4-year Priority Management Service (includes 2LS Support Access) for PCs (Attachment 3)	U1PV8E
HP Care Pack Services - CTO/BTCO only (E)	HP 4-year Next Business Day Onsite Hardware Support w/Defective Media Retention for Notebooks (Attachment 1)	UE340E
Absolute Standalone	HP 5-year Absolute DDS Premium (Attachment 2)	U8UK3E



HP offers the following as alternates for the State's Optional Components.

Table 5. Alternate Optional Components

The model number provided in the table below is for CTO build purposes only. The wvOASIS single part number will be provided upon award.

Category	Tag/Description	Model No.
Alternate Upgraded Video Card	NVIDIA Quadro P4000 8BG Graphics Card	1ME40AA
Alternate Adapters for Docking Station (see Note below)	C2G DisplayPort Dongle Adapters: <ul style="list-style-type: none"> · C2G DisplayPort to VGA Adapter · C2G DisplayPort to DVI-D Adapter 	54323 54321

Note: The C2G DisplayPort Dongle Adapters are to be used with the proposed HP Elite USB-C G4 Docking Station (for laptops and tablets), provided in **Table 12**. For pricing purposes, the C2G DisplayPort Dongle Adapters and the HP Elite USB-C G4 Docking Station are included in the bundled price in **Exhibit_A Pricing Page – Revised 9-10-2018**, subsection Alternate Products.

11. Exceptions and Clarifications

The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

Response:

HP agrees and has not included any exceptions, clarifications, or other proposed modifications.

12. Communication Limitations

In accordance with West Virginia Code of State Rules §148-1-6.6, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.

Response:

HP agrees.

13. Registration

Prior to Contract award, the apparent successful Vendor must be properly registered with the West Virginia Purchasing Division and must have paid the \$125 fee, if applicable.

Response:

HP agrees.



14. Unit Price

Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.

Response:

HP agrees.

15. Preference

Vendor Preference may be requested in purchases of motor vehicles or construction and maintenance equipment and machinery used in highway and other infrastructure projects. Any request for preference must be submitted in writing with the bid, must specifically identify the preference requested with reference to the applicable subsection of West Virginia Code § 5A-3-37, and should include with the bid any information necessary to evaluate and confirm the applicability of the requested preference. A request form to help facilitate the request can be found at:

<http://www.state.wv.us/admin/purchase/vrc/Venpref.pdf>.

Response:

HP is not claiming a vendor preference.

15A. Reciprocal Preference

The State of West Virginia applies a reciprocal preference to all solicitations for commodities and printing in accordance with W. Va. Code § 5A-3-37(b). In effect, non-resident vendors receiving a preference in their home states, will see that same preference granted to West Virginia residents vendors bidding against them in West Virginia. A request for to help facilitate the request can be found at:

<http://www.state.wv.us/admin/purchase/vrc/Venpref.pdf>.

Response:

HP agrees.

16. Small, Women-Owned, or Minority-Owned Businesses

For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37(a)(7) and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women- owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the same preference made available to any resident vendor. Any non-resident small, women -owned, or minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to contract award to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.

Response:

HP agrees.



17. Waiver of Minor Irregularities

The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.6.

Response:

HP agrees.

18. Electronic File Access Restrictions

Vendor must ensure that its submission in wvOASIS can be accessed by the Purchasing Division staff immediately upon bid opening. The Purchasing Division will consider any file that cannot be immediately opened and/or viewed at the time of the bid opening (such as, encrypted files, password protected files, or incompatible files) to be blank or incomplete as context requires, and are therefore unacceptable. A vendor will not be permitted to unencrypt files, remove password protections, or resubmit documents after bid opening if those documents are required with the bid. A Vendor may be required to provide document passwords or remove access restrictions to allow the Purchasing Division to print or electronically save documents provided that those documents are viewable by the Purchasing Division prior to obtaining the password or removing the access restriction.

Response:

HP agrees.

19. Non-Responsible

The Purchasing Division Director reserves the right to reject the bid of any vendor as Non-Responsible in accordance with W. Va. Code of State Rules § 148-1- 5.3, when the Director determines that the vendor submitting the bid does not have the capability to fully perform, or lacks the integrity and reliability to assure good-faith performance.”

Response:

HP agrees.

20. Acceptance/Rejection

The State may accept or reject any bid in whole, or in part in accordance with W. Va. Code of State Rules § 148-1-4.5. and § 148-1-6.4.b.”

Response:

HP agrees.

21. Your Submission Is a Public Document

Vendor’s entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1- 1 et seq.

DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.



Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

Response:

HP agrees.

22. Interested Party Disclosure

W. Va. Code § 6D-1-2 requires that the vendor submit to the Purchasing Division a disclosure of interested parties to the contract for all contracts with an actual or estimated value of at least \$1 Million. That disclosure must occur on the form prescribed and approved by the WV Ethics Commission prior to contract award. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

Response:

HP agrees. Since HP is a publicly traded company on the New York Stock Exchange (NYSE: HPQ), a Disclosure of Interested Parties is not required by W. Va. Code § 6D-1-2.

23. With the Bid Requirements

In instances where these specifications require documentation or other information with the bid, and a vendor fails to provide it with the bid, the Director of the Purchasing Division reserves the right to request those items after bid opening and prior to contract award pursuant to the authority to waive minor irregularities in bids or specifications under W. Va. CSR § 148-1-4.6. This authority does not apply to instances where state law mandates receipt with the bid.

Response:

HP agrees.



General Terms and Conditions

1. Contractual Agreement

Issuance of a Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.

Response:

HP agrees.

2. Definitions

As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.

- 2.1. "Agency" or "Agencies" means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.
- 2.2. "Bid" or "Proposal" means the vendors submitted response to this solicitation.
- 2.3. "Contract" means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.
- 2.4. "Director" means the Director of the West Virginia Department of Administration, Purchasing Division.
- 2.5. "Purchasing Division" means the West Virginia Department of Administration, Purchasing Division.
- 2.6. "Award Document" means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.
- 2.7. "Solicitation" means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.
- 2.8. "State" means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.
- 2.9. "Vendor" or "Vendors" means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

Response:

HP agrees.



3. Contract Term; Renewal; Extension

The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

⌋ Term Contract

Initial Contract Term: Initial Contract Term: This Contract becomes effective on Upon Award and extends for a period of One (1) year(s).

Renewal Term: This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be delivered to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Unless otherwise specified below, renewal of this Contract is limited to Three (3) successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed the total number of months available in all renewal years combined. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

Alternate Renewal Term – This contract may be renewed for ____ successive __ year periods or shorter periods provided that they do not exceed the total number of months contained in all available renewals. Automatic renewal of the Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

.. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

Delivery Order Limitations: In the event that this contract permits delivery orders, a delivery order may only be issued during the time this Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.

.. Fixed Period Contract: This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within _____ days.

.. Fixed Period Contract with Renewals: This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within _____ days. Upon completion, of the work covered by the preceding sentence the vendor agrees that maintenance, monitoring, or warranty services will be provided for ___year(s) thereafter.

.. One Time Purchase: The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

.. Other: See attached.

Response:

HP agrees.



4. Notice to Proceed

Vendor shall begin performance of this Contract immediately upon receiving notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the fully executed Award Document will be considered notice to proceed.

Response:

HP agrees.

5. Quantities

The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

- o Open End Contract: Quantities listed in this Solicitation are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.
- .. Service: The scope of the service to be provided will be more clearly defined in the specifications included herewith.
- .. Combined Service and Goods: The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.
- .. One Time Purchase: This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

Response:

HP agrees.

6. Emergency Purchases

The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute of breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One Time Purchase contract.

Response:

HP agrees.



7. Required Documents

All of the items checked below must be provided to the Purchasing Division by the Vendor as specified below.

- .. BID BOND (Construction Only): Pursuant to the requirements contained in W. Va. Code § 5-22-1(c), All Vendors submitting a bid on a construction project shall furnish a valid bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.
- .. PERFORMANCE BOND: The apparent successful Vendor shall provide a performance bond in the amount of _____. The performance bond must be received by the Purchasing Division prior to Contract award.
- .. LABOR/MATERIAL PAYMENT BOND: The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be delivered to the Purchasing Division prior to Contract award.

In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under \$100,000. Personal or business checks are not acceptable. Notwithstanding the foregoing, West Virginia Code § 5-22-1(d) mandates that a vendor provide a performance and labor/material payment bond for construction projects. Accordingly, substitutions for the performance and labor/material payment bonds for construction projects is permitted.

- .. MAINTENANCE BOND: The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.
- .. LICENSE(S) / CERTIFICATIONS / PERMITS: In addition to anything required under the Section of the General Terms and Conditions entitled Licensing, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits prior to Contract award, in a form acceptable to the Purchasing Division.

The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications prior to Contract award regardless of whether or not that requirement is listed above.

Response:

HP agrees.



8. Insurance

The apparent successful Vendor shall furnish proof of the insurance identified by a checkmark below and must include the State as an additional insured on each policy prior to Contract Award. The insurance coverages identified below must be maintained throughout the life of this contract. Thirty (30) days prior to the expiration of the insurance policies, Vendor shall provide the Agency with proof that the insurance mandated herein has been continued. Vendor must also provide Agency with immediate notice of any changes in its insurance policies, including but not limited to, policy cancelations, policy reduction, or change in insurers. The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether or not that insurance requirement is listed in this section.

Vendor must maintain:

- Commercial General Liability Insurance in at least an amount of: \$1,000,000.00 per occurrence.
- Automobile Liability Insurance in at least an amount of: \$1,000,000.00 per occurrence.
- Professional/Malpractice/Errors and Omission Insurance in at least an amount of: \$1,000,000.00 per occurrence.
- Commercial Crime and Third Party Fidelity Insurance in an amount of: _____per occurrence.
- Cyber Liability Insurance in an amount of: _____per occurrence.
- Builders Risk Insurance in an amount equal to 100% of the amount of the Contract.
- Pollution Insurance in an amount of: _____per occurrence.
- Aircraft Liability in an amount of: _____per occurrence.

Notwithstanding anything contained in this section to the contrary, the Director of Purchasing Division reserves the right to waive the requirement that the State be named as an additional insured on one or more of the Vendor's insurance policies if the Director finds that doing so is in the State's best interest.

Response:

HP agrees. Please refer to **Attachment 7 – HP Certificates of Insurance (2)**, which evidence that HP meets the State's insurance coverage requirements.

9. Workers' Compensation Insurance

The apparent successful Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

Response:

HP agrees.

10. [Reserved]

Response:

Not applicable.



11. Liquidated Damages

This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy. Vendor shall pay liquidated damages in the amount specified below or as described in the specifications:

.. ___ for ___.

b Liquidated Damages Contained in the Specifications

Response:

Pursuant Q&A number 02, included in Addendum Number 1, dated September 10, 2018, the State advised liquidated damages are not applicable for this Solicitation.

12. Acceptance

Vendor's signature on its bid, or on the certification and signature page, constitutes an offer to the State that cannot be unilaterally withdrawn, signifies that the product or service proposed by vendor meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise indicated, and signifies acceptance of the terms and conditions contained in the Solicitation unless otherwise indicated.

Response:

HP agrees.

13. Pricing

The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification.

Response:

HP agrees.

14. Payment in Arrears

Payment in advance is prohibited under this Contract. Payment may only be made after the delivery and acceptance of goods or services. The Vendor shall submit invoices, in arrears.

Response:

HP agrees.



15. Purchasing Card Acceptance

Vendor must accept payment by electronic funds transfer and P-Card. (The State of West Virginia's Purchasing Card program, administered under contract by a banking institution, processes payment for goods and services through state designated credit cards.)

Response:

HP agrees to accept the State of West Virginia VISA Purchasing Card for payment of contract purchases at the time the order is placed only. Credit card orders can be placed by phone providing a copy of the purchase order for HP's records. HP will include details in the order process document for agencies on HP Credit Card Payment order processing guidelines.

16. Taxes

The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

Response:

HP agrees.

17. Additional Fees

Vendor is not permitted to charge additional fees or assess additional charges that were not either expressly provided for in the solicitation published by the State of West Virginia or included in the unit price or lump sum bid amount that Vendor is required by the solicitation to provide. Including such fees or charges as notes to the solicitation may result in rejection of vendor's bid. Requesting such fees or charges be paid after the contract has been awarded may result in cancellation of the contract.

Response:

HP agrees. We do not charge any additional fees other than the fees included in our proposed pricing. Please refer to **Exhibit_A Pricing Page – Revised 9-10-2018**.

18. Funding

This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available.

Response:

HP agrees.



19. Cancellation

The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-5.2.b.

Response:

HP agrees.

20. Time

Time is of the essence with regard to all matters of time and performance in this Contract.

Response:

HP agrees.

21. Applicable Law

This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code or West Virginia Code of State Rules is void and of no effect.

Response:

HP agrees.

22. Compliance

Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable laws, regulations, and ordinances.

Subcontractor Compliance: Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to comply with all applicable laws, regulations, and ordinances. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

Response:

HP agrees.

23. Arbitration

Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

Response:

HP agrees.



24. Modifications

This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any change to existing contracts that adds work or changes contract cost, and were not included in the original contract, must be approved by the Purchasing Division and the Attorney General's Office (as to form) prior to the implementation of the change or commencement of work affected by the change.

Response:

HP agrees.

25. Waiver

The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.

Response:

HP agrees.

26. Subsequent Forms

The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.

Response:

HP agrees. If HP is fortunate to receive the CRFQ award, we propose that the parties contract using the same process as IP12 and IP16. HP agrees to the terms and conditions of the CRFQ and the West Virginia Agreement Addendum WV-96 (Rev. 5/16). As required by sections 4.2.3 and 4.2.4), the HP Customer Terms are included as **Attachment 8**, which are consistent with the terms to which the parties agreed for IP12 and IP16.

HP Customer Terms also include the following provision (as included in the IP12 and IP16 contracts), so that the terms of the West Virginia Agreement Addendum control in the event of a conflict:

"19. Conflict. In the event of a conflict between the terms of this HP Agreement and the terms of West Virginia's Agreement Addendum (WV-96) that apply to Solicitation CRFQ 0212 SWC1900000001, to which this HP Agreement is attached, the terms of West Virginia's Agreement Addendum, WV-96 (revised 5/2016) shall control."

HP is committed to negotiating, in good faith, to mutually arrive at a final agreement that meets the best interests of both the State and HP.



27. Assignment

Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments.

Response:

HP agrees.

28. Warranty

The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.

Response:

HP agrees.

29. State Employees

State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.

Response:

HP agrees.

30. Privacy, Security, and Confidentiality

The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/default.html>.

Response:

HP agrees, as it applies to personally identifiable information or other confidential information gained from the Agency. Understanding that the products and services proposed by HP do not involve the receipt, use, or disclosure of personally identifiable information or other confidential information, HP agrees to comply with the referenced Confidentiality Policies and Information Security Accountability Requirements, to the extent applicable to the resultant agreement.



31. Your Submission is a Public Document

Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and SG-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

Response:

HP agrees.

32. Licensing

In accordance with West Virginia Code of State Rules § 148-1-6.1.e, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

Subcontractor Compliance: Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to be licensed, in good standing, and up-to-date on all state and local obligations as described in this section. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

Response:

HP agrees. HP is current with the West Virginia Secretary of State's Office, the West Virginia Tax Department, and the West Virginia Insurance Commission. Please reference **Attachment 9 – HP Inc. Certificate of Authorization** issued by the West Virginia Secretary of State.



33. Antitrust

In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.

Response:

HP agrees.

34. Vendor Certifications

By signing its bid or entering into this Contract, Vendor certifies (1) that its bid or offer was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid or offer for the same material , supplies, equipment or services; (2) that its bid or offer is in all respects fair and without collusion or fraud; (3) that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; and (4) that it has reviewed this Solicitation in its entirety; understands the requirements , terms and conditions, and other information contained herein.

Vendor's signature on its bid or offer also affirms that neither it nor its representatives have any interest, nor shall acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency. The individual signing this bid or offer on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or offer or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

Response:

HP agrees.

35. Vendor Relationship

The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing.



Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

Response:

HP agrees.

36. Indemnification

The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.

Response:

HP agrees.

37. Purchasing Affidavit

In accordance with West Virginia Code §§ 5A-3-10a and 5-22-1(i), the State is prohibited from awarding a contract to any bidder that owes a debt to the State or a political subdivision of the state. Vendors are required to sign, notarize, and submit the Purchasing Affidavit to the Purchasing Division affirming under oath that it is not in default on any monetary obligation owed to the state or a political subdivision of the state.

Response:

HP agrees. Please refer to the **Purchasing Affidavit** section below for HP's signed Purchasing Affidavit.

38. Additional Agency and Local Government Use

This Contract may be utilized by other agencies, spending units, and political subdivisions of the State of West Virginia; county, municipal, and other local government bodies; and school districts ("Other Government Entities"). Any extension of this Contract to the aforementioned Other Government Entities must be on the same prices, terms, and conditions as those offered and agreed to in this Contract, provided that such extension is in compliance with the applicable laws, rules, and ordinances of the Other Government Entity. If the Vendor does not wish to extend the prices, terms, and conditions of its bid and subsequent contract to the Other Government Entities, the Vendor must clearly indicate such refusal in its bid. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.

Response:

HP agrees.



39. Conflict of Interest

Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

Response:

HP agrees.

40. Reports

Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:

- ⓑ Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.
- ⓑ Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at purchasing.requisitions@wv.gov.

Response:

HP agrees. Please refer to HP's response to Specifications, subsections 3.1.9.3.5, Support and Contacts and section 8.3, Reports.

41. Background Check

In accordance with W. Va. Code § 15-2D-3, the Director of the Division of Protective Services shall require any service provider whose employees are regularly employed on the grounds or in the buildings of the Capitol complex or who have access to sensitive or critical information to submit to a fingerprint-based state and federal background inquiry through the state repository. The service provider is responsible for any costs associated with the fingerprint-based state and federal background inquiry.

After the contract for such services has been approved, but before any such employees are permitted to be on the grounds or in the buildings of the Capitol complex or have access to sensitive or critical information, the service provider shall submit a list of all persons who will be physically present and working at the Capitol complex to the Director of the Division of Protective Services for purposes of verifying compliance with this provision. The State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check.

Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

Response:

HP agrees.



42. Preference for Use of Domestic Steel Products

Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

- a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
- b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:
- c. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars (\$2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or
- d. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

Response:

Pursuant to Addendum 1, dated September 10, 2018, Q&A 07 states this paragraph 42 does not apply.

43. Preference for Use of Domestic Aluminum, Glass, and Steel

In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars (\$50,000) or public works contracts that require more than ten thousand pounds of steel products.



The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a "substantial labor surplus area", as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products. This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

Response:

Pursuant to Addendum 1, dated September 10, 2018, Q&A 08 states this paragraph 43 does not apply.

44. Interested Party Supplemental Disclosure

W. Va. Code § 6D-1-2 requires that for contracts with an actual or estimated value of at least \$1 million, the vendor must submit to the Agency a supplemental disclosure of interested parties reflecting any new or differing interested parties to the contract, which were not included in the original pre-award interested party disclosure, within 30 days following the completion or termination of the contract. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

Response:

HP agrees. Since HP is a publicly traded company on the New York Stock Exchange (NYSE: HPQ), a Disclosure of Interested Parties form is not required by W. Va. Code § 6D-1-2.

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and initial point of contact for matters relating to this Contract.

Jerome Gabryszewski, Inside Sales Account Manager

(Name, Title)

Jerome Gabryszewski, Inside Sales Account Manager

(Printed Name and Title)

2351 HP Way NE, Rio Rancho, New Mexico 87144

(Address)



Office Phone: (505) 415-7120

(Phone Number) / (Fax Number)

jerome.gabryszewski@hp.com

(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

HP Inc.

(Company)

Since HP is submitting documentation through wvOASIS, a signature is not required.

(Authorized Signature) (Representative Name, Title)

Nicole Hadley, Contract Administrator

(Printed Name and Title of Authorized Representative)

September 27, 2018

(Date)

Phone: (281) 927-7974; Fax: (281) 274-9242

(Phone Number) (Fax Number)



CRFQ 0212 SWC1900000001 Statewide Contract – IP19 Computers and Peripherals

Specifications

1. Purpose and Scope

The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Office of Technology (WVOT) to establish an open-end Statewide Contract for the purchase of Computers and Peripherals.

The purpose of this RFQ is to seek bids from interested original equipment manufacturers (OEM) capable of providing desktops, laptops, netbooks, tablet PCs (without integrated cellular service), monitors, and other peripheral equipment for those products.

The successful bidder must provide full support capability, as requested, including, but not limited to, configuration, support and maintenance.

The State's intent is to contract with a single vendor enabling the State to standardize its desktop and mobile equipment base for the life of the contract.

Response:

HP agrees.

2. Definitions

The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in Section 2 of the General Terms and Conditions.

- 2.1 "Agency" is any entity seeking good/services under this Contract.
- 2.2 "ARO" means after receipt of order.
- 2.3 "Business class machines" means computers that offer more features for professional work, such as fingerprint readers, remote desktop control software, and encryption tools. The professional operating system version that comes on business PCs is also more suited for workers than the home version.
- 2.4 "Contract" is the binding agreement that is entered into between the State and the Vendor to provide the items requested in the solicitation
- 2.5 "Contract Item" or "Contract Items" means the list of items identified in Section 3.1 below and on the Pricing Pages.
- 2.6 "FOB" stands for Free on Board which indicates that the Vendor is responsible for delivery and shipping costs.
- 2.7 "Mandatory Requirements" The terms "must", "will", "shall", "minimum", "maximum", or "is/are required" identify a mandatory item or factor. Decisions regarding compliance with any mandatory requirements shall be at the sole discretion of the State. Failure on the part of the Vendor to meet any of the mandatory specifications shall result in the disqualification of the bid.
- 2.8 "Manufacturer" is the company who produces the equipment.
- 2.9 "PCs" are desktops, laptops, netbooks, and tablets.



- 2.10 "Pricing Pages" means the schedule of prices, estimated order quantity, and totals contained in wvOASIS or attached hereto as Exhibit A, and used to evaluate the solicitation responses.
- 2.11 "Refurbished reused or recycled" means old or used computer equipment that has been restored to like-new working condition and/or appearance or computer devices that have been sent back to the factory to fix a flaw.
- 2.12 "Solicitation" means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.
- 2.13 "TPM" means Trusted Platform Module
- 2.14 "Absolute DDS" means Absolute Data and Device Security with Bios Enabled data and asset protection tool integrated deep within a computer, helps detect and enforce compliance and accountability for at-risk data on devices, and assists in recovery efforts.
- 2.15 "HDD" means Hard Disk Drive
- 2.16 "SSD" means Solid State Drive
- 2.17 "OEM" means Original Equipment Manufacturer
- 2.18 "Vendor" means any entity submitting a bid in response to this solicitation, the entity that has been selected as the lowest responsible vendor, or the entity that has been awarded the Contract as context requires.
- 2.19 "OS" means Operating System
- 2.20 "MB" means Megabyte
- 2.21 "GB" means Gigabyte
- 2.22 "DVD/RW" means a disc drive that can read and record DVDs
- 2.23 "USB" means Universal Serial Bus
- 2.24 "PCI-E" means Peripheral Component Interconnect Express
- 2.25 "HD" means High Definition
- 2.26 "HDMI" means High Definition Multimedia Interface
- 2.27 "DVI" means Digital Visual Interface
- 2.28 "VGA" means Video Graphics Array
- 2.29 "LAN" means Local Area Network
- 2.30 "TB" means Terabyte
- 2.31 "SATA" means Serial AT Attachment
- 2.32 "FIPS-201" means Federal Information Processing Standard Publication 201

Response:

HP agrees.



3. General Requirements

3.1 Contract Items and Mandatory Requirements: Vendor shall provide Agency with the Contract Items listed below on an open-end and continuing basis. Contract Items must meet or exceed the mandatory requirements as shown below.

3.1.1 All platforms in this solicitation must be offered with the same operating system.

Response:

HP agrees.

3.1.2 Standard PC:

- 3.1.2.1 Operating System: Windows 10 Professional or equal business class operating system with graphical user interface capable of running applications in both 64 and 32-bit architecture.
- 3.1.2.2 Processor: Latest generation process technology, minimum Intel Core i5 or equal with minimum 4 cores and 6MB cache
- 3.1.2.3 RAM: Minimum 8GB Single DIMM, expandable up to 16GB
- 3.1.2.4 Hard Drive: Minimum 500GB HDD
- 3.1.2.5 Keyboard: USB or Wireless
- 3.1.2.6 Mouse: USB or Wireless, 2-button with scroll
- 3.1.2.7 Optical Drive: Internal DVD/RW
- 3.1.2.8 USB Ports: Minimum 4 USB ports; at least 2 USB v3.0 or C
- 3.1.2.9 Expansion Slots: Minimum 2 slots available PCI-E
- 3.1.2.10 Display/Graphics: Integrated HD Graphics with Dual Monitor Support. HDMI or Display port may be substituted as long as adapters are included to support DVI and VGA.
- 3.1.2.11 Network Interface: Integrated Gigabit Ethernet (10/100/1000) Card, Wake on Lan
- 3.1.2.12 TPM Version 2.0
- 3.1.2.13 Warranty: Four year onsite: minimum onsite/next day, to cover a minimum of hardware, keyboards, monitors or other issues related to internal components. Parts and labor for repairs included at no additional charge.
- 3.1.2.14 Absolute DDS or equal - Complete 5 years. Five years begins at activation of license and lasts for five (5) calendar years from activation date.
- 3.1.2.15 Energy Consumption: Unit must be ENERGY Star Certified

Response:

HP offers the HP ProDesk 400 G5 Microtower for the State's Standard PC. Please refer to Table 6 below for HP's CTO build.



Table 6. Standard PC: HP ProDesk 400 G5 Microtower

The model number provided in the table below is for CTO build purposes only. The wvOASIS single part number will be provided upon award.

Category	Tag/Description	Model No.
Base Unit	HP RCTO ProDesk 400 G5 Microtower PC	2WY66AV
Packaging	Single Unit (Microtower) Packaging	2WQ87AV
Energy Star Compliance	ENERGY STAR Certified Label	2WQ81AV
Chassis	HP ProDesk 400PLA250W MT Chassis	2WQ92AV
Operating System	Windows 10 Pro 64 US	2WR70AV#ABA
Processor	Intel Core i5 8500 3.0 2666MHz 6C 65W CPU	2WQ06AV
System Memory	8GB (1x8GB) DDR4 2666 DIMM Memory	2WQ97AV
Internal Storage	500GB 7200RPM 3.5in	2WQ38AV
Keyboard	HP USB Wired Keyboard US	2WR45AV#ABA
ID/Mechanical	HP VGA Port	2WQ76AV
Mouse	HP Optical Wired Mouse USB	2WQ64AV
Optical Device 1	9.5mm DVD-Writer 8/6G3SFF 4G4MT/SFF	2WQ90AV
Add On Selections	HP DisplayPort to DVI-D Adapter	2WQ49AV
Warranty	3/3/3 (material/labor/onsite) MT Warranty US	2WR53AV#ABA
Country Kit	HP 400 G5 Country Kit US	2WR31AV#ABA
Technical AVs	Intel CFL Core i5 Label	3PN93AV
Account Operations Services – AV	Custom Reporting AY161AV	AY161AV
Account Operations Services – AV	Project Management Rollout AY162AV	AY162AV
HP Care Pack Services - CTO/BTCO only (E)	HP 4-year Next Business Day Onsite Hardware Support w/Defective Media Retention for Desktops (Attachment 1)	UE333E
HP Priority Management Services, 2LS Support Access	HP 4-year Priority Management Service (includes 2LS Support Access) for PCs (Attachment 3)	U1PV8E
Absolute Standalone	HP 5-year Absolute DDS Premium (Attachment 2)	U8UK3E

3.1.3 POWER PC:

- 3.1.3.1 Operating System: Windows 10 Professional or equal business class operating system with graphical user interface capable of running applications in both 64 and 32-bit architecture.
- 3.1.3.2 Processor: Latest generation processor technology, minimum Intel Core i7 Processor or equal, 4 cores and minimum 8MB cache.
- 3.1.3.3 RAM: Minimum 16GB, with free slots, expandable up to 32GB
- 3.1.3.4 Hard Drive: Minimum 256GB HDD
- 3.1.3.5 Keyboard: USB or Wireless



- 3.1.3.6 Mouse: USB or Wireless, 2-button with scroll
- 3.1.3.7 Optical Drive: Internal DVD/RW
- 3.1.3.8 USB Ports: Minimum 4 USB ports; at least 2 USB v3.0 or C
- 3.1.3.9 Expansion Slots: Minimum 2 slots available PCI-E
- 3.1.3.10 Display/Graphics: Integrated HD Graphics with Dual Monitor Support. HDMI or Display port may be substituted as long as adapters are included to support DVI and VGA.
- 3.1.3.11 Network Interface: Integrated Gigabit Ethernet (10/100/1000) Card, Wake on Lan
- 3.1.3.12 TPM Version 2.0
- 3.1.3.13 Warranty: Four year onsite: minimum onsite/next day, to cover a minimum of hardware, keyboards, monitors or other issues related to internal components. Parts and labor for repairs included at no additional cost.
- 3.1.3.14 Absolute DDS or equal - Complete 5 years. Five years begins at activation of license and lasts for five (5) calendar years from activation date.
- 3.1.3.15 Energy Consumption: Unit must be ENERGY Star Certified

Response:

HP offers the HP ProDesk 400 G5 Microtower for the State's Power PC. Please refer to Table 7 below for HP's CTO build.

Table 7. Power PC: HP ProDesk 400 G5 Microtower

The model number provided in the table below is for CTO build purposes only. The wvOASIS single part number will be provided upon award.

Category	Tag/Description	Model No.
Base Unit	HP RCTO ProDesk 400 G5 Microtower PC	2WY66AV
Packaging	Single Unit (Microtower) Packaging	2WQ87AV
Energy Star Compliance	ENERGY STAR Certified Label	2WQ81AV
Chassis	HP ProDesk 400PLA250W MT Chassis	2WQ92AV
Operating System	Windows 10 Pro 64 US	2WR70AV#ABA
Processor	Intel Core i7 8700 3.2 2666MHz 6C 65W CPU	2WQ08AV
System Memory	16GB (2x8GB) DDR4 2666 DIMM Memory	2WQ95AV
Internal Storage	256GB SATA Three Layer Cell Solid State Drive	2WR06AV
Keyboard	HP USB Wired Keyboard US	2WR45AV#ABA
ID/Mechanical	HP VGA Port	2WQ76AV
Mouse	HP Optical Wired Mouse USB	2WQ64AV
Optical Device 1	9.5mm DVD-Writer 8/6G3SFF 4G4MT/SFF	2WQ90AV
Add On Selections	HP DisplayPort to DVI-D Adapter	2WQ49AV
Warranty	3/3/3 (material/labor/onsite) MT Warranty US	2WR53AV#ABA
Country Kit	HP 400 G5 Country Kit US	2WR31AV#ABA
Technical AVs	Intel CFL Core i7 Label	3PN94AV



Category	Tag/Description	Model No.
Technical AVs	2.5 BAY SATA Cable Kit	1HJ58AV
Account Operations Services - AV	Custom Reporting AY161AV	AY161AV
Account Operations Services - AV	Project Management Rollout AY162AV	AY162AV
HP Priority Management Services, 2LS Support Access	HP 4-year Priority Management Service (includes 2LS Support Access) for PCs (Attachment 3)	U1PV8E
HP Care Pack Services - CTO/BTCO only (E)	HP 4-year Next Business Day Onsite Hardware Support w/Defective Media Retention for Desktops (Attachment 1)	UE333E
Absolute Standalone	HP 5-year Absolute DDS Premium (Attachment 2)	U8UK3E

3.1.4 FIXED WORKSTATION:

- 3.1.4.1 Chassis: Full size tower
- 3.1.4.2 Operating System: Windows 10 Professional or equal business class operating system with graphical user interface capable of running applications in both 64 and 32-bit architecture.
- 3.1.4.3 Processor: Latest generation processor technology, minimum Intel Xeon or equal with minimum 8 cores and ~~13~~11MB cache. [**Addendum 1**]
- 3.1.4.4 RAM: Minimum 32GB, with free slots, expandable up to ~~64~~128GB [**Addendum 3**]
- 3.1.4.5 Hard Drive: Minimum 256GB SSD Primary Drive minimum and 1TB SATA HDD Secondary
- 3.1.4.6 Keyboard: USB or Wireless
- 3.1.4.7 Mouse: USB or Wireless, 2-button with scroll
- 3.1.4.8 Power Supply: Minimum of 600w or greater
- 3.1.4.9 Optical Drive: Internal DVD/RW
- 3.1.4.10 USB Ports: Minimum 4 USB ports; at least 2 USB v3.0 or C
- 3.1.4.11 Expansion Slots: 4 slots available PCI-E
- 3.1.4.12 Video: Installed 2GB (non-shared memory), discreet, DVI-D and/or Display Port Dual Link Monitor capable, support for DirectX 11, with minimum color depth 24bit.
- 3.1.4.13 Network Interface: Integrated Gigabit Ethernet (10/100/1000) Card, Wake on Lan
- 3.1.4.14 TPM Version 2.0
- 3.1.4.15 Warranty: Four year onsite: minimum onsite/next day, to cover a minimum of hardware, keyboards, monitors or other issues related to internal components. Parts and labor for repairs included at no additional cost.



3.1.4.16 Data and Device Security: Absolute DDS or equal – Complete 5 years. Five years begins at activation of license and lasts for five (5) calendar years from activation date.

3.1.4.17 Energy Consumption: Unit must be ENERGY Star Certified

Response:

HP offers the HP Z4 G4 Tower Workstation for the State's Fixed Workstation. Please refer to Table 8 below for HP's CTO build.

Table 8. Fixed Workstation: HP Z4 G4 Tower Workstation

The model number provided in the table below is for CTO build purposes only. The wvOASIS single part number will be provided upon award.

Category	Tag/Description	Model No.
Base Unit	HP Z4 G4 WKS	1JP11AV
Packaging	Single unit (TWR) Packaging	1JR04AV
Chassis	HP Z4 G4 90 750W Chassis	1JQ29AV
Operating System	Windows 10 Pro 64 Workstations Plus US	2LH13AV#ABA
Internal OS Load Storage Options	Operating System Load to M.2	1JP92AV
Processor	Intel Xeon W-2145 3.7 2666MHz 11 8C CPU	2PC04AV
System Memory	32GB (2x16GB) DDR4 2666 DIMM ECC Registered Memory	1JQ79AV
Graphics Card	AMD FirePro W2100 2GB GFX	1JP12AV
Internal M.2 Storage	HP Z Turbo Drive M.2 256GB TLC SSD	1JP86AV
Internal Storage 1	1TB 7200RPM SATA 3.5in	1JP38AV
Keyboard	USB Business Slim Wired Keyboard US	1JQ87AV#ABA
Mouse	HP Optical Wired Mouse USB	1JQ63AV
Optical Device 1	9.5mm DVD-Writer 1st ODD	1JR01AV
Front I/O	Premium FIO 2xUSB3.1 TypeC 2xUSB3 TypeA	1JP95AV
Application Software 1	HP Remote Graphics Software (RGS) for Z	1JQ27AV
Warranty	3/3/3 (material/labor/onsite) Warranty US	1JR07AV#ABA
Graphics Connectors	HP DisplayPort to DVI-D Adapter	1QE62AV
Country Kit	HP Z4 G4 Country Kit US	1JQ44AV#ABA
Technical AVs	HP Z4 Std CPU Cooling Solution	1QE66AV
Account Operations Services - AV	Custom Reporting AY161AV	AY161AV
Account Operations Services - AV	Project Management Rollout AY162AV	AY162AV
HP Priority Management Services, 2LS Support Access	HP 4-year Priority Management Service (includes 2LS Support Access) for PCs (Attachment 3)	U1PV8E
HP Care Pack Services - CTO/BTCO only (E)	HP 4-year Next Business Day Onsite Hardware Support w/Defective Media Retention for Workstations (Attachment 1)	U1G56E
Absolute Standalone	HP 5-year Absolute DDS Premium (Attachment 2)	U8UK3E



3.1.5 STANDARD LAPTOP:

- 3.1.5.1 Operating System: Windows 10 Professional or equal business class operating system with graphical user interface capable of running applications in both 64 and 32-bit architecture.
- 3.1.5.2 Processor: Latest generation processor technology, minimum Intel Core i5 Processor or equal with a minimum of 4 cores and 6MB cache.
- 3.1.5.3 RAM: Minimum 8GB Single DIMM, expandable up to 16GB
- 3.1.5.4 Hard Drive: Minimum 500GB HDD, upgrade option to SSD
- 3.1.5.5 Camera: Integrated Webcam
- 3.1.5.6 USB Ports: Minimum 3 USB ports; with a minimum of 1 USB v3.0 and 1 USBC (charging)
- 3.1.5.7 Display/Graphics: Integrated HD Graphics, 15" display or greater
- 3.1.5.8 Network Interface: Integrated Gigabit Ethernet (10/100/1000) Card, Wake on Lan
- 3.1.5.9 Wireless Adapter: Supports 802.11ac (2x2) Wi-Fi and Bluetooth 4.2
- 3.1.5.10 Smart Card Reader: Integrated FIPS-201 compliant Smart Card Reader
- 3.1.5.11 Power: A/C Adapter
- 3.1.5.12 TPM Version 2.0
- 3.1.5.13 Warranty: Four year onsite: minimum onsite/next day, to cover a minimum of hardware, keyboards, monitors or other issues related to internal components. Parts and labor for repairs included at no additional cost.
- 3.1.5.14 Data and Device Security: Absolute DDS or equal – Complete 5 years. Five years begins at activation of license and lasts for five (5) calendar years from activation date.
- 3.1.5.15 Energy Consumption: Unit must be ENERGY Star Certified
- 3.1.5.16 Optional Optical Drive: Internal DVD/RW

Response:

HP offers the HP ProBook 650 G4 for the State's Standard Laptop. Please refer to Table 9 below for HP's CTO build.

Table 9. Standard Laptop: HP ProBook 650 G4

The model number provided in the table below is for CTO build purposes only. The wvOASIS single part number will be provided upon award.

Category	Tag/Description	Model No.
Base Unit	HP IDS UMA i5-8250U no WWAN 650 G4 Base NB PC	2GN03AV
OS & Documentation	Windows 10 Pro 64 US	2GN90AV#ABA
Integrated Camera	Integrated HD 720p DualAryMic Webcam	2GN61AV
Display	15.6 HD AG LED SVA 220 fCAM slim	2GN17AV
System Memory	8GB (1x8GB) DDR4 2400	2GN43AV
Internal Storage	500GB 7200RPM SATA-3	2GN08AV



Category	Tag/Description	Model No.
Optical Device	No Optical Disc Drive	2GN26AV
Input/Output Device	VGA port	2GN60AV
Near Field Communication	No Near Field Communication (No NFC)	2GN25AV
Communication WLAN and Bluetooth	Intel 8265 ac 2x2 nvP +Bluetooth 4.2 WW with 2 Antennas	2GN64AV
Wireless WAN	No WWAN	2GN33AV
Fingerprint Reader	No Fingerprint Reader	2GN24AV
Smart Card Reader	Active SmartCard	2GN46AV
Battery	3 Cell 48 WHr Long Life	2GZ43AV
AC Adapter	45 Watt Smart nPFC AC Adapter	2GM94AV
Power Cords	C5 1.0m Power Cord US	2GN74AV#ABA
Warranty	1/1/0 Warranty US	2GN69AV#ABA
Out-Of-Band Manageability	No vPro AMT supported	X9H42AV
Country/Hardware Kit	Country Localization US	2GN79AV#ABA
Keyboard	Clickpad spill-resistant US	2GN78AV#ABA
Technical AV	eStar Enable IOPT	X7B43AV
Processor Labels	Core i5 G8 Label	1QE37AV
Account Operations Services - AV	Custom Reporting AY161AV	AY161AV
Account Operations Services - AV	Project Management Rollout AY162AV	AY162AV
HP Priority Management Services, 2LS Support Access	HP 4-year Priority Management Service (includes 2LS Support Access) for PCs (Attachment 3)	U1PV8E
HP Care Pack Services - CTO/BTCO only (E)	HP 4-year Next Business Day Onsite Hardware Support w/Defective Media Retention for Notebooks (Attachment 1)	UE340E
Absolute Standalone	HP 5-year Absolute DDS Premium (Attachment 2)	U8UK3E

3.1.6 POWER LAPTOP:

- 3.1.6.1 Operating System: Windows 10 Professional or equal business class operating system with graphical user interface capable of running applications in both 64 and 32-bit architecture.
- 3.1.6.2 Processor: Latest generation processor technology, minimum Intel Core i7 Processor or equal with a minimum of 4 cores and 8MB cache.
- 3.1.6.3 RAM: Minimum 16GB Single DIMM, expandable up to 32GB
- 3.1.6.4 Hard Drive: Minimum 256GB SSD
- 3.1.6.5 Camera: Integrated Webcam
- 3.1.6.6 USB Ports: Minimum 3 USB ports; minimum of 1 USB v3.0 and 1 USBC (charging)



- 3.1.6.7 Display/Graphics: Integrated HD Graphics, 17.5" display or greater
[Addendum 1]
- 3.1.6.8 Network Interface: Integrated Gigabit Ethernet (10/100/1000) Card, Wake on Lan
- 3.1.6.9 Wireless Adapter: Supports 802.11ac (2x2) Wi-Fi and Bluetooth 4.2
- 3.1.6.10 Smart Card Reader: Integrated FIPS-201 compliant Smart Card Reader
- 3.1.6.11 Power: A/C Adapter
- 3.1.6.12 TPM Version 2.0
- 3.1.6.13 Warranty: Four year onsite: minimum onsite/next day, to cover a minimum of hardware, keyboards, monitors or other issues related to internal components. Parts and labor for repairs included at no additional cost.
- 3.1.6.14 Data and Device Security: Absolute DDS or equal – Complete 5 years. Five years begins at activation of license and lasts for five (5) calendar years from activation date.
- 3.1.6.15 Energy Consumption: Unit must be ENERGY Star Certified
- 3.1.6.16 Optional Optical Drive: Internal DVD/RW

Response:

HP offers the HP ProBook 650 G4 for the State's Power Laptop. Please refer to Table 10 below for HP's CTO build.

Table 10. Power Laptop: HP ProBook 650 G4

The model number provided in the table below is for CTO build purposes only. The wvOASIS single part number will be provided upon award.

Category	Tag/Description	Model No.
Base Unit	HP IDS UMA i7-8550U for WWAN 650 G4 Base NB PC	2SG59AV
OS & Documentation	Windows 10 Pro 64 US	2GN90AV#ABA
Integrated Camera	Integrated HD 720p DualAryMic Webcam	2GN61AV
Display	15.6 HD AG LED SVA 220 fCAM slim	2GN17AV
System Memory	16GB (1x16GB) DDR4 2400	2GN39AV
M.2 Storage	256GB PCIe NVMe Value Solid State Drive	2GN53AV
Optical Device	No Optical Disc Drive	2GN26AV
Input/Output Device	VGA port	2GN60AV
Near Field Communication	No Near Field Communication (No NFC)	2GN25AV
Communication WLAN and Bluetooth	Intel 8265 ac 2x2 nvP +Bluetooth 4.2 WW with 2 Antennas	2GN64AV
Wireless WAN	No WWAN	2GN33AV
Fingerprint Reader	No Fingerprint Reader	2GN24AV
Smart Card Reader	Active SmartCard	2GN46AV
Battery	3 Cell 48 WHr Long Life	2GZ43AV
AC Adapter	65 Watt Smart nPFC AC Adapter	2GM95AV
Power Cords	C5 1.0m Power Cord US	2GN74AV#ABA



Category	Tag/Description	Model No.
Warranty	1/1/0 Warranty US	2GN69AV#ABA
Out-Of-Band Manageability	No vPro AMT supported	X9H42AV
Country/Hardware Kit	Country Localization US	2GN79AV#ABA
Keyboard	Clickpad spill-resistant US	2GN78AV#ABA
Technical AV	eStar Enable IOPT	X7B43AV
Processor Labels	Core i7 G8 Label	1QE44AV
Account Operations Services - AV	Custom Reporting AY161AV	AY161AV
Account Operations Services - AV	Project Management Rollout AY162AV	AY162AV
HP Priority Management Services, 2LS Support Access	HP 4-year Priority Management Service (includes 2LS Support Access) for PCs (Attachment 3)	U1PV8E
HP Care Pack Services - CTO/BTCO only (E)	HP 4-year Next Business Day Onsite Hardware Support w/Defective Media Retention for Notebooks (Attachment 1)	UE340E
Absolute Standalone	HP 5-year Absolute DDS Premium (Attachment 2)	U8UK3E

3.1.7 TABLET PC:

- 3.1.7.1 Operating System: Windows 10 Professional or equal business class operating system with graphical user interface capable of running applications in both 64 and 32-bit architecture.
- 3.1.7.2 Processor: Latest generation processor technology, minimum Intel Core i7 Processor or equal with ~~4 cores and 8MB cache~~ **minimum 2 cores and minimum 4MB cache. [Addendum 4]**
- 3.1.7.3 RAM: Minimum 8GB, ~~expandable up to 32GB~~ **[Addendum 1]**
- 3.1.7.4 Hard Drive: Minimum 256GB SSD, upgrade option to 512B SSD
- 3.1.7.5 Keyboard: Backlit
- 3.1.7.6 Mouse: Glide or Trackpad
- 3.1.7.7 Camera: Integrated Webcam, ~~front and rear facing~~ **[Addendum 4]**
- 3.1.7.8 USB Ports: Minimum 1 USB v3.0 and 1 USBC (charging)
- 3.1.7.9 Display/Graphics: Integrated HD Graphics, 13" display or greater
- 3.1.7.10 Wireless Adapter: Supports 802.11ac (2x2) Wi-Fi and Bluetooth 4.2
- 3.1.7.11 Smart Card Reader: Integrated FIPS-201 compliant Smart Card Reader
- 3.1.7.12 Power: A/C Adapter
- 3.1.7.13 TPM Version 2.0
- 3.1.7.14 Warranty: Four year onsite: minimum onsite/next day, to cover a minimum of hardware, keyboards, monitors or other issues related to internal components. Parts and labor for repairs included.



3.1.7.15 Data and Device Security: Absolute DDS or equal – Complete 5 years. Five years begins at activation of license and lasts for five (5) calendar years from activation date.

3.1.7.16 Energy Consumption: Unit must be ENERGY Star Certified

Response:

HP offers the HP EliteBook x360 1030 G2 for the State’s Tablet PC. Please refer to Table 11 below for HP’s CTO build.

Table 11. Tablet PC: HP EliteBook x360 1030 G2

The model number provided in the table below is for CTO build purposes only. The wvOASIS single part number will be provided upon award.

Category	Tag/Description	Model No.
Base Unit	HP IDS UMA i7-7500U 8GB 1030 G2 Base NB PC	1WB84AV
OS & Documentation	Windows 10 Pro 64 US	X4L05AV
Digital Pen	No Wacom Pen	1AB34AV
Display	13.3-inch FHD (1920x1080) BrightView LED UWVA ultraslim Touchscreen	X3U27AV
Internal Storage	256GB PCIe NVMe Value Solid State Drive	3RB81AV
Near Field Communication	No Near Field Communication (No NFC)	X3U29AV
Communication WLAN and Bluetooth	Intel 8265 ac 2x2 nvP +Bluetooth 4.2 WW with 2 Antennas	X3U48AV
Wireless WAN	No WWAN	X3U49AV
AC Adapter	65 Watt Smart nPFC AC Adapter	X3U24AV
Power Cords	C5 1.0m Power Cord US	X3W31AV
Warranty	1/1/0 Warranty US	Z2H74AV
Warranty Extension Bundling	No Extend Warranty Service Bundle	1HU29AV
Out-Of-Band Manageability	No vPro AMT supported	X9H42AV
Country/Hardware Kit	Country Localization US	X3U52AV
Keyboard	Clickpad Backlit Collaboration US	X3W34AV
Technical AV	eStar Enable IOPT	X7B43AV
Processor Labels	Core i7 G7 Label	Y8C94AV
Account Operations Services - AV	Custom Reporting AY161AV	AY161AV
Account Operations Services - AV	Project Management Rollout AY162AV	AY162AV
HP Priority Management Services, 2LS Support Access	HP 4-year Priority Management Service (includes 2LS Support Access) for PCs (Attachment 3)	U1PV8E
HP Care Pack Services - CTO/BTCO only (E)	HP 4-year Next Business Day Onsite Hardware Support w/Defective Media Retention for Notebooks (Attachment 1)	UE340E
Absolute Standalone	HP 5-year Absolute DDS Premium (Attachment 2)	U8UK3E



3.1.8 OPTIONAL COMPONENTS AND SERVICES

3.1.8.1 MONITORS:

- 3.1.8.1.1 Flat Panel Monitor 20" or greater, Aspect Ratio of 16:9 or greater, Minimum Resolution 1600x900
- 3.1.8.1.2 Flat Panel Monitor 24" ~~or greater~~, Aspect Ratio of 16:9 or greater, Minimum Resolution 1920x1080 **[Addendum 1]**
- 3.1.8.1.3 Flat Panel Monitor 27" ~~or greater~~, Aspect Ratio of 16:9 or greater, Minimum Resolution 1920x1080 **[Addendum 1]**
- 3.1.8.2 Docking Station for Standard Laptop: Optional OEM USB-C Powered Docking Station compatible with Standard Laptop. Must support dual monitors, HDMI or Display port may be substituted as long as adapters are included to support DVI and VGA. Docking stations from 3rd party manufacturers are not acceptable.
- 3.1.8.3 Docking Station for Power Laptop: Optional OEM USB-C Powered Docking Station compatible with Power Laptop. Must support dual monitors, HDMI or Display port may be substituted as long as adapters are included to support DVI and VGA. Docking stations from 3rd party manufacturers are not acceptable.
- 3.1.8.4 Docking Station for Tablet: Optional OEM USB-C Powered Docking Station compatible with Tablet. Must support dual monitors, HDMI or Display port may be substituted as long as adapters are included to support DVI and VGA. Docking stations from 3rd party manufacturers are not acceptable.
- 3.1.8.5 Optional DVD/RW Drive: If DVD/RW drive is not an internal component to the Standard Laptop and Power Laptop, the Vendor should provide pricing for an optional external DVD/RW drive.
- 3.1.8.6 Optional Accidental Damage Coverage for all mobile equipment to cover everything the standard four-year warranty does not cover.
- 3.1.8.7 Optional 512GB SSD 2.5"

3.1.8.8 Optional Video Card Upgrade for Fixed Workstation: Vendor must provide an optional upgraded video card that can used in the Fixed Workstation. The video card must be a minimum 8GB internal memory graphics card NVIDIA Quadro or GTX, or equal, with capabilities to run professional computer-aided design, computer-generated imagery, and digital content creation applications. [Addendum 1]

Response:

HP offers the following products for the State's Monitors, Docking Stations, and Optional Components. Please refer to Table 12 below for detailed information.



Table 12. Monitors, Docking Stations, and Optional Components

The model number provided in the table below is for CTO build purposes only. The wvOASIS single part number will be provided upon award.

Category	Tag/Description	Model No.
Monitors		
20-inch Monitor	HP N223 21.5-inch Monitor	3WP71A6
24-inch Monitor	HP VH24 23.8-inch Monitor	M1T03A6
27-inch Monitor	HP VH27 27-inch Monitor	2KZ36A6
Docking Station for All Laptops and Tablet		
Docking Station for All Laptops and Tablet	HP USB-C G4 Docking Station	3FF69AA#ABA
Adapter for Docking Station	HP DisplayPort DVI-D Adapter	FH973AA
Adapter for Docking Station	HP DisplayPort VGA Adapter	AS615AA
Optional Components		
DVD/RW Drive	HP External USB DVD-RW	F2B56AA
Accidental Damage Coverage	HP 4-year Next Business Day Onsite with Defective Media Retention and Accidental Damage coverage	UL742E
512 GB SSD 2.5-inch	SanDisk X600 3D NAND SATA External SSD Drive (see Note below)	SD9SB8W-512G-1122
Upgraded Video Card	AMD Radeon Pro WX 7100 8GB Graphics Card	Z0B14AA

Note: HP has proposed a third-party product for the optional 512 GB SSD 2.5-inch as allowed in Addendum 1, Q&A 20, dated September 10, 2018.

3.1.9 MISCELLANEOUS MANDATORY REQUIREMENTS

3.1.9.1 Technical Requirements:

- 3.1.9.1.1 All computers provided under this contract must be business-class machines, as specified in Section 2 of these specifications

Response:

HP agrees.



3.1.9.1.2 All computing equipment offered in the Vendor's response must be OEM products. Vendors must provide detailed specification sheets for all proposed products upon request. It is preferred that specification sheets be submitted with the bid. Vendors who fail to provide the required specification sheets within the allotted timeframe will be disqualified.

Response:

HP agrees, and has proposed only OEM hardware. Please refer to **Attachment 4 – HP Documentation for Standard Proposed Products**, **Attachment 5 – HP Documentation for Alternate Proposed Products**, and the Hardware Configurations above for all specifications and configuration (CTO) builds.

3.1.9.1.3 All new equipment must be delivered to the State with new components only, not refurbished, used or recycled components. If providing replacement parts, the WVOT, while preferring new parts, will accept “like new” refurbished parts with the same warranty offered for new parts. Shipping cost for returns must be paid by vendor.

Response:

HP agrees. HP's proposed products will be delivered to the State with new components, not refurbished, used or recycled components.

3.1.9.1.4 All hardware provided under this contract must be a minimum of Energy Star 5.0 compliant.

Response:

HP agrees that all proposed systems are Energy Star 5.0 compliant.

3.1.9.1.5 All Desktops and Monitors must meet minimum Electronic Product Environmental Assessment Tool (EPEAT) Silver certification. The vendor must provide documentation proving level of certification with specification sheets upon request. The Vendor must ensure equipment meets the latest EPEAT registration requirements before it is delivered. It is preferred certification documentation be provided with the bid.

Response:

HP agrees that all hardware meets at least the EPEAT Silver Certification. For HP's EPEAT certifications for all proposed desktops, monitors, laptops, and tablets. Please refer to **Attachment 4 – HP Documentation for Standard Proposed Products** and **Attachment 5 – HP Documentation for Alternate Proposed Products**.

3.1.9.1.6 Vendor must stock spare parts for ALL proposed equipment, for the duration of the warranty period.

Response:

HP agrees.



3.1.9.1.7 Each model provided under this contract must have consistent hardware configurations, meaning that all machines of the same make or model must have the same components.

Response:

HP agrees.

3.1.9.1.8 Vendor must inform the State in writing, sixty (60) days prior to replacement, of any platform revisions it intends to make. Written notification may be made by e-mail and sent to OTPCContract@wv.gov.

Response:

HP agrees to meet once a month, by webinar and quarterly in person, to discuss product transitions and confirm in writing 60-days prior to the replacement via email.

3.1.9.1.9 Vendor must provide at no additional charge the State with two (2) free of charge units of all initial and subsequent replacement PC, laptop, and tablet contract models. The State will use this time to test the equipment and images. It is the State's right to accept or reject any proposed model replacements.

Response:

HP agrees.

3.1.9.1.10 Vendor must guarantee that any replacement units meet, or exceed, the current model's specifications. Vendor must guarantee any proposed replacement units are of equivalent pricing (equal to, or less than) to initially bid units.

Response:

HP agrees.

3.1.9.1.11 Current models must be available for purchase by the State, until the proposed replacement units have been approved by the State and a Change Order has been fully executed.

Response:

HP agrees.



3.1.9.1.12 If the computing equipment experiences “repeated failure” in the first year of ownership, the Vendor must replace the computing unit with a new unit of the same make and model or a model equal to or better than what is currently provided under the contract.

3.1.9.1.12.1 The State defines “repeated failure” to be, at a minimum, the following: three instances of parts failure with no more than two instances on the same part within one year after the machine is installed.

Response:

Though HP’s definition for Repetitive Failure is three (3) functional hardware failures of the same type in any 90-day period during the first year of ownership, we can accommodate the State’s definition of repetitive failure through HP’s Customer First Program. HP’s first step in resolving repeat problems is to engage our escalation process. HP’s formal escalation process provides the appropriate level of management focus and resources to resolve persistent, difficult, or high business impact customer issues.

Once a device or system has encountered repeated failures for the same problem, HP the will engage the appropriate HP Engineering Team to determine whether the problem can be resolved or if the unit should be replaced.

In the unlikely event that your HP hardware product has recurring failures, HP, at its sole discretion, may elect to: (a) provide you with a replacement unit of HP’s choosing that is the same or equivalent to your HP hardware product in performance, or (b) give you a refund of your purchase price instead of a replacement.

3.1.9.1.13 The State must have the ability to remove the hard drive before returning any equipment to the Vendor.

Response:

HP agrees. HP has included four (4) years of Defective Media Retention (DMR) service, which allows an end-user to retain its hard drive during a service incident or warranty repair.

Defective Media Retention

This service feature option allows the Customer to retain defective hard disk drive components that the Customer does not want to relinquish due to sensitive data contained within the "Disk Drive" covered under this service. All Disk Drives on a covered system must participate in the defective media retention. Please reference **Attachment 1 – HP Hardware Support Onsite Service** for details regarding HP’s Defective Media Retention service. Notwithstanding anything to the contrary in **Attachment 1**, HP waives the right to take possession and title of a defective Disk Drive covered by the defective media retention service feature option in the event a replacement product is delivered by HP to the Customer. The Customer will retain all defective Disk Drives supported by HP under the HP support agreement.



3.1.9.2 Shipping, Ordering, Billing:

3.1.9.2.1 Vendor must provide Next Business Day (NBD) delivery of replacement parts for all equipment.

Response:

HP agrees. HP will provide onsite service for problems that cannot be resolved either by remote technical support or by the Customer Self Repair Process. The Customer Self Repair (CSR) process provides replacement parts for next business day delivery.

HP Customer Self Repair

The HP Customer Self Repair program provides the fastest hardware support service under warranty. This program ships Genuine HP replacement parts, typically delivered the next business day, directly to the State so replacement can be done at your convenience.

Customer Self Repair Process

The State obtains a CSR part by logging a technical support case for warranty repair as normal, online or via phone. After the case is logged, initial diagnosis and troubleshooting are performed to determine that a part replacement is necessary and available through CSR. Most CSR parts ship via next-business day delivery. Same-day or 4-hour delivery via courier may be available at an additional charge.

The instruction materials shipped with a replacement part outline whether the defective part must be returned to HP. HP provides preprinted return labels, with prepaid shipping and free pick-up service, along with complete instructions on how to repackage the part. Defective parts should be returned to HP within five days. Failure to do so may result in HP billing the State for the replacement.

If assistance is required during the installation of the replacement CSR part, technicians are available via phone by calling the HP Technical Support Center. More information on the CSR process is available online at <http://h18029.www1.hp.com/support/selfrepair/>.

CSR Parts Categories

CSR parts are divided into two (2) categories: mandatory and optional.

- Optional—Parts designated as CSR optional can either be replaced by a State representative or repaired by an HP service technician. There is no additional charge for HP to repair an optional CSR part, per the type of warranty service designated for your product.
- Mandatory—Parts provided under warranty in this category include but are not limited to items like mice, keyboards, and DVD drives. HP Limited Hardware Warranty terms require that you install CSR parts designated as mandatory, without on-site assistance from HP, unless you request that HP send a technician to your site at the current HP hourly rate – travel charges may apply in remote areas. Note: The purchase of any HP Care Pack uplift makes all CSR parts optional, and on-site assistance is provided on request at no additional charge for covered equipment.

HP Care Pack Services

The purchase of any HP Care Pack negates the mandatory CSR requirement of the HP limited hardware warranty, making all CSR replacements optional.

A database of mandatory and optional CSR parts is available online at: http://h18033.www1.hp.com/support/selfrepair/ww/replace_part.asp.



3.1.9.2.2 Vendor must provide immediate replacement equipment for any new machines which do not function properly out of the box, at no cost to the Agency, within five (5) business days

Response:

HP agrees.

3.1.9.3 Support and Contacts:

3.1.9.3.1 Vendor must identify by name and location the proposed primary account representative and immediate supervisor who shall be responsible for the performance of the contract. Such notification may be included in the bid response but must be provided within no less than five (5) business days from the date of contract award. Vendor must immediately notify the Office of Technology and the WV Purchasing Division if/when these contacts change.

Response:

HP agrees, and has included the required information below.

Primary Account Representatives

Kristen Reed
Account Manager
Lexington, KY 40509
Tel: 859-338-9286
kristen.reed@hp.com

Kristen reports to Leon Hobson, Mid-Atlantic Region Sales Manager.

Jerome Gabryszewski
Inside Account Manager, Kentucky and West Virginia
Rio Rancho, NM 87144
Tel: 505-415-7120
Jerome.Gabryszewski@hp.com

Jerome reports to Dave Bracken, Mid-Atlantic Region Inside Sales Manager.

Regional Sales Manager

Leon Hobson
Mid-Atlantic Region Sales Manager, State, Local & Education
Mechanicsville, VA 23116
Tel: 404-774-7090
Leon.Hobson@hp.com

Inside Sales Manager

Dave Bracken
Mid-Atlantic Region Inside Sales Manager
State, Local and Education
Rio Rancho, NM 87144
Tel: 505-600-4416
david.m.bracken@hp.com



3.1.9.3.2 The successful vendor must provide a customer support telephone number Monday-Friday 8:00 AM to 5:00 PM EST to resolve billing and shipping issues. Billing issues shall be resolved within five (5) business days.

Response:

HP agrees. Your HP Customer Services Representative will be available via a toll-free number, 1-800-727-2472, Monday – Friday, 8:00 a.m. to 5:00 p.m. (Eastern), to support all of your fulfillment-related issues, such as billing and shipping issues. Customer Services is required to escalate billing issues within one (1) business day to minimize resolution time.

3.1.9.3.3 Vendor must provide direct, via telephone, second level technical access to support all equipment offered.

Response:

HP agrees.

3.1.9.3.4 Vendor must provide a parts and support website for access by State technical staff.

Response:

HP agrees. The toll-free warranty number for warranty part orders is 1-800-227-8164.

The support website can be found at <https://support.hp.com/us-en/>, where all assistance is made available for product details, software, and drivers.

Business Support Center

HP offers an online support portal through HP’s Business Support Center (BSC).

The BSC is a free, worldwide technical support portal for business professionals that provide proven self-solve resources and expert guidance to address issues throughout the lifecycle of desktops, workstations, and mobile computing devices.

At the HP BSC you can:

- Troubleshoot problems whenever the need arises
- Quickly download software and drivers
- Perform regular maintenance tasks
- Find information to discover, use, and upgrade products
- Receive proactive, personalized notifications of software updates and other vital information
- Easily contact HP via e-mail, Web chat, or online support case logging
- Connect with a worldwide community of business professionals to share knowledge and speed problem-solving

BSC Benefits

The HP BSC can deliver convenient, cost-saving solutions. There is no need for time-consuming searches across multiple websites because everything is stored on one portal. Intuitive task-based navigation lets you quickly identify the area you want to focus on, choose the tasks you want to perform, and discover topics and tools relating to your specific products



Post Warranty Options

Should the State choose to perform its own maintenance after the warranty period expires, replacement parts can be sourced through the HP Parts Store at:

<http://h20141.www2.hp.com/Hpparts/Default.aspx?mcsid=FC72045F71484C9A97C612DC699C44FF>

3.1.9.3.5 Vendor must provide the State of West Virginia Office of Technology and the Purchasing Division with a detailed, quarterly report in excel format indicating the State Agency, model, serial number(s), cost, and delivery location for all purchases made under the contract. The report shall also include a listing of all service calls associated with this agreement, including the location and nature of service required. These reports must be sent to OTPurchasingRequest@wv.gov

Response:

HP agrees to provide the detailed quarterly sales reports by the end of the next month following the quarter end, as noted below.

Quarter End	Report Due Date
March 31	April 30
June 30	July 31
September 30	October 31
December 31	January 31

HP will generate a separate quarterly report that will include a listing of the serial number(s) and all service calls associated with the products purchased under this agreement, including the location and nature of the service call.

3.1.9.3.6 The Vendor must agree to establish Quarterly Reviews and/or mutually agreed upon calls to discuss contract issues, questions, concerns, and performance.

Response:

HP agrees.

4. Contract Award

4.1 Contract Award: The Contract is intended to provide Agencies with a purchase price on all Contract Items. The Contract shall be awarded to the Vendor that provides the Contract Items meeting the required specifications for the lowest overall total cost as shown ~~on in~~ the Pricing Pages and wvOASIS. ~~The Pricing Sheet contains a formula which will add the total value of these columns in order to give the total overall cost. However, it is the vendors responsibility to ensure the calculations for their bid is correct before submission. In the event of an error, the unit price shall prevail.~~ **[Addendum 1]**

Renewal options for years 2, 3, and 4 will be initiated by the Agency, agreed to by the Vendor and processed by the West Virginia Purchasing Division as Change Orders for subsequent years.

Response:

HP agrees.



4.2 Pricing Pages: Vendor should complete the Pricing Pages by filling in the price per requested unit. Vendor should complete the Pricing Pages in their entirety as failure to do so may result in Vendor's bids being disqualified.

4.2.1 The Pricing Pages contain a list of the Contract Items and estimated purchase volume. The estimated purchase volume for each item represents the approximate annual volume of anticipated purchases only. No future use of the Contract or any individual item is guaranteed or implied.

Response:

HP agrees. Please refer to **Exhibit_A Pricing Page – Revised 9-10-2018**.

4.2.2 Vendor should electronically enter the information into the Pricing Pages through wvOASIS, if available, or as an electronic document. In most cases, the Vendor can request an electronic copy of the Pricing Pages for bid purposes if unable to access the one provided in wvOasis by sending an email request to the following address: Mark.A.Atkins@wv.gov

Response:

HP agrees.

4.2.3 Vendor should provide with their bid a copy of any Software Terms and Conditions or licenses that the State of West Virginia or the Agency may have to agree or accept as a part of this solicitation. Vendor will be required to provide before a Purchase Order is issued.

Response:

HP agrees. Please refer to **Attachment 8**, for HP's Customer Terms, which includes software licensing terms and conditions.

4.2.4 Vendor should include with their bid a copy of any and all Maintenance Terms and Conditions or Licenses that the State of West Virginia or the Agency may be required to agree or accept as a part of this solicitation. Vendor will be required to provide before a Purchase Order is issued.

Response:

HP agrees. Please refer to **Attachment 8**, for HP's Customer Terms, which includes maintenance/support terms and conditions.

5 Ordering and Payment

5.1 Ordering: Vendor shall accept orders through wvOASIS, regular mail, facsimile, e-mail, or any other written form of communication. Vendor may, but is not required to, accept on-line orders through a secure internet ordering portal/website. If Vendor has the ability to accept on-line orders, it should include in its response a brief description of how Agencies may utilize the on-line ordering system. Vendor shall ensure that its on-line ordering system is properly secured prior to processing Agency orders on-line.

Response:

HP agrees. HP can provide online e-commerce ordering based on the State's request. HP e-commerce sites are properly secured.



5.2 Payment: Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia.

Response:

HP agrees.

6 Delivery and Return

6.1 Delivery Time: Vendor shall deliver standard orders within sixteen (16) working days after orders are received. Vendor shall deliver emergency orders within five (5) working days after orders are received. Vendor shall ship all orders in accordance with the above schedule and shall not hold orders until a minimum delivery quantity is met.

Response:

HP agrees.

6.2 Late Delivery: The Agency placing the order under this Contract must be notified in writing if orders will be delayed for any reason. Any delay in delivery that could cause harm to an Agency will be grounds for cancellation of the delayed order, and/or obtaining the items ordered from a third party.

6.2.1 Any Agency seeking to obtain items from a third party under this provision must first obtain approval of the Purchasing Division.

Response:

HP agrees. HP will provide a delay notice via email to the Agency email address provided on the WV PO.

6.3 Delivery Payment/Risk of Loss: Standard order delivery shall be FOB destination to the Agency's location. Vendor shall include the cost of standard order delivery charges in its bid pricing/discount and is not permitted to charge the Agency separately for such delivery. The Agency will pay delivery charges on all emergency orders provided that Vendor invoices those delivery costs as a separate charge with the original freight bill attached to the invoice.

Response:

HP agrees. Since HP's freight terms are F.O.B. Destination for all locations within the State, shipping and handling services include a guarantee that HP will replace any product lost or damaged during shipment. HP will be responsible for ensuring orders are delivered without damage and will be responsible for filing any freight claims. Customer Services is charged with initiating all such shipping and return issues within 24 hours of notification.

Standard ground delivery is included in the hardware pricing quoted for our public-sector customers, and delivery timeframes average three (3) business days but can range from 2-5 business days depending upon the destination location. Expedited or special delivery services, such as Inside Delivery, will incur additional charges that can be quoted on an as-needed basis as required.

Inside Deliveries

HP agrees that our package carriers will deliver to a guard/receptionist immediately inside the office at no additional charge. Deliveries of devices and accessories weighing less than 50 pounds are usually handled by package carriers.



For larger deliveries, HP will use a freight carrier. Freight carriers provide dock delivery, though will provide inside delivery to a single holding location at no additional charge.

6.4 Return of Unacceptable Items: If the Agency deems the Contract Items to be unacceptable, the Contract Items shall be returned to Vendor at Vendor's expense and with no restocking charge. Vendor shall either make arrangements for the return within five (5) days of being notified that items are unacceptable, or permit the Agency to arrange for the return and reimburse Agency for delivery expenses. If the original packaging cannot be utilized for the return, Vendor will supply the Agency with appropriate return packaging upon request. All returns of unacceptable items shall be FOB the Agency's location. The returned product shall either be replaced, or the Agency shall receive a full credit or refund for the purchase price, at the Agency's discretion.

Response:

HP agrees.

6.5 Return Due to Agency Error: Items ordered in error by the Agency will be returned for credit within thirty (30) days of receipt, FOB Vendor's location. Vendor shall not charge a restocking fee if returned products are in a resalable condition. Items shall be deemed to be in a resalable condition if they are unused and in the original packaging. Any restocking fee for items not in a resalable condition shall be the lower of the Vendor's customary restocking fee or 5% of the total invoiced value of the returned items.

Response:

HP agrees. We have also provided our State and Local Government and Education Customer Return Policy below.

State and Local Government and Education Customer Return Policy

Coverage: These guidelines apply only to returns initiated by State and Local Government or Education customers purchasing HP/Compaq branded product direct from HP Inc. (HP) or a customer purchase under one of HP's State and Local Government or Education direct contracts. A direct contract is defined as a contract by and between HP and a State, Local, or Education end user. This return policy does not apply to resellers purchasing directly from HP Direct under a contract held by and between the reseller and the end user. This return policy does not apply to loaners, early marketing units, or employee purchases administered as internal HP orders.

Products Not Eligible

- Factory Express Services: Products that require a custom image load, asset tagging, and/or special packaging are not eligible unless the products are damaged, customer received an overage, or HP incorrectly configured, ordered, or shipped product (HP error).
- Refurbished products: HP/Compaq branded refurbished products are not eligible.
- Consumable products: Printer cartridges, paper, open box software, etc. cannot be returned to HP.



- Third Party Options: Items where returns are otherwise governed by the original manufacturer cannot be returned to HP.
Note: The original manufacturer may provide its own warranties; the guidelines should be confirmed with the customer support representative when requesting a Return Good Authorization (RGA).
- Product not purchased from HP directly: Product purchased from another source, such as a reseller, distributor, etc. not covered under an HP Direct held contract.

Return of Products

Defective Product

For product that is defective on arrival, it is recommended that customers call Technical Support at 1-800-334-5144 to determine if the product can be corrected. Or, the customer may utilize the 30-day goodwill return policy and return the product by calling the Order Management Customer Service Representative at 1-800-888-3224, Option 2, Option 2.

Carrier Related Loss or Damaged Shipments

Customers should note damages or shortages on the Bill of Lading at the time of delivery. Within a reasonable time or not later than 30 days from delivery, notify the HP Customer Service team and provide a copy of the Bill of Lading/Packing Slip.

Concealed damage(s) or shortage(s) (where the box is in good condition, but product is missing or damaged) is an exception and should be reported as soon as practical after delivery in order for HP to establish the claim with the carrier.

HP is committed to customer satisfaction and values our relationship with State and Local Government and Education Customers. To show our commitment, HP is providing a goodwill right to return, or exchange of unused products within 30 days from receipt of the product. HP does not charge a restocking or handling fee for products returned within 30 days. It is at HP's sole discretion to accept return products after 30 days. If a product return is accepted after 30 days, a restocking fee may apply.

Procedures for Returns

The State or Local Government Customer should contact the assigned Customer Service Representative by calling 800-727-2472 to coordinate returns or replacements within 30 days from receipt of product. At that time, the customer will be issued an RGA number that will remain valid for a period of 15 calendar days from the date of issuance. All materials must be received within the RGA validation period.

The HP Customer Service Representative will schedule the pickup for returns and forward an email to the person requesting the return. Faxes can also be forwarded in place of an email. The email will include all the information regarding the return, including the RGA and carrier name and date of pickup. The Customer Service Representative will assist the customer on any other details or specifics regarding returns, credits, and refunds.

HP reserves the right to refuse any return that does not meet the requirements stated below:

- Product must be returned in the original shipping packaging. In the event the packaging is not available or unusable, it must be noted when requesting an RGA.



- If possible, remove all mailing labels on the outside of the box that reference the customer address, or mark out the mailing labels address with a marker. The customer will either receive a mailing label via email that should be attached to the return products and/or will be provided a label by the carrier. Be sure to mark your RGA number on the box.
- If product for more than one RGA is being returned in the same box, make sure that all RGA numbers are listed on both the mailing label and packing list. If products are received at the Returns Center without valid RGA numbers on the mailing label, your credit may be delayed, and proof of delivery or other supporting documentation may be required.
- The RGA number(s) must appear clearly on the box, as returns will not be accepted without an RGA number.
- Returns must be 100% complete, unused, and in original and re-sellable condition, with all original packaging, manuals, registration card(s), software, cabling, and accessories. If, after the product has been returned and inspected, it is discovered that components are missing from the return, HP reserves the right not to issue an RGA for the return of the missing components. If it is determined that there are missing components when the product is returned, and the customer has received a credit, the customer will be issued an invoice for the missing component. Missing components may include, but are not limited to, keyboard, mouse, software, speakers, accessories, drives, memory, microprocessors, and processor boards.
- RGA numbers that have been open for greater than 15 days may be cancelled, and the customer subsequently invoiced for the unreturned product. Another RGA can be requested as long as it is within 30 days of receipt of the product. Please note that all returned products must be credited against the account and order from which the product was originally invoiced.

All products must be returned to the address provided by the HP Customer Service Representative via email or by the carrier:

HP Returns
421 New Sanford Road
Dock Door 47
LaVergne, TN 37086
RGA XXXXXXXX

Please note: HP reserves the right to change any part of its return guidelines.

7 Vendor Default

- 7.1 The following shall be considered a vendor default under this Contract.
 - 7.1.1 Failure to provide Contract Items in accordance with the requirements contained herein.
 - 7.1.2 Failure to comply with other specifications and requirements contained herein.
 - 7.1.3 Failure to comply with any laws, rules, and ordinances applicable to the Contract Services provided under this Contract.
 - 7.1.4 Failure to remedy deficient performance upon request.

Response:

HP agrees.



- 7.2 The following remedies shall be available to Agency upon default.
- 7.2.1 Immediate cancellation of the Contract.
 - 7.2.2 Immediate cancellation of one or more release orders issued under this Contract.
 - 7.2.3 Any other remedies available in law or equity.

Response:

HP agrees.

8 Miscellaneous

- 8.1 No Substitutions: Vendor shall supply only Contract Items submitted in response to the Solicitation unless a contract modification is approved in accordance with the provisions contained in this Contract.

Response:

HP agrees.

- 8.2 Vendor Supply: Vendor must carry sufficient inventory of the Contract Items being offered to fulfill its obligations under this Contract. By signing its bid, Vendor certifies that it can supply the Contract Items contained in its bid response.

Response:

HP agrees.

- 8.3 Reports: Vendor shall provide quarterly reports and annual summaries to the Agency showing the Agency's items purchased, quantities of items purchased, and total dollar value of the items purchased. Vendor shall also provide reports, upon request, showing the items purchased during the term of this Contract, the quantity purchased for each of those items, and the total value of purchases for each of those items. Failure to supply such reports may be grounds for cancellation of this Contract.

Response:

HP agrees to provide the detailed quarterly sales reports by the end of the next month following the quarter end, as noted below.

Quarter End	Report Due Date
March 31	April 30
June 30	July 31
September 30	October 31
December 31	January 31

HP will generate a separate quarterly report that will include a listing of the serial number(s) and all service calls associated with the products purchased under this agreement, including the location and nature of the service call.



8.4 Contract Manager: During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract manager and his or her contact information below.

Contract Manager:	Debra Lee
Telephone Number:	(847) 537-0344 (office) or (847) 922-2977 (cell)
Fax Number:	(847) 572-1336
Email Address:	Debra.lee@hp.com



Ethics Disclosure

Response:

Since HP is a publicly traded company on the New York Stock Exchange (NYSE: HPQ), a Disclosure of Interested Parties form is not required by W. Va. Code § 6D-1-2.



Purchasing Affidavit

Per Section 37, Purchasing Affidavit of the General Terms and Conditions, please refer to the completed and signed Purchasing Affidavit form on the following page.



STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: HP Inc.

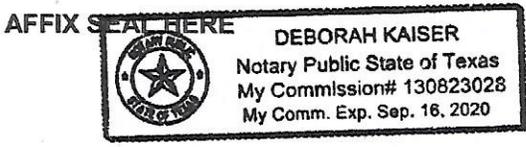
Authorized Signature: Nicole S. Hadley Date: 9-25-2018

State of Texas

County of Harris, to-wit:

Taken, subscribed, and sworn to before me this 25th day of September, 2018.

My Commission expires Sept 16, 2020.



NOTARY PUBLIC DKaiser

Exhibit_A Pricing Page – Revised 9-10-2018

Standard Products

HP's pricing for our Standard Proposed Products can be found on the following page.



CRFQ 0212 SWC190000001

(IP19) COMPUTERS AND PERIPHERALS

Est. Quantity	Specification	Manufacturer Name	Manufacturer Part Number	Item Description	Extended Description	Unit of Measure	List Price	Extended Price
4000	3.1.2	HP Inc.	Part # provided upon Award	Standard PC	HP ProDesk 400 G5 MT i5, 8GB RAM, 500GB HDD	EA	\$ 682.50	\$ 2,730,000.00
1000	3.1.3	HP Inc.	Part # provided upon Award	Power PC	HP ProDesk 400 G5 MT i7, 16GB RAM, 256GBGB SSD	EA	\$ 907.50	\$ 907,500.00
500	3.1.4	HP Inc.	Part # provided upon Award	Fixed Workstation	HP Z4G4 Workstation, 2GB GPU, 32GB RAM, 1TB HDD	EA	\$ 2,635.25	\$ 1,317,625.00
2000	3.1.5	HP Inc.	Part # provided upon Award	Standard Laptop	HP ProBook 650 G4 i5, 8GB RAM, 500GB HDD	EA	\$ 899.50	\$ 1,799,000.00
1000	3.1.6	HP Inc.	Part # provided upon Award	Power Laptop	HP ProBook 650 G4 i7, 16GB RAM, 256GB SSD	EA	\$ 1,082.50	\$ 1,082,500.00
500	3.1.7	HP Inc.	Part # provided upon Award	Tablet	HP EliteBook X360 1030 G2 i7, 8GB RAM, 256 GB SSD	EA	\$ 1,352.25	\$ 676,125.00
1000	3.1.8.1.1	HP Inc.	Part # provided upon Award	20" Monitor	HP N223 21.5" Monitor	EA	\$ 81.00	\$ 81,000.00
500	3.1.8.1.2	HP Inc.	Part # provided upon Award	24" Monitor	HP VH24 23.8" Monitor	EA	\$ 125.00	\$ 62,500.00
500	3.1.8.1.3	HP Inc.	Part # provided upon Award	27" Monitor	HP VH27 27" Monitor	EA	\$ 150.00	\$ 75,000.00
100	3.1.8.2	HP Inc.	Part # provided upon Award	Dock for Standard Laptop	HP USB-C G4 Docking station w/ DVI-D & VGA Adapters	EA	\$ 156.50	\$ 15,650.00
100	3.1.8.3	HP Inc.	Part # provided upon Award	Dock for Power Laptop	HP USB-C G4 Docking station w/ DVI-D & VGA Adapters	EA	\$ 156.50	\$ 15,650.00
100	3.1.8.4	HP Inc.	Part # provided upon Award	Dock for Tablet	HP USB-C G4 Docking station w/ DVI-D & VGA Adapters	EA	\$ 156.50	\$ 15,650.00
100	3.1.8.5	HP Inc.	F2B56AA	DVD/RW Drive	HP External USB DVD RW drive	EA	\$ 30.00	\$ 3,000.00
100	3.1.8.6	HP Inc.	Part # provided upon Award	Accidental Damage Coverage	ADP Care Pack upgrade on mobile equipment	EA	\$ 153.00	\$ 15,300.00
100	3.1.8.7	Sandisk	Part # provided upon Award	512 GB SSD 2.5"	SanDisk X600 512 GB 2.5" Internal Solid State Drive	EA	\$ 105.84	\$ 10,584.00
100	3.1.8.8	HP Inc.	Z0B14AA	Upgraded Video Card	AMD Radeon Pro WX 7100 8GB GraphicsCard	EA	\$ 699.00	\$ 69,900.00

TOTAL PRICE \$8,876,984.00

Vendor Name: HP Inc.
Contact Name: Jerome Gabryszewski
Email: jerome.gabryszewski@hp.com
Phone: (505) 415-7120

Alternate Products

HP's pricing for our Alternate Proposed Products can be found on the following page.



CRFQ 0212 SWC190000001

(IP19) COMPUTERS AND PERIPHERALS

Est. Quantity	Specification	Manufacturer Name	Manufacturer Part Number	Item Description	Extended Description	Unit of Measure	List Price	Extended Price
4000	3.1.2	HP Inc.	Part # provided upon Award	Standard PC	HP EliteDesk 705 G4 MT i5, 8GB RAM, 500GB HDD	EA	\$ 689.50	\$ 2,758,000.00
1000	3.1.3	HP Inc.	Part # provided upon Award	Power PC	HP EliteDesk 705 G4 MT i7, 16GB RAM, 256 GB SSD	EA	\$ 974.50	\$ 974,500.00
500	3.1.4	N/A	N/A	Fixed Workstation	N/A	EA	\$ -	\$ -
2000	3.1.5	HP Inc.	Part # provided upon Award	Standard Laptop	HP ProBook 650 G4 i5, 8GB RAM, 500GB HDD w/ DVD-RW	EA	\$ 908.50	\$ 1,817,000.00
1000	3.1.6	HP Inc.	Part # provided upon Award	Power Laptop	HP ProBook 650 G4 i7, 16GB RAM, 256GB SSD w/ DVD-RW	EA	\$ 1,090.50	\$ 1,090,500.00
500	3.1.7	N/A	N/A	Tablet	N/A	EA	\$ -	\$ -
1000	3.1.8.1.1	N/A	N/A	20" Monitor	N/A	EA	\$ -	\$ -
500	3.1.8.1.2	N/A	N/A	24" Monitor	N/A	EA	\$ -	\$ -
500	3.1.8.1.3	N/A	N/A	27" Monitor	N/A	EA	\$ -	\$ -
100	3.1.8.2	HP Inc./C2G	Part # provided upon Award	Dock for Standard Laptop	HP USB-C G4 Dock w/ C2G DVI-D & VGA Adapters	EA	\$ 143.94	\$ 14,394.00
100	3.1.8.3	HP Inc./C2G	Part # provided upon Award	Dock for Power Laptop	HP USB-C G4 Dock w/ C2G DVI-D & VGA Adapters	EA	\$ 143.94	\$ 14,394.00
100	3.1.8.4	HP Inc./C2G	Part # provided upon Award	Dock for Tablet	HP USB-C G4 Dock w/ C2G DVI-D & VGA Adapters	EA	\$ 143.94	\$ 14,394.00
100	3.1.8.5	N/A	N/A	DVD/RW Drive	N/A	EA	\$ -	\$ -
100	3.1.8.6	N/A	N/A	Accidental Damage Coverage	N/A	EA	\$ -	\$ -
100	3.1.8.7	N/A	N/A	512 GB SSD 2.5"	N/A	EA	\$ -	\$ -
100	3.1.8.8	HP Inc.	1ME40AA	Upgraded Video Card	NVIDIA Quadro P4000 (8GB) GraphicsCard	EA	\$ 875.00	\$ 87,500.00

TOTAL PRICE \$6,770,682.00

Vendor Name: HP Inc.
Contact Name: Jerome Gabryszewski
Email: jerome.gabryszewski@hp.com
Phone: (505) 410-6812

HP Attachments

The following HP attachments can be found on the subsequent pages.

- Attachment 1 – HP Hardware Support Onsite Service
- Attachment 2 – Absolute Data & Device Security Support Service
- Attachment 3 – HP Priority Access and Priority Management Services for Commercial Customers
- Attachment 4 – HP Documentation for Standard Proposed Products
- Attachment 5 – HP Documentation for Alternate Proposed Products
- Attachment 6 – Addendum Acknowledgement Form
- Attachment 7 – HP Certificates of Insurance (2)
- Attachment 8 – HP Customer Terms
- Attachment 9 – HP Inc. Certificate of Authorization



Attachment 1 – HP Hardware Support Onsite Service



Hardware Support Onsite Service



Care Pack, part of HP Care

Service feature highlights

- Remote problem diagnosis and support
- Improved technical communications from North American based technicians (HP commercial PCs only)
- Onsite hardware support
- Replacement parts and materials included
- Firmware updates for selected products
- Choice of coverage windows
- Choice of onsite response times for hardware support
- Escalation management
- Access to electronic support information and services
- HP electronic remote support solution (for eligible products only)
- Accidental damage protection (optional for eligible products only)
- Defective media retention (optional for eligible products only)
- Call-to-repair time commitment in lieu of onsite response time for hardware support (optional for eligible products only)
- Enhanced parts inventory management (included with select, optional call-to-repair time commitments)
- Desktop-/workstation-/thin client-/notebook-only coverage (optional for eligible products)
- Maintenance kit replacement Service

Service overview

Hardware Support Onsite Service provides high-quality remote assistance and onsite support for your Covered Product, helping you to improve product uptime. The “Covered Product” is your notebook, all-in-one, desktop, or tablet computer, Printer, or MFP identified on your invoice or order confirmation that is the subject of this Care Pack.

You have the flexibility to choose between multiple service-level options featuring several onsite response or call-to-repair time and coverage window combinations in various durations to address your specific service needs.

Service-level options with call-to-repair times provide IT managers with support specialists who will quickly begin troubleshooting the system to help return the hardware to operating condition within a specified timeframe.

Specifications

Table 1. Service features

Feature	Delivery specifications
Remote problem diagnosis and support	<p>Once the Customer has placed and HP has acknowledged the receipt of a call as described in the 'General provisions/Other exclusions' section, HP will work during the coverage window to isolate the hardware incident and to remotely troubleshoot, remedy, and resolve the incident with the Customer. Prior to any onsite assistance, HP may initiate and perform remote diagnostics using electronic remote support solutions to access covered products, or HP may use other means available to facilitate remote incident resolution.</p> <p>HP will provide telephone assistance for the installation of customer-installable firmware and Customer Self Repair parts during the service coverage window.</p> <p>Regardless of the Customer's coverage window, incidents with covered hardware can be reported to HP via telephone or Web portal, as locally available, or as an automated equipment reporting event via the HP electronic remote support solutions 24 hours a day, 7 days a week. HP will acknowledge the receipt by logging the call, assigning a case ID, and communicating that case ID to the Customer. HP retains the right to determine the final resolution of all reported incidents.</p>
Onsite hardware support	<p>For hardware incidents that cannot, in HP's judgment, be resolved remotely, an HP authorized representative will provide onsite technical support on covered hardware products to return them to operating condition. For certain products, HP may, at its sole discretion, elect to replace such products in lieu of repairing them. Replacement products are new or functionally equivalent to new in performance. Replaced products become the property of HP.</p> <p>Once an HP authorized representative arrives at the Customer's site, the representative will continue to deliver the service, either onsite or remotely, at the discretion of HP, until the products are repaired. Work may be temporarily suspended if parts or additional resources are required, but work will resume when they become available.</p> <p>To ensure high service quality and quick turnaround time is provided, the level of damage will determine whether the unit can be repaired onsite</p>

Onsite hardware support, continued	<p>(if onsite offering is included in coverage) or should be returned to the HP repair depot for service. Onsite repairs may occasionally necessitate the Service Provider to bring the unit back to their shop for repairs. Work to completion may not apply to onsite support provided for desktop, mobile, and consumer products. Repair is considered complete upon HP verification that the hardware malfunction has been corrected or that the hardware has been replaced.</p> <p>Fix-on-Failure: In addition, at the time of onsite technical support delivery, HP may:</p> <ul style="list-style-type: none"> • Install available engineering improvements to help the Customer ensure proper operation of the hardware products and maintain compatibility with HP-supplied hardware replacement parts. • Install available firmware updates defined by HP as non-customerinstallable that, in the opinion of HP, are required to return the Covered Product to operating condition or to maintain supportability by HP and for which the Customer has the required license to use, if applicable. <p>Fix-on-Request: In addition, at the Customer's request, HP will install during coverage hours critical firmware updates defined by HP as non-customer-installable and for which the Customer has the required license to use, if applicable. Critical firmware updates are firmware updates recommended by the HP product division for immediate installation.</p>
Replacement parts and materials	<p>HP will provide HP-supported replacement parts and materials necessary to maintain the Covered Product in operating condition, including parts and materials for available and recommended engineering improvements. Replacement parts provided by HP shall be new or functionally equivalent to new in performance.</p> <p>Replaced parts become the property of HP. Customers who wish to retain, degauss, or otherwise physically destroy replaced parts will be billed and required to pay the list price less any applicable discounts for the replacement part.</p> <p>Supplies and consumable parts are not supported and will not be provided as part of this service; standard warranty terms and conditions apply to supplies and consumable parts.</p> <p>Maximum supported lifetime/maximum usage: Parts and components that have reached their maximum supported lifetime and/or the maximum usage limit as set forth in the manufacturer's operating manual, product QuickSpecs, or the technical product data sheet will not be provided, repaired, or replaced as part of this service.</p>
Firmware updates for selected products	<p>As HP releases entitled firmware updates to HP hardware products, these updates are only made available to Customers with an active agreement that entitles them to access these updates.</p> <p>As part of this service, Customers will have the right to download, install, and use firmware updates for hardware products covered by this service, subject to all applicable license restrictions in HP's current standard sales terms.</p> <p>HP will verify entitlement to updates by reasonable means (such as an access code or other identifier), and the Customer is responsible for using any such access tools in accordance with the terms of this data sheet and other applicable agreements with HP.</p> <p>HP may take additional reasonable steps, including audits, to verify the Customer's adherence to the terms of their agreements with HP, including this data sheet.</p> <p>For Customers with licenses to firmware-based software products (features implemented in firmware activated by the purchase of a separate software license product), the Customer must also have, if available, an active HP Software Support agreement to receive, download, install, and use related firmware updates. HP will provide, install, or assist the Customer with installation of firmware updates as previously described in this document only if the Customer has the license to use the related software updates for each system, socket, processor, processor core, or end-user software license as allowed by the original HP or original manufacturer software license terms.</p>

Coverage window	<p>Calls received outside this coverage window will be logged at the time the call is placed to HP, but will not be acknowledged as described in the 'General provisions/Other exclusions' section until the next day for which the Customer has a coverage window.</p> <p>Coverage window options available for eligible products are specified in the Service-level options table.</p> <p>All coverage windows are subject to local availability. Contact a local HP sales office for detailed information on service availability.</p>
Onsite response time for hardware support	<p>For incidents with Covered Products that cannot be resolved remotely, HP will use commercially reasonable efforts to respond onsite within the specified onsite response time.</p> <p>Onsite response time specifies the period of time that begins when the initial call has been received and acknowledged by HP, as described in the 'General provisions/Other exclusions' section. The onsite response time ends when the HP authorized representative arrives at the Customer's site, or when the reported event is closed with explanation that HP has determined it does not currently require an onsite intervention.</p> <p>Response times are measured during the coverage window only and may be carried over to the next day for which there exists a coverage window. Response time options available for eligible products are specified in the Service-level options table. All response times are subject to local availability. Contact a local HP sales office for detailed information on service availability.</p>
Escalation management	<p>HP has established formal escalation procedures to facilitate the resolution of complex incidents. Local HP management coordinates incident escalation, enlisting the skills of appropriate HP resources and/or selected third parties to assist with problem-solving.</p>
Access to electronic support information and services	<p>As part of this service, HP provides access to certain commercially available electronic and Web-based tools. The Customer has access to:</p> <ul style="list-style-type: none"> • Certain capabilities that are made available to registered users, such as downloading selected HP firmware or patches which may require additional entitlement through HP Software support agreements, subscribing to hardware-related proactive service notifications, and participating in support forums for solving problems and sharing best practices with other registered users. • Expanded Web-based searches of entitled technical support documents to facilitate faster problem-solving. • Certain HP proprietary service diagnostic tools with password access • A Web-based tool for submitting questions directly to HP. The tool helps to resolve problems quickly with a pre-qualification process that routes the support or service request to the resource qualified to answer the question. The tool also allows the status of each support or service request submitted to be viewed, including cases submitted by telephone. • Search of HP and third-party hosted knowledge databases for certain third-party products in order to retrieve product information, get answers to support questions, and participate in support forums. This service may be limited by third-party access restrictions.
HP electronic remote support solution	<p>For eligible products, the HP electronic remote support solution provides robust troubleshooting and repair capabilities. It can include remote system access solutions and may offer a convenient central point of administration and an enterprise view of open incidents and history. An HP support specialist will only use the remote system access with the Customer's authorization. The remote system access may enable the HP support specialist to provide more efficient troubleshooting and faster problem resolution.</p>

Specifications (optional)

Table 2. Optional service features

Feature	Delivery specifications
Accidental damage protection	<p>For eligible Covered Products, specific service levels may be offered with protection against accidental damage from handling. If accidental damage protection was purchased, the Customer receives protection against accidental damage from handling for the Covered Product as part of this service.</p> <p>Accidental damage is defined as operational or mechanical failure caused by an accident from handling which occurs in the course of the normal intended use of the Covered Product. Coverage for accidental damage from handling includes non-intentional liquid spills in or on the unit, accidental drops or falls during the handling of the unit from not more than fifteen feet or five meters, and electrical surge that damages the Covered Product's circuitry.</p> <p>Additional details and exclusions pertaining to the accidental damage protection service feature are detailed in the "Service limitations" section.</p>
Defective media retention	<p>For eligible products, this service feature option allows the Customer to retain defective hard disk or eligible SSD/Flash Drive components that the Customer does not want to relinquish due to sensitive data contained within the disk ('Disk or SSD/Flash Drive') covered under this service. All Disk or eligible SSD/Flash Drives on a covered system must participate in the defective media retention. Notwithstanding anything to the contrary in this document or HP's current standard sales terms, HP waives the right to take possession and title of a defective Disk or SSD/Flash Drive covered by the defective media retention service feature option in the event a replacement product is delivered by HP to the Customer. The Customer will retain all defective Disk or SSD/Flash Drives supported by HP under the HP support agreement, and the Customer remains fully responsible for the protection and privacy of the data residing on the defective Disk or SSD/Flash Drive.</p>
Call-to-repair time commitment for hardware support	<p>A call-to-repair time commitment may be selected for eligible products in lieu of an onsite response time. For critical incidents (severity 1 or 2) with Covered Products that cannot be resolved remotely, HP will use commercially reasonable efforts to return the Covered Product to operating condition within the specified call-to-repair time commitment. For noncritical incidents (severity 3 or 4), or at the Customer's request, HP will work with the Customer to schedule an agreed-upon time for the remedial action to commence, and the call-to-repair time commitment will then start at that time. Incident severity levels are defined in 'General provisions.'</p> <p>Call-to-repair time refers to the period of time that begins when the initial call has been received and acknowledged by HP, as specified in 'General provisions.' Call-to-repair time ends with HP's determination that the hardware is repaired or when the reported event is closed with the explanation that HP has determined it does not currently require onsite intervention. Call-to-repair times are measured during the coverage window only and may be carried over to the next day for which there exists a coverage window.</p> <p>Call-to-repair time options available for eligible products are specified in the Service-level options table. All call-to-repair times are subject to local availability. Contact a local HP sales office for more information.</p>

Call-to-repair time commitment for hardware support, continued	<p>Repair is considered complete upon HP verification that the hardware malfunction has been corrected or that the hardware has been replaced. HP is not liable for any lost data and the Customer is responsible for implementing appropriate backup procedures. Verification by HP may be accomplished by the completion of a power-on self-test, stand-alone diagnostic, or visual verification of proper operation. At its sole discretion, HP will determine the level of testing necessary to verify that the hardware is repaired. At its sole discretion, HP may temporarily or permanently replace the product in order to meet the repair time commitment. Replacement products are new or functionally equivalent to new in performance. Replaced products become the property of HP.</p> <p>It will take 30 days from the time this service is purchased to set up and perform necessary audits and processes before the hardware call-to-repair time commitment is in effect. During this initial 30-day period and for up to 5 additional business days after the audit is completed, HP will provide a 4-hour onsite response time.</p>
Enhanced parts inventory management	<p>To support HP call-to-repair time commitments, an inventory of critical replacement parts is maintained for call-to-repair Customers. This inventory is stored at an HP designated facility. These parts are managed to allow for increased inventory availability and are accessible to HP authorized representatives responding to eligible support requests. Enhanced parts inventory management is included with select, optional call-to-repair time commitments.</p>
Maintenance kit replacement	<p>An HP trained technician travels to the Customer's site and provides all labor, parts, and materials necessary to replace the maintenance kit and clean the printer. HP may use remanufactured parts that are equivalent to new in performance; replaced parts become the property of HP. The repair commitment is complete on the Customer's printer when the technician replaces the maintenance kit and successfully prints a test page. Note: the printer must be operating properly before the kit can be installed (see the 'Service limitations' section).</p>

Specifications (optional)

Table 3. Optional service features

Option	Delivery specifications
Next-day response, standard business hours (9x5)	<p>Service is available 9 hours per day between 8:00 a.m. and 5:00 p.m. local time, Monday through Friday, excluding HP holidays.</p> <p>An HP authorized representative will arrive at the Customer's site during the coverage window to begin hardware maintenance service the next coverage day after the call has been received and acknowledged by HP. Calls received outside the coverage window will be acknowledged the next coverage day and serviced within the following coverage day.</p>
4-hour response, standard business hours (9x5)	<p>Service is available 9 hours per day between 8:00 a.m. and 5:00 p.m. local time, Monday through Friday, excluding HP holidays.</p> <p>An HP authorized representative will arrive at the Customer's site during the coverage window to begin hardware maintenance service within 4 hours after the call has been received and acknowledged by HP. The 4-hour onsite response time is measured during the coverage window only. For calls received after 1:00 p.m. local time, the response time may be carried over to the next coverage window.</p>
4-hour response, extended business hours (13x5)	<p>Service is available 13 hours per day between 8:00 a.m. and 9:00 p.m. local time, Monday through Friday, excluding HP holidays.</p> <p>An HP authorized representative will arrive at the Customer's site during the coverage window to begin hardware maintenance service within 4 hours after the call has been received and acknowledged by HP. The 4-hour onsite response time is measured during the coverage window only. For calls received after 5:00 p.m. local time, the response time may be carried over to the next coverage window.</p>

4-hour response, extended business hours (13x7)	<p>Service is available 13 hours per day between 8:00 a.m. and 9:00 p.m. local time, Monday through Sunday, including HP holidays.</p> <p>An HP authorized representative will arrive at the Customer's site during the coverage window to begin hardware maintenance service within 4 hours after the call has been received and acknowledged by HP. The 4-hour response time is measured during the coverage window only. For calls received after 5:00 p.m. local time, the response time may be carried over to the next coverage window.</p>
4-hour response, 24x7	<p>Service is available 24 hours per day, Monday through Sunday, including HP holidays.</p> <p>An HP authorized representative will arrive at the Customer's site any time and day of the year to begin hardware maintenance service within 4 hours after the call has been received and acknowledged by HP.</p>
6-hour call-to-repair, 24x7	<p>Service is available 24 hours per day, Monday through Sunday, including HP holidays.</p> <p>For critical incidents with Covered Products, HP will use commercially reasonable efforts to return the Covered Products to operating condition within 6 hours after the call has been received and acknowledged by HP.</p>

Coverage

This service provides coverage for eligible HP PC, HP Printer and MFP branded hardware products and HP-supported and supplied internal components such as memory and optical drives. This includes attached HP branded accessories purchased together and included in the original packaging of the main desktop, workstation, thin client, notebook, tablet or POS Printer or MFP product, such as mouse, keyboard, docking station, jacket, port replicator and AC power adapter finishing accessory or paper tray.

HP Care Pack Services with this coverage limitation do not cover external HP Monitors. All-in-One devices do include the display, which is not considered a separate, external Monitor. However, a second monitor attached to an All-in-One device, for example, would not be covered by this HP Care Pack.

The docking station or port replicator is covered within the country where the HP Care Pack was purchased, but is not covered outside the country of purchase.

For HP point-of-sale (POS) systems and bundled product solutions such as retail or mobile point of sale solutions this service covers the base unit only, unless the service states it is a POS solution service, which provides coverage for the base unit as well as up to six attached HP-branded peripherals such as cash drawers, printers, pole displays for monitors, and barcode readers or handheld scanners that have been sold as part of the POS or bundled product solution.

Coverage for eligible multivendor systems includes all standard vendor-supplied internal components and the external monitor, keyboard, and mouse.

Consumable items including, but not limited to, removable media, customer-replaceable batteries and tablet PC pens, maintenance kits, and other supplies, as well as user maintenance and non-HP devices, are not covered by this service. HP Notebook and Tablet long-life batteries are covered for up to 3 years.

For replacement parts and components that are discontinued, an upgrade path may be required. Upgrades for discontinued parts or components may in some cases result in additional charges to the Customer. HP will work with the Customer to recommend a replacement. Not all components will have available replacements in all countries due to local support capabilities.

Prerequisites

The Customer must have rightfully acquired the license for any underlying firmware that will be covered under these services.

HP, at its sole discretion, may require an audit on the Covered Products. If such an audit is required, an HP authorized representative will contact the Customer, and the Customer will agree to arrange for an audit to be performed within the initial 30-day timeframe. During the audit, key system configuration information is collected and an inventory of the Covered Products is performed. The information gathered in the audit enables HP to plan and maintain replacement part inventories at the appropriate level and location, and allows HP to survey and troubleshoot possible future hardware incidents so that repairs can be completed as quickly and efficiently as possible. At the sole discretion of HP, the audit may be performed onsite, via remote system access, via remote audit tools, or over the phone.

If an audit is required by HP, it will take 30 days from the time this service is purchased to set up and perform the audits and processes that must be completed before the hardware call-to-repair time commitment can be put in effect. The hardware call-to-repair time commitment will not take effect until five (5) business days after the audit has been completed. Until such time, service for the Covered Product will be delivered at a 4-hour onsite response time service level.

In addition, HP reserves the right to downgrade service to an onsite response time or cancel the service contract if critical audit suggestions are not followed or the audit is not performed within the specified timeframe, unless the delay is caused by HP.

For hardware onsite response time options, HP strongly recommends that the Customer install and operate the appropriate HP remote support solution, with a secure connection to HP, in order to enable the delivery of the service. For hardware call-to-repair time commitments, HP requires that the Customer install and operate the appropriate HP remote support solution, with a secure connection to HP, in order to enable the delivery of the service. Please contact a local HP representative for further details on requirements, specifications, and exclusions. If the Customer does not deploy the appropriate HP remote support solution, HP may not be able to provide the service as defined and is not obligated to do so. Additional charges will be applied for onsite installation of non-customer-installable firmware if the Customer does not deploy the appropriate HP remote support solution in cases where recommended and available. Installation of customer-installable firmware is the responsibility of the Customer. Additional charges will apply if the Customer requests that HP install customer-installable firmware and software updates. Any additional charges to the Customer will be on a time-and-materials basis, unless otherwise previously agreed in writing by HP and the Customer.

Customer responsibilities

If the Customer does not act upon the specified Customer responsibilities, at HP's discretion, HP or the HP authorized service provider will i) not be obligated to deliver the services as described, or ii) perform such service at the Customer's expense at the prevailing time and material rates.

If required by HP, the Customer or HP authorized representative must activate the hardware product to be supported within 10 days of purchase of this service, using the registration instructions within the Care Pack or the email document provided by HP, or as otherwise directed by HP. In the event that a covered product changes location, activation and registration (or a proper adjustment to existing HP registration) is to occur within 10 days of the change.

The call-to-repair time commitment is subject to the Customer providing immediate and unrestricted access to the system, as requested by HP. The call-to-repair time commitment does not apply when system access, including physical, remote troubleshooting, and hardware diagnostic assessments, is delayed or denied. If the Customer requests scheduled service, the call-to-repair time period begins at the agreed-upon scheduled time.

For hardware onsite response time options HP strongly recommends and for hardware call-to-repair time commitments, the Customer must install the appropriate HP remote support solution, with a secure connection to HP, and provide all necessary resources according to the HP remote support solution release notes, in order to enable the delivery of the service and options. When an HP remote support solution is installed, the Customer must also maintain

the contact details configured in the remote support solution that HP will use in responding to a device failure. Please contact a local HP representative for further details on requirements, specifications, and exclusions.

Upon HP request, the Customer will be required to support HP's remote problem resolution efforts. The Customer will:

- Provide all information necessary for HP to deliver timely and professional remote support and to enable HP to determine the level of support eligibility
- Start self-tests and install and run other diagnostic tools and programs
- Install customer-installable firmware updates and patches
- Perform other reasonable activities to help HP identify or resolve problems, as requested by HP

The Customer is responsible for installing, in a timely manner, critical customer-installable firmware updates, as well as Customer Self Repair (CSR) parts and replacement products delivered to the Customer.

The Customer agrees to pay additional charges if the Customer requests that HP install customer-installable firmware updates or patches. Any additional charges to the Customer will be on a time-and-materials basis, unless otherwise previously agreed in writing by HP and the Customer.

In cases where Customer Self Repair parts or replacement products are shipped to resolve a problem, the Customer is responsible for returning the defective part or product within a time period designated by HP. In the event that HP does not receive the defective part or product within the designated time period or if the part or product is degaussed or otherwise physically damaged upon receipt, the Customer will be required to pay the HP list price for the defective part or product, as determined by HP.

For Care Packs that include the accidental damage from handling service feature:

- It is the Customer's responsibility to report the accidental damage to HP within 30 days of the incident date so that HP can expedite system repair. HP reserves the right to deny repair under this coverage program for damages to systems on which the incident has been reported more than 30 days after the incident date.
- The use of this coverage requires an explanation of where and when the accident occurred as well as a detailed description of the actual event. Failure to provide this information will result in claim denial.
- If protective items such as covers, carrying cases, or pouches, etc., were provided or made available for use with the Covered Product, the Customer must continually use these product accessories to be eligible for protection under this accidental damage coverage service.

With the defective media retention service feature option, it is the Customer's responsibility to:

- Retain physical control of Disk or SSD/Flash Drives at all times during support delivery by HP; HP is not responsible for data contained on Disk or SSD/Flash Drives.
- Ensure that any Customer sensitive data on the retained Disk or SSD/Flash Drive is destroyed or remains secure.
- Have an authorized representative present to retain defective Disk or SSD/Flash Drives, accept replacement Disk or SSD/Flash Drives, provide HP with identification information for each Disk or SSD/Flash Drive retained hereunder, and, upon HP request, execute a document provided by HP acknowledging the retention of the Disk or SSD/Flash Drives.
- Destroy the retained Disk or SSD/Flash Drive and/or ensure that the Disk or SSD/Flash Drive is not put into use again.

- Dispose of all retained Disk or SSD/Flash Drives in compliance with applicable environmental laws and regulations.

For Disk or SSD/Flash Drives supplied by HP to the Customer as loaner, rental, or lease products, the Customer will promptly return the replacement Disk or SSD/Flash Drives at the expiration or termination of support with HP. The Customer will be solely responsible for removing all sensitive data before returning any such loaned, rented, or leased Disk or SSD/Flash Drive to HP, and HP shall not be responsible for maintaining the confidentiality or privacy of any sensitive data that remains on such Disk or SSD/Flash Drive.

Service limitations

At the discretion of HP, service will be provided using a combination of remote diagnosis and support, services delivered onsite, and other service delivery methods. Other service delivery methods may include the delivery, via a courier, of customer-replaceable parts such as a keyboard, a mouse, or, if agreed by the Customer, other parts classified by HP as Customer Self Repair parts, or an entire replacement product. HP will determine the appropriate delivery method required to provide effective and timely Customer support and meet the call-to-repair time commitment, if applicable.

HP has invested significantly in engineering products so they can be customer repairable. Customer Self Repair (CSR) is a key component of HP's warranty terms. It allows HP to ship replacement parts, such as a keyboard, a mouse, or other parts classified as CSR parts, directly to the Customer once a failure has been confirmed. Parts are generally shipped overnight so they can be received as quickly as possible. The Customer can then replace the parts at their convenience.

'Mandatory' CSR is part of the standard warranty associated with some products. CSR is optional for customers with an HP Care Pack or a contractual support agreement. 'Optional' allows the Customer to perform CSR or choose to have HP service personnel perform the replacement at no additional charge during the product service coverage period.

Care Pack and contractual support agreements that include "onsite" terms would result in CSR parts being shipped directly to the Customer if they choose CSR, and conversely, an HP support representative would arrive onsite to perform the repair if the Customer decides they do not want to utilize CSR.

Care Pack and contractual support agreements that include "offsite" terms such as Pickup and Return or Return to HP would require the Customer to deliver the product to an authorized HP repair location or ship the product to HP at HP's discretion if the Customer decides they do not want to utilize CSR.

If the Customer agrees to the recommended CSR and a CSR part is provided to return the system to operating condition, the onsite service level shall not apply. In those cases, it is HP's practice to express ship CSR parts that are critical to the product operation to the Customer location.

An onsite response time will not apply if the service can be delivered using remote diagnosis, remote support, or other service delivery methods described above.

For HP POS systems and bundled product solutions such as retail solutions, kiosks, or carts, service may be provided onsite for the base unit only. Service for attached peripherals will be provided by shipping replacement parts or entire replacement products for CSR or installation by the technical courier delivering the part or product.

If an upfront audit is required by HP, the hardware call-to-repair time commitment will not take effect until five (5) business days after the audit has been completed. In addition, HP reserves the right to downgrade service to an onsite response time or cancel the service contract if critical audit suggestions are not followed or the audit is not performed within the specified timeframe.

The following activities or situations will suspend the call-to-repair time calculation (if applicable) until they are completed or resolved:

- Any Customer or third-party actions or inaction impacting the repair process
- Any automated or manual recovery processes triggered by the hardware malfunction, such as disk mechanism rebuild, sparing procedures, or data integrity protection measures
- Any other activities not specific to the hardware repair but required to verify that the hardware malfunction has been corrected, such as rebooting the operating system

HP reserves the right to modify the call-to-repair time commitment as it applies to the Customer's specific product configuration, location, and environment. This is established at the time of support agreement order and is subject to resource availability.

Call-to-repair time commitments and onsite response times do not apply to the repair or replacement of defective or depleted batteries for selected enterprise storage arrays and enterprise tape products.

A call-to-repair time commitment does not apply when the Customer chooses to have HP prolong diagnosis rather than execute recommended recovery procedures.

If the Customer requests scheduled service, the call-to-repair time period begins at the agreed-upon scheduled time.

The following activities are excluded from this service:

- Backup, recovery, and support of the operating system, other software, and data
- Operational testing of applications, or additional tests requested or required by the Customer
- Troubleshooting for interconnectivity or compatibility problems
- Support for network-related problems
- Services required due to failure of the Customer to incorporate any system fix, repair, patch, or modification provided to the Customer by HP Services required due to failure of the Customer to take avoidance action previously advised by HP.
- Services that, in the opinion of HP, are required due to improper treatment or use of the product Services that, in the opinion of HP, are required due to unauthorized attempts by non-HP personnel to install, repair, maintain, or modify hardware, firmware, or software.

Exclusions to the accidental damage from handling service feature option

Eligibility for purchase of the accidental damage protection service feature requires the product to be covered by a factory warranty or a warranty extension service with coverage duration equal to or longer than the accidental damage protection service. The accidental damage protection service feature provides protection against sudden and unforeseen accidental damage from handling, provided such damage occurs in the course of regular use.

Except for products where such damage is specifically identified as being covered under the HP limited warranty, the HP limited warranty does not cover the following situations and damage due to:

- Normal wear and tear; change in color, texture, or finish; gradual deterioration; rust; dust; or corrosion
- Vandalism, fire, a vehicular or homeowner's accident, act of God (such as flood, natural disaster), or any other peril originating from outside the product.
- Damage due to police action, undeclared or declared war, nuclear incident, or terrorism.
- Exposure to weather conditions or environmental conditions that are outside of HP specifications, exposure to hazardous (including bio-hazardous or human or animal bodily fluids) materials, animal or insect damage or infestation.
- Operator negligence, misuse, mishandling.
- Improper electrical power supply, unauthorized repairs or attempts to repair, improper and

unauthorized equipment modifications, attachments or installation, defective batteries, battery leakage, lack of manufacturer-specified maintenance (including the use of inappropriate cleansers).

- Error in product design, construction, programming, or instructions
- Maintenance, repair, or replacement necessitated by loss or damage resulting from any cause other than normal use, storage, and operation of the product in accordance with the manufacturer's specifications and owner's manual
- Theft, loss, mysterious disappearance, or misplacement
- Data loss or corruption; business interruptions
- Fraud (including, but not limited to, incorrect, misleading, erroneous or incomplete disclosure of how the equipment was damaged to the Customer's adjudicator, the servicer, or HP)
- Accidental or other damage to the product that is cosmetic in nature, meaning damage that does not impact operation and functioning of the computer, including damage to case or cabinetry or other non-operating parts or components which does not affect the functionality of the Covered Product.
- Computer monitor screen imperfections including, but not limited to, 'burn-in' and missing pixels, caused by normal use and operation of the product
- Damage to product(s) whose serial numbers are removed or altered
- Damage or equipment failure that is covered by manufacturer's warranty, recall, or factory bulletins
- Damage caused during the Customer's shipment of the covered product to or from another location
- Damage to hardware, software, media, data, etc., stemming from causes including, but not limited to, viruses; application programs; network programs; upgrades; formatting of any kind; databases; files; drivers; source code; object code or proprietary data; any support, configuration, installation or reinstallation of any software or data; or use of damaged or defective media
- Any and all pre-existing conditions that occurred (i.e., took place) prior to the purchase date of the Care Pack; in addition, a 30-day waiting period must be observed for Care Packs purchased more than 30 days after the HW purchase before a claim can be filed with HP.
- Product obsolescence
- Any equipment relocated outside the country of purchase and not covered by a Travel + Accidental Damage Protection Care Pack
- Damaged or defective LCD screens when the failure is caused by abuse or is otherwise excluded herein
- Intentional damage that results in a cracked or damaged computer display screen or damaged monitor
- Alteration or modification of the Covered Product in any way
- Unexplained or mysterious disappearance and any willful act to cause damage to the Covered Product
- Reckless, negligent, abusive, willful, or intentional conduct while handling or using the product. Abuse is defined as the intentional non-utilization of protective items during product use, or the treatment and use of the Covered Product(s) in a harmful, injurious, or offensive manner that may result in its damage, and any willful or intentional damage to the product.
- If protective items such as covers, carrying cases, or pouches, etc., were provided or made available for use with the Covered Product, the Customer must continually use these product accessories to be eligible for protection under this accidental damage coverage service.

Limitations to the accidental damage from handling service feature option

The total amount that HP will pay for repairs or replacement made in connection with all claims for accidental damage from handling on any Covered Product shall not exceed the purchase price of that Covered Product excluding tax and shipping. In the event that HP, ITS AFFILIATES, SUPPLIERS, CONTRACTORS, RESELLERS, OR SERVICE PROVIDERS make repairs, which in the aggregate are equal to the purchase price of the Covered Product, or replace the Covered Product with a new, rebuilt, or refurbished product of equal or similar features and functionality, HP will have no further obligations under this Care Pack agreement regarding claims for accidental damage from handling for such Covered Product, but all other aspects of the Care Pack purchased will remain in effect unless specifically documented otherwise in the country of purchase. The cost of repair for any additional ADP claims will be charged on a time-and-materials basis.

WE SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, PROPERTY DAMAGE, LOST TIME, OR LOST DATA RESULTING FROM THE FAILURE OF ANY PRODUCT OR EQUIPMENT OR FROM DELAYS IN SERVICE OR THE INABILITY TO RENDER SERVICE.

HP reserves the right to physically audit your product and/or collaborate with the Customer to validate a claim submitted for accidental damage from handling.

HP may, at its sole discretion, elect to replace HP products in lieu of repairing them. The Covered Product becomes the property of HP and must be returned to HP (or HP designee) at HP expense. HP reserves the right to replace the product with a remanufactured or refurbished product. Technological advances may result in a replacement product with a lower selling price than the original product.

HP reserves the right to deny acceptance of requests to purchase the accidental damage from handling service feature at its sole discretion.

Limitations to the defective media retention service feature option

The defective media retention service feature option applies only to Disk or eligible SSD/ Flash Drives replaced by HP due to malfunction. It does not apply to any exchange of Disk or SSD/ Flash Drives that have not failed.

Data retentive components that are specified by HP as consumable parts and/or that have exceeded the maximum supported lifetime and/or the maximum usage limit as set forth in the manufacturer's operating manual, the product QuickSpecs, or the technical data sheet are not eligible for the defective media retention service feature option.

Defective media retention service coverage for options designated by HP as requiring separate coverage, if available, must be configured and purchased separately.

Failure rates on these components are constantly monitored, and HP reserves the right to cancel this service with 30 days' notice if HP reasonably believes that the Customer is overusing the defective media retention service feature option (such as when replacement of defective data retentive components materially exceeds the standard failure rates for the system involved).

Exclusions to the maintenance kit replacement service feature

Excluded from the maintenance kit replacement optional service feature are activities such as, but not limited to, the following:

- Any repair beyond the replacement of the maintenance kit; should the Customer's printer need any additional part replacements, there will be a separate charge for this service.
- Maintenance kits for HP printers can only be replaced by authorized HP technicians.

General provisions/Other exclusions

HP will acknowledge a call by logging a case, communicating the case ID to the Customer, and confirming the Customer's incident severity and time requirements for commencement of remedial action. Note: For events received via the HP electronic remote support solutions, HP is required to contact the Customer, determine the incident severity with the Customer, and arrange access to the system before the hardware call-to-repair time or hardware onsite response time period can start.

Hardware support onsite response time and call-to-repair time commitment may differ depending on incident severity. The Customer determines the incident severity level.

Incident severity is defined as:

- Severity 1—Critical Down: for example, production environment down: production system or production application down/at severe risk; data corruption/loss or risk; business severely affected; safety issues
- Severity 2—Critically Degraded: for example, production environment severely impaired; production system or production application interrupted/compromised; risk of reoccurrence; significant impact on business
- Severity 3—Normal: for example, non-production system (e.g., test system) down or degraded; production system or production application degraded with workaround in place; noncritical functionality lost; limited impact on the business
- Severity 4—Low: for example, no business or user impact

Travel zones

Travel to sites located within 200 miles (320 km) of an HP designated support hub is provided at no additional charge. If the site is located more than 200 miles (320 km) from the HP designated support hub, there will be an additional travel charge.

Travel zones and charges, if applicable, may vary in some geographic locations. Response times to sites located more than 100 miles (160 km) from an HP designated support hub will have modified response times for extended travel, as shown in the table below.

A 6-hour call-to-repair time commitment is available for sites located within 50 miles (80 km) of an HP-designated support hub. For sites that are located within 51 to 100 miles (81 to 161 km) of an HP-designated support hub, an adjusted hardware call-to-repair time commitment applies, as shown in the table below.

The 6-hour hardware call-to-repair time commitment is not available for sites located more than 100 miles (160 km) from an HP-designated support hub.

Other call-to-repair times are subject to adjustment for sites located more than 100 miles from an HP-designated support hub. Travel zones and charges, if applicable, may vary in some geographic locations. For more information on travel zones, contact a local HP sales office.

Zone	Distance from HP Support Responsible Office	Next Business day Onsite Response Time	Travel Zone Charges
Zones 0 to 2	0-50 miles (0-80 km)	Next business day	No Uplift
Zone 3	51-100 miles (81-160km)	Next business day	No Uplift
Zone 4	101-200 miles (161-320km)	1 additional business day	No Uplift
Zone 5	201-300 miles (321-480km)	2 additional business days	Custom Quoted based on actual travel charges
Zone 6	Beyond 300 miles (+480km)	Not Available	Custom Quoted based on actual travel charges

Zone	Distance from HP Support Responsible Office	4-hour Onsite Response Time	6-hour Hardware Call-to-Repair Time Commitment	Travel Zone Charges
Zones 0 to 2	0-50 miles (0-80 km)	4 hours	6 hours	No Uplift
Zone 3	51-100 miles (81-160km)	4 hours	8 hours	No Uplift
Zone 4	101-200 miles (161-320km)	8 hours	Not Available	No Uplift
Zone 5	201-300 miles (321-480km)	Not Available	Not Available	Custom Quoted based on actual travel charges
Zone 6	Beyond 300 miles (+480km)	Not Available	Not Available	Custom Quoted based on actual travel charges

Ordering information

All units and options with individually sold Care Pack must be ordered with the same service level as the product they are contained in if that service level is available for those units and options.

Availability of service features and service levels may vary according to local resources and may be restricted to eligible products and geographic locations. To obtain further information or to order HP Hardware Support Onsite Service, contact a local HP sales representative.

For more information

For more information on HP Services, contact any of our worldwide sales offices or resellers or visit the following website:

HP PC and print services: hp.com/go/pcandprintservices

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Attachment 2 – Absolute Data & Device Security Support Service





Absolute Data & Device Security Support Service

Care Pack, part of HP Care

Service benefits

Lifecycle security

Apply a layer of security across the entire lifecycle of each device and receive alerts if specific conditions occur. Some examples include securing new devices in transit; validating end users; and performing hardware/software inventories, blacklisted applications, and certified end-of-life data delete protocols.

Risk assessment

Monitor device activity and status, and receive alerts if specific conditions occur. Examples include noncompliant device location; the status of complementary security technologies such as encryption, anti-malware, and SCCM; offline device control; blacklisted applications; and rogue employees.

Risk response

Remotely invoke security commands and other measures to avoid a significant security incident. Some examples include end-user messaging, locking a device until its status is confirmed, definitive proof that endpoint data and corporate networks were not accessed while a device was at risk, remote retrieval and deletion of endpoint data, chain of custody, and endpoint investigations.

Service overview

The strategic global relationship between Absolute and HP Care provide your organization with world-class hardware technology and endpoint security and management for your devices.

Absolute provides persistent endpoint security and data risk management solutions for computers, tablets, and smartphones. Its solutions offer a unique and trusted layer of security, so customers can manage mobility while remaining firmly in control. With over 30,000 commercial customers worldwide and more than 20 years of experience in the industry, Absolute is a leader in device security and management tracking. The Absolute Data & Device Security (DDS) solution (formerly Absolute Computrace®) provides your organization with actionable intelligence to prove compliance and deliver comprehensive visibility and control over your devices and data—anytime, anywhere.

Absolute Data & Device Security Support Service offers multiple service levels of Absolute DDS products to meet your business needs.

Persistence technology

HP devices have Persistence® technology embedded in their firmware. Once activated, it provides a reliable two-way connection, so you can confidently manage mobility, investigate potential threats, and take action if a security incident occurs. The ability to communicate with endpoints—regardless of user or location—means that you can receive timely device and event information. Most importantly, you can apply remote security measures to protect each device and the data it contains. No other technology can do this. For a complete listing of HP devices with Persistence technology embedded in the firmware, visit: absolute.com/en/partners/oem/hp

Table 1. Service features matrix

	Device Theft Investigation & Recovery	Healthcare Endpoint Investigations	Safe Schools**	Software Asset Reports	Security Reports	Geotechnology	Geofencing	Data Delete	Device Freeze	End User Messaging
Absolute DDS Premium***	•			•	•	•	•	•	•	•
Absolute DDS Professional				•	•	•	•	•	•	•
Absolute DDS Standard								•	•	•
Absolute DDS for Education Premium	•		•	•	•	•	•	•	•	•
Absolute DDS for Education Professional				•	•	•	•	•	•	•
Absolute DDS for Education Standard				•		•				
Absolute DDS for Healthcare Premium*	•	•		•	•	•	•	•	•	

* Available in the US only

** Safe Schools is available in North America and the UK only

*** Includes Mobile Basic, Mobile Standard, and Mobile Premium features

Specifications

Table 2. Service features

Feature	Delivery specifications
Capability overview	Depending on the Absolute DDS Support Service purchased, the following features may apply:
Reporting and analytics	Collect highly accurate information from each device, including historical data, and determine what's installed on a device. Identify events and activities that could be precursors to a security incident, including changes to IP address, location, and user; noncompliant software/hardware installations; and more. Receive a notification if these activities occur.
Geotechnology	Track assets on Google Maps™, including recent and historical locations. Create geofences based on corporate policies, and investigate devices that are out of bounds or entering an unauthorized location.
Risk assessment	Identify risk conditions and receive a notification if these conditions occur. Key security data integrates automatically with security information and event management (SIEM) solutions. Validate the status of complementary security applications such as encryption, anti-malware, and System Center Configuration Manager (SCCM). Use these reports to prove to auditors that security measures were properly implemented and in place at the time of a security incident.
Risk response	Remotely recover or delete data. Set policies to ensure offline devices are automatically protected. Freeze a device and communicate with the user to verify status. Produce an audit log to prove that data on a compromised device was properly secured, not accessed, and safely deleted. Use certified data delete workflows to decommission a device.
Endpoint investigations	Leverage the Absolute Investigations team to determine the cause of an endpoint security incident. Identify and eliminate insider threats. Refine best practices so the same incident does not reoccur. Determine if data was accessed during an incident, and whether or not a data breach notification is required. Recover stolen devices.
Device Theft Investigation & Recovery	Leverage the Absolute Investigations team to determine the cause of an endpoint security incident, identify and eliminate insider threats, refine security best practices, and determine if data was accessed during an incident, and whether or not a data breach notification is required.
Healthcare Endpoint Investigations	Leverage the HealthCare Information Security and Privacy Practitioners (HCISPPs) and ASIS Certified Protection Professionals (CPPs) on the Absolute Investigations team to determine the cause of an endpoint security incident. Identify and eliminate insider threats. Refine best practices so the same incident does not reoccur. Determine if data was accessed during an incident, and whether or not a data breach notification is required.
Absolute Safe Schools	Absolute Safe Schools is an integrated program that works in conjunction with existing Absolute theft recovery technology. Overseen by the Absolute Investigations team, Absolute Safe Schools can help keep students, school environments, and devices safe.
Software Asset Reports	Collect incredibly accurate information from each device, including historical data. Determine what's installed on a device to ensure compliance.
Security Reports	Identify risk conditions and receive a notification if these conditions occur. Key security data integrates automatically with SIEM solutions. Validate the status of complementary security applications such as encryption, anti-malware, and SCCM. Use these reports to prove to auditors that security measures were properly implemented and in place at the time of a security incident.

Feature	Delivery specifications
Geofencing	Create geofences based on organizational policies and receive an alert to investigate devices that are out of bounds or entering an unauthorized location.
Data Delete	Remotely delete data from at-risk devices.
Device Freeze	Remotely freeze suspicious devices until the status can be verified.
End User Messaging	Remotely communicate with end users to verify the status of a device.

Customer responsibilities

Product and factory installation information

The Customer must register the covered hardware and Care Pack immediately after purchase, using the registration instructions provided by HP.

In addition, to be eligible for the Absolute DDS Support Service, the Customer must work with Absolute to install the necessary software on the required Customer's device. None of the services can be provided until the Absolute software agent is installed. The Customer will receive a welcome email from Absolute (fulfillment@absolute.com) with instructions on how to download and install the Absolute software agent.

Alternatively, HP can pre-install Absolute DDS on the Customer's devices before deployment via factory installation. The Customer should contact an HP sales representative for more information on this option.

The Absolute software agent must be installed by the Customer before the service can be activated. In order to use security features such as geotechnology and risk response, the Customer must first sign a pre-authorization agreement and follow other instructions.

For additional information regarding customer responsibility, service limitations, and other terms, please visit the Absolute Software Service Agreement page: absolute.com/en/partners/oem/hp

Support

Absolute is committed to providing customers with world-class support. Solutions and help for Absolute products is available from the Absolute online support resources page: absolute.com/support

Absolute Investigations

Absolute customers that engage with the Absolute Investigations team are able to adjust their infrastructure and immediately remove points of weakness, reducing the risk to the organization and precluding corporate liability.

Absolute DDS customers can take advantage of endpoint investigations delivered by the Absolute Investigations team. They will help customers to:

- Determine the cause of an endpoint security incident
- Identify and eliminate insider threats
- Refine best practices so the same incident does not reoccur
- Determine if data was accessed during an incident, and whether or not a data breach notification is required
- Recover stolen devices

To learn more, download the Absolute Investigations datasheet: absolute.com/en/resources/datasheets/absolute-investigative-services

Coverage

Table 3. Product coverage by geographic region

Type of Care Pack service sold	Americas			EMEA	APJ
	U.S.	Puerto Rico	Canada	EMEA	
Absolute DDS Premium*	•	•	•	•	•
Absolute DDS Professional*	•	•	•	•	•
Absolute DDS Standard*	•	•	•	•	•
Absolute DDS for Education Premium**	•	•	•	•	•
Absolute DDS for Education Professional	•	•	•	•	•
Absolute DDS for Education Standard	•	•	•	•	•
Absolute DDS for Healthcare Premium	•				

Legacy Computrace Mobile functionality is now fully supported across all Absolute DDS product editions.

* Available in the US only

** Safe Schools is available in North America and the UK only

Learn more at
hp.com/go/pcandprintservices

Sign up for updates
hp.com/go/getupdated



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4AA2-1087ENUS, November 2015, Rev. 8



Attachment 3 – HP Priority Access and Priority Management Services for Commercial Customers



Specifications

Table 1. HP Priority Access Service features

Feature	Delivery specifications
Technical Support Design for IT	Designed to support IT professionals, rather than end users, this feature leverages the Customer's diagnosis, bypassing standard troubleshooting steps and resulting in up to 30 percent shorter support call times than HP standard remote support.
Global Experience	This provides a globally consistent experience in more than 60 countries and 15 languages. Refer to the 'Geographic coverage' section (table 4) for specific country information.
Direct Access	Customer IT help desk teams get prioritized access to specially trained HP IT support professionals with a toll-free number and a unique PIN.
Online Case Management Tools	This feature provides support tools with Web-based submission and tracking solutions. The HP Support Case Manager (SCM) provides 24x7 access and enables the Customer to submit and manage support cases via the Internet. Additional access information is included in program onboarding information that is sent to the Customer upon purchase.

Table 2. HP Priority Management Service features

Feature	Delivery specifications
Priority Access	This includes all of the features of the Priority Access Service.
Dedicated Support Contact	<p>An HP global customer support manager (GCSM), who is located in the Customer's region and is dedicated to meeting global support needs, will be assigned to the Customer.</p> <p>The HP GCSM is a highly trained professional who has a thorough understanding of the Customer's business and strategic IT requirements. The GCSM is located in the same geographic region as the Customer's headquarters location, is aligned with the Customer's executive management, and makes strategic support decisions.</p> <p>If an issue does arise that requires special attention, the GCSM will act as the Customer's single point of contact within HP. In that role, the GCSM can align HP's service professionals to quickly and effectively address the Customer's unique requirements.</p>
Proactive Support Plan	<p>An HP support manager will work with the Customer to understand their business and strategic IT requirements and then design and implement a proactive support plan tailored to meet their needs.</p> <p>Once the Customer purchases this service, the support manager will meet with the Customer and the HP account team to gain a thorough understanding of the Customer's business and IT requirements, including a review and documentation of the Customer's geographical footprint, entitlements, SLAs, and specific support instructions.</p>
Problem Management	<p>This feature provides a dedicated support expert to proactively manage and address the Customer's support needs and performance.</p> <p>The HP GCSM regularly monitors key operational performance indicators and tracks results against the Customer's established targets. Through regular Customer updates, this feature provides thorough root-cause analysis, corrective action plans, and resolution timelines.</p>
Parts Prioritization	<p>Whether the Customer has experienced a natural disaster or everyday technical issues, this feature provides the Customer with proactive prioritized access to parts that improve end-user uptime.</p> <p>In the event that a part shortage occurs, fulfillment of orders for HP Priority Management customers will be prioritized at the time inventory becomes available. Additionally, support teams may utilize exceptional methods to acquire inventory for these customers including, but not limited to, internal inventory sourcing, expedited factory deliveries, and broker purchases.</p>

Feature	Delivery specifications
Performance Management	<p>This provides executive-level reporting that assesses the Customer's unique product quality and service status, as well as regular status communications to track the support health of the installed base.</p> <p>This feature provides monthly and quarterly reviews with the HP global support manager to recap performance metrics. Quarterly performance summary reports provide action plans to address any deviations from targets; monthly open and closed escalations include an issue summary and root-cause action plans.</p>

Table 3. Service-level options

Option	Delivery specifications
Duration	HP Priority Services are available in 1-year or 3-year coverage durations. The coverage duration is indicated in the description of the selected package.

Service eligibility

- Only HP PC products and HP-supported products that are sold by HP or an HP authorized reseller are eligible; the service is limited to the following PC products: desktops, notebooks, workstations, retail point-of-sale products, thin clients, and tablets.
- The Customer must have a valid HP warranty or HP extended hardware service contract for any hardware receiving this service.
- HP requires that customers cover 100 percent of their in-warranty installed base of HP PC units when purchasing HP Priority Services.
- The Customer must have an IT department or a Customer-authorized IT help desk service provider that conducts hardware diagnosis for the Customer's end-user HP PC technical issues. Only the Customer's IT help desk professional or those of a Customer-authorized partner will be allowed to contact HP Priority Services for support.
- Customers purchasing the Priority Access Service must have an installed base of at least 250 in-warranty HP PC units.
- Customers purchasing the Priority Management Service must have an installed base of at least 1,000 in-warranty HP PC units.

Geographic coverage

Table 4. Geographic coverage

Region	Countries
Americas	Argentina, Brazil, Canada, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru, Puerto Rico, Uruguay, United States, Venezuela
Europe, Middle East, and Africa	Austria, Belgium, Czech Republic, Denmark, Egypt, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Luxembourg, Morocco, the Netherlands, Nigeria, Norway, Poland, Portugal, Qatar, Russia, Saudi Arabia, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, United Arab Emirates, United Kingdom
Asia Pacific and Japan	Australia, China, Hong Kong, India, Indonesia, Japan, Malaysia, New Zealand, Philippines, South Korea, Singapore, Taiwan, Thailand

Languages supported

The following languages are supported: Bahasa, Cantonese, Dutch, English, French, German, Hindi, Italian, Japanese, Korean, Mandarin, Polish, Portuguese, Spanish, Thai, and Turkish.

Customer responsibilities

If the Customer does not act upon the specified Customer responsibilities, at HP's discretion, HP or the HP authorized service provider will i) not be obligated to deliver the services as described or ii) perform such service at the Customer's expense at the prevailing time and material rates.

The Customer will:

- Provide an accurate estimate of the entire HP PC installed base with a valid HP warranty or HP extended hardware service contract.
- Prior to a support incident, conduct internal troubleshooting and diagnosis
- During a support incident, have the Customer's designated support contact perform the following:
 - Provide all information necessary for HP to deliver timely and professional support and to enable HP to determine the level of support eligibility
 - Perform other reasonable activities to help HP identify or resolve problems, as requested by HP

Service limitations

Activities such as, but not limited to, the following are excluded from this service:

- Hardware without a valid HP warranty or HP extended service contract (except as noted in the 'Service eligibility' section)
- Resolution of hardware-related problems encountered during the verification testing process, unless covered by an active HP warranty or an applicable HP Hardware Support agreement
- Services required due to failure of the Customer to incorporate any system fix, repair, patch, or modification provided to the Customer by HP
- Services required due to failure of the Customer to take avoidance action previously advised by HP
- Services that, in the opinion of HP, are required due to unauthorized attempts by non-HP personnel to install, repair, maintain, or modify hardware, firmware, or software
- Any services not clearly specified in this document

Parts prioritization is not available in the following countries: Dominican Republic, Ecuador, Guatemala, Honduras, Nicaragua, and Uruguay.

General provisions/Other exclusions

- HP Priority Services will be activated within 30 days of purchase of the service.
- HP reserves the right to deny this service if the Customer provides inaccurate or fraudulent information regarding their in-warranty PC installed base.
- HP reserves the right to conduct routine audits of the Customer's in-warranty installed base to ensure that there is an accurate sizing of the fleet.
- HP's ability to deliver this service is dependent upon the Customer's full and timely cooperation with HP, as well as the accuracy and completeness of any information and data the Customer provides to HP.
- Geographic locations and languages are subject to change.

Ordering information

To obtain further information or to order HP Priority Services, contact a local HP sales representative.

Table 5. Product ordering information

Service part no.	Description
U7C98E	HP 1yr Priority Access PC 250+ seats SVC
U7C99E	HP 3yr Priority Access PC 250+ seats SVC
U7D00E	HP 1yr PriorityManagemt PC 1k+ seats SVC
U7D01E	HP 3yr PriorityManagemt PC 1k+ seats SVC

For more information

For additional information on HP Priority Services in your region, visit:
hp.com/services/support

Sign up for updates
hp.com/go/getupdated



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Attachment 4 – HP Documentation for Standard Proposed Products

As requested in Specifications, subsections 3.1.9.1.2 and 3.1.9.1.5, Technical Requirements, specification sheets/product literature for the following proposed products are included in the datasheets and EPEAT certifications on the subsequent pages.

Datasheets

- **Standard PC and Power PC:** HP ProDesk 400 G5 Microtower
- **Fixed Workstation:** HP Z4 G4 Tower Workstation
- **Standard Laptop and Power Laptop:** HP ProBook 650 G4
- **Tablet:** HP EliteBook x360 1030 G2
- **20-inch Monitor:** HP N223 21.5-inch Monitor
- **24-inch Monitor:** HP VH24 23.8-inch Monitor
- **27-inch Monitor:** HP VH27 27-inch Monitor
- **Dock for Laptops and Tablet:** HP Elite USB-C G4 Docking Station
- **Adapters for Docking Station:** HP DisplayPort DVI-D Adapter and HP DisplayPort VGA Adapter
- **DVD/RW Drive:** HP External USB DVD-RW
- **512 GB SSD 2.5-inch:** SanDisk X600 3D NAND SATA External SSD Drive
- **Upgraded Video Card:** AMD Radeon Pro WX 7100 8BG Graphics Card

EPEAT Certifications

- **Standard PC and Power PC:** HP ProDesk 400 G5 Microtower
- **Fixed Workstation:** HP Z4 G4 Tower Workstation
- **Standard Laptop and Power Laptop:** HP ProBook 650 G4
- **Tablet:** HP EliteBook x360 1030 G2
- **20-inch Monitor:** HP N223 21.5-inch Monitor
- **24-inch Monitor:** HP VH24 23.8-inch Monitor
- **27-inch Monitor:** HP VH27 27-inch Monitor



HP ProDesk 400 G5 Microtower PC



Designed to fit the modern workspace now and in the future, the stylishly designed, reliable, and secure HP ProDesk 400 MT is a powerful PC with scalable performance that can grow with your business.

HP recommends Windows 10 Pro.

- Windows 10 Pro¹
- Intel® Core™ processors²



Powerful options

Power through your day with a high-performance 8th Gen Intel® Core™ processor² and options that include Intel® Optane™ memory³, SSD storage⁴, and up to 32 GB of DDR4 memory⁴.

Expansion that extends your investment

The full value of your investment comes with expansion that extends the life of your PC. The HP ProDesk 400 MT has three bays and three full-height slots, and optional ports⁴ to connect to up to three HP displays⁵.

Connection hub

With eight total USB ports and optional Bluetooth™⁴ connectivity, the HP ProDesk 400 MT becomes a hub for all your devices in the office.

Tested and ready

The reliable HP ProDesk 400 MT experienced 120,000 hours of the HP Total Test Process⁶ and now has an optional dust filter⁴ to help extend the life of your PC by reducing airborne particulate intake in the most demanding work environments.

Featuring

- Power through your day with Windows 10 Pro with built-in security, collaboration, and connectivity.¹
- HP Client Security Manager Gen4 features multi-factor authentication, HP Device Access Manager, HP SpareKey, and HP Password Manager. These tools work to keep data out of reach and defend against theft, attacks, and unauthorized users.⁷
- Keep productivity high and downtime low with the fully integrated and automated features of the HP BIOSphere Gen4 firmware ecosystem. Your PCs have extra protection thanks to automatic updates and security checks.⁸
- The HP Manageability Integration Kit helps speed up image creation and management of hardware, BIOS, and security through Microsoft System Center Configuration Manager.⁹
- Help protect your PC from websites, read only Microsoft® Office and PDF attachments, malware, ransomware, and viruses with hardware-enforced security from HP Sure Click.¹⁰
- Greatly improve the transfer rates of user's data, voice, and video communication when connecting over challenged LAN or Wi-Fi networks with HP Velocity.⁴
- Enjoy always-on, included self-help support built right into your PC, for the life of your PC.¹¹
- ITDMs can quickly help create, improve, and secure custom Windows images with HP Image Assistant Gen3.

HP ProDesk 400 G5 Microtower PC Specifications Table



Form Factor	Microtower
Available Operating System	Windows 10 Pro 64 – HP recommends Windows 10 Pro. ¹ Windows 10 Pro 64 (National Academic only) ² Windows 10 Home 64 ¹ Windows 10 Home Single Language 64 ¹ FreeDOS 2.0
Processor Family⁴	Intel® Celeron® processor (G4900 is Windows 10 only) Intel® Pentium® Gold processor 8th Generation Intel® Core™ i3 processor (i3-8100, i3-8300) 8th Generation Intel® Core™ i5 processor (i5-8500, i5-8600) 8th Generation Intel® Core™ i5+ processor (i5-8500, i5-8600) 8th Generation Intel® Core™ i7 processor (i7-8700) 8th Generation Intel® Core™ i7+ processor (i7-8700)
Available Processors^{33,34,35}	Intel® Celeron® G4900 with Intel® UHD Graphics 610 (3.1 GHz, 2 MB cache, 2 cores) Intel® Pentium® Gold G5400 with Intel® UHD Graphics 610 (3.7 GHz, 4 MB cache, 2 cores) Intel® Pentium® Gold G5500 with Intel® UHD Graphics 630 (3.8 GHz, 4 MB cache, 2 cores) Intel® Core™ i3-8100 with Intel® UHD Graphics 630 (3.6 GHz, 6 MB cache, 4 cores) Intel® Core™ i3-8300 with Intel® UHD Graphics 630 (3.7 GHz, 8 MB cache, 4 cores) Intel® Core™ i5+ 8500 (Core™ i5 and 16 GB Intel® Optane™ memory) (3 GHz base frequency, up to 4.1 GHz with Intel® Turbo Boost Technology, 9 MB cache, 6 cores) Intel® Core™ i5+ 8600 (Core™ i5 and 16 GB Intel® Optane™ memory) (3.1 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 9 MB cache, 6 cores) Intel® Core™ i5-8500 with Intel® UHD Graphics 630 (3 GHz base frequency, up to 4.1 GHz with Intel® Turbo Boost Technology, 9 MB cache, 6 cores) Intel® Core™ i5-8600 with Intel® UHD Graphics 630 (3.1 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 9 MB cache, 6 cores) Intel® Core™ i7+ 8700 (Core™ i7 and 16 GB Intel® Optane™ memory) (3.2 GHz base frequency, up to 4.6 GHz with Intel® Turbo Boost Technology, 12 MB cache, 6 cores) Intel® Core™ i7-8700 with Intel® UHD Graphics 630 (3.2 GHz base frequency, up to 4.6 GHz with Intel® Turbo Boost Technology, 12 MB cache, 6 cores)
Chipset	Intel® B360
Maximum Memory	32 GB DDR4-2666 SDRAM ^{6,7} (Transfer rates up to 2666 MT/s.)
Memory Slots	2 DIMM
Internal Storage	500 GB up to 2 TB SATA HDD ³ 500 GB SATA SED Opal 2 HDD ³ 500 GB SATA FIPS SED HDD ³ 256 GB up to 512 GB SATA SSD ³ 256 GB up to 512 GB SATA SED Opal 2 TLC SSD ³ 128 GB up to 512 GB PCIe® NVMe™ M.2 SSD ³ 128 GB up to 512 GB PCIe® NVMe™ TLC M.2 SSD ³ 256 GB up to 512 GB PCIe® NVMe™ SED Opal 2 TLC M.2 SSD ³ 256 GB up to 512 GB SATA SED FIPS 140-2 SSD ³
Optical Drive	HP 9.5 mm Slim DVD-Writer; HP 9.5 mm Slim DVD-ROM; HP 9.5 mm Slim Blu-ray writer ⁸
Available Graphics	Integrated: Intel® UHD Graphics 630; Intel® UHD Graphics 610 ³⁶ Discrete: AMD Radeon™ R7 430 Graphics (2 GB GDDR5 dedicated); AMD Radeon™ RX 550 Graphics (4 GB GDDR5 dedicated)
Audio	Conexant CX20632 codec, 2 W internal speaker, universal audio jack, headset and headphone front ports (3.5 mm), multi-streaming capable
Communications	LAN: Intel® I210-T1 PCIe® GbE; Realtek RTL8111HSH-CG GbE ¹¹ WLAN: Realtek RTL8821CE-CG 802.11a/b/g/n/ac (1x1) with Bluetooth® 4.2 M.2 PCIe®; Realtek RTL8723DE 802.11b/g/n (1x1) M.2 PCIe® and Bluetooth® Combo; Intel® Dual Band Wireless-AC 9560 802.11ac (2x2) and Bluetooth® M.2 PCIe®, non-vPro™ ^{8,12}

Expansion Slots	1 M.2 2230; 1 M.2 2230/2280; 1 PCIe 3 x16; 2 PCIe 3 x1; One 4-in-1 media card reader ¹⁰ (1 M.2 2230 slot for WLAN and 1 M.2 2230/2280 slot for storage.)
Ports and Connectors	Front: 1 headset connector; 2 USB 3.1 Gen 1 ¹⁶ Rear: 1 audio-in; 1 audio-out; 1 DisplayPort™ 1.2; 1 power connector; 1 RJ-45; 1 VGA; 2 USB 3.1 Gen 1; 4 USB 2.0 Optional: 1 DisplayPort™ 1.2; 1 VGA; 1 serial and 1 serial and PS/2 ports combination; 1 HDMI 2.0; 1 USB 3.1 Type-C™ Gen 2 (DisplayPort™)
Internal Drive Bays	One 3.5" HDD; One 3.5" (2.5") HDD ¹⁷
Available Software	HP Device Access Manager; HP ePrint Driver + JetAdvantage; HP Hotkey Support; HP Jumpstart; HP Noise Cancellation Software; HP PhoneWise; HP Recovery Manager; HP Secure Erase; HP Support Assistant; HP Sure Click; HP Velocity; Microsoft Defender; Native Miracast Support; HP Wireless Wakeup; Buy Office (sold separately) ^{14,23,24,25,26,27,29,30}
Security Management	DriveLock; HP BIOSphere; HP Credential Manager; HP Password Manager; HP Power On Authentication; HP Security Manager; HP Spare Key; Lock slot; Power-on password (via BIOS); Removable media write/boot control; SATA port disablement (via BIOS); Setup password (via BIOS); Support for chassis padlocks and cable lock devices; USB enable/disable (via BIOS); Master Boot Record Security; HP Client Security Suite Gen 4; Pre-boot Authentication; Serial enable/disable (via BIOS); Trusted Platform Module TPM 2.0 Embedded Security Chip shipped with Windows 10 (Common Criteria EAL4+ Certified)(FIPS 140-2 Level 2 Certified) ^{13,19,21,22}
Management Features	HP BIOS Config Utility (download); HP Client Catalog (download); HP Driver Packs (download); HP System Software Manager (download); Update BIOS via Cloud or Network (BIOS feature); Ivanti Management Suite; HP Management Integration Kit for Microsoft System Center Configuration Management Gen 2 ^{15,31,32}
Power	180 W internal power supply, up to 90% efficiency, active PFC; 250 W internal power supply, up to 92% efficiency, active PFC
Dimensions	6.69 x 10.79 x 13.3 in 17 x 27.4 x 33.8 cm
Weight	12.06 lb 5.47 kg (Configured with 1 HDD and 1 ODD. Weight will vary by configuration.)
Energy Efficiency Compliance	ENERGY STAR® certified; EPEAT® Gold ⁵
Warranty	3 year (3-3-3) limited warranty and service offering includes 3 years of parts, labor and on-site repair. Terms and conditions vary by country. Certain restrictions and exclusions apply.

HP ProDesk 400 G5 Microtower PC

Accessories and services (not included)

HP ProDisplay P223 21.5-inch Monitor



Put your HP Pro PC content front and center on an ample 21.5-inch diagonal FHD screen with the HP ProDisplay P223 21.5-inch Monitor. The sleek design delivers essential presentation features and advanced connectivity for your everyday business productivity at a highly affordable price point.

Product number: X7R61AA

HP ProDisplay P240va 23.8-inch Monitor



Give your HP Pro PC content room to roam on the extra-large HP ProDisplay P240va Monitor, a sleek display that delivers essential presentation features and advanced connectivity for your everyday business productivity needs at a highly affordable price point.

Product number: N3H14AA

HP ProDisplay P232 23-inch Monitor



Project your HP Pro PC content to a 23-inch diagonal display with the HP ProDisplay P232 Monitor, which has a sleek design, essential presentation features, and advanced connectivity for your everyday business productivity, all at a highly affordable price point.

Product number: K7X31AA

HP Type-C USB 3.1 Gen2 Port Flex IO



Maximize the life of your PC as your business needs change with the flexible connectivity of the HP Type-C USB 3.1 Gen2 Port Flex IO, which supports ultra-fast transfer speeds compared to USB 3.1 Gen 1.

Product number: 3TK78AT

HP HDMI Port Flex IO (400/600/800)



Maximize the life of your PC as your business needs change with the flexible display connectivity of the HP HDMI Port Flex IO (400/600/800).

Product number: 3TK74AT

HP 8GB DDR4-2666 DIMM



Boost the capabilities of your HP Business Desktop PC and improve system performance and application responsiveness with low-power, high-speed DDR4 memory from HP.

Product number: 3TK87AT

HP Wireless Slim Business Keyboard



Enjoy easy data entry and wireless connectivity with the HP Wireless Business Slim Keyboard, designed to complement the 2015 class of HP Business PCs.

Product number: N3R88AT

HP TLC 256 GB SATA SSD



Expand the storage capabilities of your desktop with the HP TLC 256 GB SATA SSD, which includes TLC flash and the same reliability you already get from current SATA SSD drives.

Product number: P1N68AT

HP USB Business Speakers v2



Quickly and easily add stereo sound to your workspace with HP USB Business Speakers v2, a set of stylish desktop speakers powered by your PC's USB port.

Product number: N3R89AT

HP 4 year Next Business Day Onsite Hardware Support for Desktops



When hardware issues come up, the sooner you can get running again, the better. Have expertise at the ready with HP Hardware Next Business Day Onsite Service, and vastly improve your product uptime. With high-quality remote assistance or convenient onsite support available the next business day, help is there when you need it—so you can get back to work.

Product number: U7897E (for 4 year platforms), U7899E (for 5 year platforms)

Messaging Footnotes

- ¹ Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com>.
- ² Multi-Core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering branding and/or naming is not a measurement of higher performance.
- ³ Intel® Optane™ memory system acceleration does not replace or increase the DRAM in your system and requires configuration with an optional Intel® Core™ i(5 or 7)+ processor.
- ⁴ Sold separately or as an optional feature.
- ⁵ Support for up to three video outputs via two standard video connectors and an optional third video port connector which provides the following choices: DisplayPort™ 1.2, HDMI™ 2.0, VGA, or USB Type-C™ with Display Output.
- ⁶ HP Total Test Process testing is not a guarantee of future performance under these test conditions. Accidental damage requires an optional HP Accidental Damage Protection Care Pack.
- ⁷ HP Client Security Manager Gen4 requires Windows and Intel® or AMD 8th Gen processors.
- ⁸ Available on HP Elite and Pro platforms with 8th Gen Intel or AMD processors. Features may vary by platform and configuration.
- ⁹ HP Manageability Integration Kit can be downloaded from <http://www.hp.com/go/clientmanagement>.
- ¹⁰ HP Sure Click is available on select HP platforms and supports Microsoft® Internet Explorer, Google Chrome, and Chromium™. Supported attachments include Microsoft Office (Word, Excel, PowerPoint) and PDF files in read only mode. Check <http://h20195.www2.hp.com/v2/GetDocument.aspx?docname=4AA7-0922ENW> for all compatible platforms as they become available.
- ¹¹ Requires Windows and internet access.

Technical Specifications Footnotes

- ¹ Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com/>.
- ² Some devices for academic use will automatically be updated to Windows 10 Pro Education with the Windows 10 Anniversary Update. Features vary; see <https://aka.ms/ProEducation> for Windows 10 Pro Education feature information.
- ³ For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 16 GB (for Windows 7) and 36 GB (for Windows 8.1/10) of system disk is reserved for the system recovery software.
- ⁴ Your product does not support Windows 8 or Windows 7. In accordance with Microsoft's support policy, HP does not support the Windows 8 or Windows 7 operating system on products configured with Intel® and AMD 7th generation and forward processors or provide any Windows 8 or Windows 7 drivers on <http://www.support.hp.com>
- ⁵ EPEAT® registered where applicable. EPEAT registration varies by country. See www.epeat.net for registration status by country. See HP's 3rd party option store for solar energy accessory at www.hp.com/go/options.
- ⁶ For systems configured with more than 3 GB of memory and a 32-bit operating system, all memory may not be available due to system resource requirements. Addressing memory above 4 GB requires a 64-bit operating system. Memory modules support data transfer rates up to 2133 MT/s; actual data rate is determined by the system's configured processor. See processor specifications for supported memory data rate.
- ⁷ All memory slots are customer accessible / upgradeable.
- ⁸ Sold separately or as an optional feature.
- ⁹ Availability may vary by country.
- ¹⁰ SD 3 with 4-in-1 Interface (Supports SD, SDXC, SDHC, UHS-I); It will be PCI Express x1 and PCI x1 on 480 model.
- ¹¹ Intel® I210-T1 PCIe® GbE: Sold separately or as an optional feature.
- ¹² Wireless access point and internet service required.
- ¹³ HP BIOSphere: HP BIOSphere Gen4 features may vary depending on the PC platform and configurations requires 8th Gen Intel® processors.
- ¹⁴ HP Native Miracast Support: Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming.
- ¹⁵ HP Driver Packs: HP Driver Packs not preinstalled, however available for download at <http://www.hp.com/go/clientmanagement>.
- ¹⁶ The four USB 3.1 Gen 1 ports will be moved to front side on 480 model.
- ¹⁷ Configuration will be (1) 3.5" internal storage drive bay or (1) 2.5" internal storage drive bay and (1) 3.5" internal storage drive bay.
- ¹⁸ HP Client Security Suite Gen 4 requires Windows and Intel® or AMD 8th generation processors.
- ²¹ HP Password Manager requires Internet Explorer or Chrome™ or Firefox. Some websites and applications may not be supported. User may need to enable or allow the add-on / extension in the internet browser.
- ²² Trusted Platform Module TPM 2.0 Embedded Security Chip shipped with Windows 10 (Common Criteria EAL4+ Certified)(FIPS 140-2 Level 2 Certified): In some scenarios, machines pre-configured with Windows OS might ship with TPM turned off.
- ²³ Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88. Supported on Elite platforms with BIOS version F.03 or higher.
- ²⁴ HP ePrint Driver + JetAdvantage: HP ePrint Driver requires an Internet connection to HP web-enabled printer and HP ePrint account registration (for a list of eligible printers, supported documents and image types and other HP ePrint details, see www.hp.com/go/eprintcenter). Print times and connection speeds may vary.
- ²⁵ HP Support Assistant requires Windows and Internet access.
- ²⁶ Microsoft Defender Opt in and internet connection required for updates.
- ²⁷ HP PhoneWise Client may not be available with HP Workwise. For supported platforms and HP PhoneWise system requirements see www.hp.com/go/HPPhoneWise.
- ²⁹ HP Sure Click is available on select HP platforms and supports Microsoft® Internet Explorer, Google Chrome, and Chromium™. Supported attachments include Microsoft Office (Word, Excel, PowerPoint) and PDF files in read only mode. Check <http://h20195.www2.hp.com/v2/GetDocument.aspx?docname=4AA7-0922ENW> for all compatible platforms as they become available.
- ³⁰ HP Velocity: Availability may vary by country.
- ³¹ HP Management Integration Kit for Microsoft System Center Configuration Management Gen 2: can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>.
- ³² Ivanti Management Suite: subscription required.
- ³³ Multi-Core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance.
- ³⁴ Intel® Optane™ memory system acceleration does not replace or increase the DRAM in your system and requires configuration with an optional Intel® Core™ i(5 or 7)+ processor.
- ³⁵ Intel® Turbo Boost technology requires a PC with a processor with Intel Turbo Boost capability. Intel Turbo Boost performance varies depending on hardware, software and overall system configuration. See www.intel.com/technology/turboboost for more information.
- ³⁶ Intel® UHD Graphics 610: integrated on Pentium® Gold G5400, Pentium® Gold G5400T, Celeron® G4900, Celeron® G4900T; Intel® UHD Graphics 630: integrated on 8th gen Core i7/i5/i3 processors and Pentium® Gold G5500, Pentium® Gold G5500T.

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HP Z4 G4 Workstation

Perfect for engineering, visualization and Machine Learning, HP's most popular workstation delivers disruptive performance for a wide spectrum of applications. With a choice of Intel® Xeon® or Core™ X processors, and support for dual extreme graphics, you get all you need, nothing more.



HP recommends Windows 10 Pro.

Feature-rich functionality

The Z4 is ahead of its time with more standard features than any other single processor HP workstation. With multiple configuration options, you can choose the perfect blend of components that meet your performance requirements.

Visualization powerhouse

Visualize your project anytime with the power to move seamlessly between 3D CAD, rendering and simulation applications. The Z4 can easily handle tasks that require high frequency processing, multiple cores and high-powered GPUs for an optimized design process.

HP's most secure workstations

Advanced security features come standard on every Z4. Rest assured your device, identity and data are safe with security software like HP Client Security Suite Gen3² and HP Sure Start Gen3¹⁰ featuring a self-healing BIOS.

Featuring

- Support your unique user needs with a choice of Windows 10 Pro 64 or Linux® operating systems.¹
- Run demanding professional apps with the newest generation Intel® Xeon® processors available with up to 18 cores for powerful performance and productivity.³
- Experience disruptive price-performance on multi-threaded applications, or combined workflows such as simulation based design, with Intel® Core™ X-Series processors: the high-performance single-socket processors from Intel®.⁸
- Get serious about graphics and reach peak productivity with access to a breadth of NVIDIA® and AMD professional graphics from entry to high-end 3D.⁴
- Install pro-grade storage hardware and elevate your storage-bound apps without sacrificing standard PCIe slots.
- The simply stunning design features front and rear handles, so you can easily relocate your system.
- Save space within your office layout with a chassis that is 10% smaller than the previous generation.
- Multiple high-speed network connections are easy and speedy with dual embedded 1GbE LAN ports with Thunderbolt™ 3 technology for fast data transfers.^{6,9}
- The optional dual front I/O USB 3.1 G2 Type C™ module lets you transfer data to devices using modern connection technology at higher data rates.⁵
- Optional self-encryption drives thwart outside access so your valuable IP won't fall into the wrong hands.⁴

HP Z4 G4 Workstation Specifications Table



Operating System	Windows 10 Pro 64 for Workstations – HP recommends Windows 10 Pro. ^{1,21,24,28} Windows 10 Pro 64 ^{1,21,25,28} Windows 10 Pro (National Academic Plus) ²⁸ Red Hat® Enterprise Linux® (HP Linux® Installer Kit includes drivers for 64-bit versions of Red Hat® Enterprise Linux® 7.4, SUSE Linux® Enterprise Desktop 12 and Ubuntu 16.04. Red Hat® Enterprise Linux® (1-year paper license only) is available as a second operating system.)
Processor Family	Intel® Xeon® W processor; Intel® Core™ X-Series processor ^{26,30}
Processors	Intel® Xeon® W2102 (2.9 GHz, 8.25 MB cache, 4 cores) Intel® Xeon® W2104 (3.2 GHz, 8.25 MB cache, 4 cores) Intel® Xeon® W2123 (3.6 GHz base frequency, up to 3.9 GHz with Intel® Turbo Boost Technology, 8.25 MB cache, 4 cores) Intel® Xeon® W2125 (4 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 8.25 MB cache, 4 cores) Intel® Xeon® W2133 (3.6 GHz base frequency, up to 3.9 GHz with Intel® Turbo Boost Technology, 8.25 MB cache, 6 cores) Intel® Xeon® W2135 (3.7 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 8.25 MB cache, 6 cores) Intel® Xeon® W2145 (3.7 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 11 MB cache, 8 cores) Intel® Xeon® W2155 (3.3 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 13.75 MB cache, 10 cores) Intel® Xeon® W2195 (2.3 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 24.75 MB cache, 14 cores) Intel® Xeon® W2175 (2.5 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 19.25 MB cache, 14 cores) Intel® Core™ i9-7980XE (2.6 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Max Technology 3.0, 24.75 MB cache, 18 cores) Intel® Core™ i9-7960X (2.8 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Max Technology 3.0, 22.0 MB cache, 16 cores) Intel® Core™ i9-7940X (3.1 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Max Technology 3.0, 19.25 MB cache, 14 cores) Intel® Core™ i9-7920X (2.9 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Max Technology 3.0, 16.5 MB cache, 12 cores) Intel® Core™ i9-7900X (3.3GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Max Technology 3.0, 13.75 MB cache, 10 cores) Intel® Core™ i7-7820X (3.6 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Max Technology 3.0, 11.0 MB cache, 8 cores) Intel® Core™ i7-7800X (3.5 GHz base frequency, up to 4 GHz with Intel® Turbo Boost Technology, 8.25 MB cache, 6 cores) ^{2,3,30}
Chipset	Intel® C422; Intel® X299 ²⁶
Maximum Memory	256 GB DDR4-2666 ECC SDRAM (for Intel® Xeon® configurations); 128 GB DDR4-2666 non-ECC SDRAM (for Intel® Core™ X configurations) ⁸ (Transfer rates up to 2666 MT/s.)
Memory Slots	8 DIMM
Drive Controllers	Integrated SATA 6.0 Gb/s supporting RAID 0, 1, 5, 10; Optional SAS controller supporting RAID, 0, 1, 10 for SAS drives
Internal Storage	300 GB SAS (15000 rpm) ^{4,23} 500 GB up to 2 TB SATA (7200 rpm) ⁴ 500 GB SATA SED (7200 rpm) ⁴ 1 TB up to 4 TB 7200 rpm SATA Enterprise ⁴ 256 GB up to 2 TB SATA SSD ⁴ 256 GB up to 512 GB SATA SED Opal 2 SSD ⁴ 240 GB up to 480 GB SATA Enterprise SSD ⁴ 256 GB up to 1 TB HP Z Turbo Drive PCIe® NVMe™ SSD ⁴ 256 GB up to 1 TB HP Z Turbo Drive PCIe® NVMe™ SSD M.2 ⁴ 256 GB up to 512 GB HP Z Turbo Drive PCIe® NVMe™ SED SSD M.2 ⁴ 256 GB up to 4 TB HP Z Turbo Drive Quad Pro PCIe® SSD ^{4,24}
Optical Storage	HP Slim DVD-ROM; HP Slim Blu-ray Writer; HP Slim DVD-Writer ^{5,6}
Additional Storage	HP SD 4 Media Card Reader (optional)
Available Graphics	Entry 3D: AMD FirePro™ W2100 Graphics (2 GB DDR3 dedicated); NVIDIA® Quadro® P400 (2 GB GDDR5 dedicated); NVIDIA® Quadro® P620 (2 GB GDDR5 dedicated) Mid-range 3D: NVIDIA® Quadro® P1000 (4 GB GDDR5 dedicated); NVIDIA® Quadro® P2000 (5 GB GDDR5 dedicated); AMD Radeon™ Pro WX 3100 Graphics (4 GB GDDR5 dedicated); AMD Radeon™ Pro WX 4100 Graphics (4 GB GDDR5 dedicated) ¹⁷ High-end 3D: NVIDIA® Quadro® P4000 (8 GB GDDR5 dedicated); AMD Radeon™ Pro WX 7100 Graphics (8 GB GDDR5 dedicated) Ultra High-end 3D: NVIDIA® Quadro® P5000 (16 GB GDDR5X dedicated); NVIDIA® Quadro® P6000 (24 GB GDDR5X dedicated); NVIDIA® Quadro® GP100 (16GB HBM2 dedicated); NVIDIA® Quadro® GV100 (32 GB GDDR5 dedicated); AMD Radeon™ Pro WX 9100 graphics (16GB dedicated) ⁷
Audio	Integrated Realtek HD ALC221
Networking	LAN: Integrated Intel® I219-LM PCIe® GbE; Integrated Intel® I210-AT PCIe® GbE; Intel® I350-T2 dual-port GbE NIC; Intel® I350-T4 dual-port GbE NIC; Intel® I210-T1 PCIe® GbE; Intel® X550-T2 dual-port GbE NIC; Intel® X710-DA2 dual-port GbE NIC; Intel® 10 GbE SFP+ SR transceiver ²⁰ WLAN: Intel® Dual Band Wireless-AC 8265 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 4.2 Combo, non-vPro™
Expansion Slots	2 PCIe 3 x4; 2 PCIe 3 x4, 1 M.2 PCIe 3 x4, 1 PCIe x8, 2 PCIe x16 (for Intel® Core™ i9-X configurations); 2 PCIe 3 x4, 1 M.2 PCIe 3 x4, 1 PCIe x8 (mechanical only), 1 PCIe x16 (x8 electrical), 1 PCIe x16 (for Intel® Core™ i7-X configurations)
Ports and Connectors	Front: 1 headset connector; 4 USB 3.1 (1 charging) Front (Premium version): 1 headset connector; 2 USB 3.1 Gen 2 Type-C™; 2 USB 3.1 Gen1 (1 charging) Rear: 1 audio-in; 1 audio-out; 1 PS/2 keyboard port; 1 PS/2 mouse port; 1 serial; 2 RJ-45 (1 GbE); 6 USB 3.1 Gen 1 (The Intel® Core™ X-Series processor configurations only have one RJ45 port available. The serial port is optional.)

Drive Bays (Internal)	Two 2.5" or 3.5" ¹⁶
Drive Bays (External)	Two 5.25"
Input Device	HP PS/2 Business Slim Keyboard; HP USB Business Slim Keyboard; USB Premium wired keyboard; USB Smart Card (CCID) keyboard ¹⁰ 3Dconnexion CADMouse; HP USB Optical Mouse; HP PS/2 Mouse; HP USB Hardened Mouse ¹⁰
Software	HP Remote Graphics Software (RGS); HP Performance Advisor ¹³
Security	HP Sure Start Gen3; Secure authentication; Kensington lock slot; Full volume encryption; HP Keyed Cable Lock Kit; TPM 2.0 certified; HP Secure Erase ^{14,15,18}
Power	1000 W internal power supply, up to 90% efficiency, active PFC; 465 W internal power supply, up to 90% efficiency, active PFC; 750 W internal power supply, up to 90% efficiency, active PFC ^{19,22}
Dimensions (W x D x H)	15.2 x 6.65 x 17.5 in 38.6 x 16.9 x 44.5 cm
Weight	Starting at 22.4 lb Starting at 10.2 kg
Energy Efficiency Compliance	ENERGY STAR® certified and EPEAT® Gold registered configurations available ¹¹
Environmental Certification	Low halogen ¹²
Compatible Displays	All HP Z Displays and HP DreamColor Displays are supported. For more information see www.hp.com/go/zdisplays .
Warranty	Protected by HP Services, including a 3 years parts, 3 years labor, and 3 years onsite service (3-3-3) standard limited warranty. Certain restrictions. 24/7 operation will not void the HP warranty.

HP Z4 G4 Workstation

Recommended accessories and services (not included)

**HP Z Premium Front I/O
2xUSB-A 2xUSB-C**



Use the HP Z Premium Front I/O 2xUSB-A 2xUSB-C to quickly and easily upgrade your HP Z4, Z6 or Z8 G4 Workstation standard front I/O ports from 4x USB 3.1 Gen 1 Type A ports to 2x higher-bandwidth USB 3.1 Gen 2 Type-C™ ports for modern peripheral compatibility and 2x USB 3.1 Gen 1 Type A ports.
Product number: 1XM32AA

**HP Z Turbo Drive Quad Pro
2x512GB PCIe SSD**



Power through your largest data challenges and get amazing performance with the HP Z Turbo Drive Quad Pro, which integrates up to four super-fast HP Z Turbo Drive G2 modules¹ into one PCIe x16 card.
Product number: N2M99AA

**NVIDIA Quadro P5000 (16GB)
Graphics Card**



Work with large models and rendering tasks and complex simulations and add more life-like VR experiences to your workflow today while preparing for the challenges of tomorrow with the NVIDIA® Quadro® P5000 workstation graphics card, powered by NVIDIA Pascal™ GPU technology.
Product number: Z0B13AA

**AMD Radeon Pro WX 7100 8GB
Graphics Card**



Meet your demanding Design & Manufacturing and Media & Entertainment VR and immersive computing workflows head on with the AMD Radeon™ Pro WX 7100, a single slot form factor card based on AMD's new Polaris architecture.
Product number: Z0B14AA

**HP Z38c 37.5-inch Curved
Display**



Completely immerse yourself in the expansive elegance of the HP Z38c Curved Display. Form meets function with crisp, panoramic views so you can stay focused on your work.
Product number: Z4W65A4

**HP 5 year Next Business
Day Onsite HW Support w/
Defective Media Retention
for Workstations**



When hardware issues come up, the sooner you can get running again, the better. Have expertise at the ready with HP Hardware Next Business Day^[1] Onsite Service with Defective Media Retention, and vastly improve your product uptime. With high-quality remote assistance or convenient onsite support available the next business day, help is there when you need it—so you can get back to work.
Product number: U1G57E

Messaging Footnotes

- ¹ Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows® functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com>.
- ² HP Client Security Suite Gen3 requires Windows and Intel® or AMD 7th Gen processors.
- ³ Multicore is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance.
- ⁴ Sold separately or as an optional feature.
- ⁵ HP Z Premium Front I/O 2xUSB-A 2xUSB-C is sold separately or as an optional feature.
- ⁶ Optional and available the first half of 2018.
- ⁷ Windows 10 Pro is preinstalled. Windows 7 is not supported on the Intel® Core™ X - Series processor configurations. Configurations with the Intel® Core™ X processors support only a subset of the full features of the Z4 G4 system, including, but not limited to: memory type and maximum memory, PCIe slot configurations, M.2 storage capacity, GbE interface and manageability features. Please refer to the product QuickSpecs for complete details.
- ⁸ Dual embedded 1GbE LAN ports on Intel® Xeon® processor configurations; single embedded 1GbE LAN ports on Intel® Core™ X processor configurations.
- ⁹ HP Sure Start Gen3 is available on HP EliteBook, HP ZBook, and HP Z Workstation products equipped with Intel® 7th generation processors.
- Screen image courtesy of Renault Sport Racing.
Screen image courtesy of Chris McLennan.

Technical Specifications Footnotes

- ¹ Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com>.
- ² Multicore is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance.
- ³ Some Intel® vPro™ functionality of this technology, such as Intel® Active management technology and Intel Virtualization technology, requires additional 3rd party software in order to run. Availability of future "virtual appliances" applications for Intel vPro technology is dependent on 3rd party software providers. Microsoft Windows required. Intel vPro is supported only with Intel® Xeon™ configurations.
- ⁴ For hard drives and solid state drives, 1 GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB of system disk is reserved for system recovery software.
- ⁵ Duplication of copyrighted material is strictly prohibited. Actual speeds may vary. Double Layer media compatibility will widely vary with some home DVD players and DVD-ROM drives. Note that DVD-RAM cannot read or write to 2.6GB Single Sided/5.2 Double Sided-Version 1.0 Media. No support for DVD RAM.
- ⁶ With Blu-Ray, certain disc, digital connection, compatibility and/or performance issues may arise, and do not constitute defects in the product. Flawless playback on all systems is not guaranteed. In order for some Blu-ray titles to play, they may require a DVI or HDMI digital connection and your display may require HDCP support. HD-DVD movies cannot be played on this Desktop PC.
- ⁷ HP VR Ready Configurations available.
- ⁸ For systems installed with Microsoft Windows 7 (Ultimate, Enterprise or Professional), the maximum accessible system memory is 192 GB. Windows 7 is not supported on the Intel® Core XTM - Series processor configurations. Windows 7 is not supported on the Intel® Core XTM - Series processor configurations. For systems installed with Microsoft Windows 8.x (Enterprise or Pro), the maximum accessible system memory is 512 GB.
- ⁹ Wireless access point and Internet access required. Availability of public wireless access points limited. The specifications for the 802.11ac WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ac WLAN devices.
- ¹⁰ Optional or add-on feature.
- ¹¹ EPEAT® registered where applicable. EPEAT registration varies by country. See www.epeat.net for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at <http://www.hp.com/go/options> www.hp.com/go/options
- ¹² External power supplies, power cords, cables and peripherals are not low halogen. Service parts obtained after purchase may not be low halogen.
- ¹³ HP Remote Graphics Software requires a Windows, Linux®, or Mac® OS X 10.10 and newer operating system and network access.
- ¹⁴ HP Sure Start Gen3 is available on HP EliteBook, HP ZBook, and HP Z Workstation products equipped with Intel® 7th generation processors.
- ¹⁵ HP Secure Erase: For the methods outlined in the National Institute of Standards and Technology Special Publication 800-88. Supported on Elite platforms with BIOS version F.03 or higher.
- ¹⁶ Each bay is configurable to 2.5" or 3.5".
- ¹⁷ The AMD Radeon™ Pro WX 4100 Graphics is available only as an aftermarket option.
- ¹⁸ HP Keyed Cable Lock Kit is available only as an aftermarket option.
- ¹⁹ Available the first half of 2018.
- ²⁰ I210-AT, I219-V are available in Intel® Xeon® configurations only.
- ²¹ NOTE: In accordance with Microsoft's support policy, HP does not support the Windows 8 or Windows 7 operating system on products configured with Intel and AMD 7th generation and forward processors or provide any Windows 8 or Windows 7 drivers on <http://www.support.hp.com>.
- ²² 465W and 750W power supply options are only available for Intel® Xeon® configurations.
- ²³ Supported only on Intel® Xeon® configurations: Not supported with Intel® Core XTM processor configurations.
- ²⁴ Available on Intel® Xeon® W processor configurations only.
- ²⁵ Available on Intel® Core™ X-Series processor configurations only.
- ²⁶ Choice of Intel Core X processor family will affect other configuration choices and system feature set availability; refer to the product Quickspecs for details.
- ²⁷ Intel® C422 for Intel® Xeon® configurations, Intel® X299 for Intel® Core™ X configurations.
- ²⁸ For Intel Core i9-X processors Windows 10 Pro 64 / National Academic Plus wont be available until April 30, 2018. Windows 10 Pro 64 Workstation Plus only available from May 1, 2018.

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4AA7-0675ENUC, March 23rd 2018



HP ProBook 650 G4 Notebook PC



The all new modern slim design of the HP ProBook 650 delivers enterprise-grade performance, security, and manageability while working with today's technology and continuing to support connectivity to legacy devices.

HP recommends Windows 10 Pro.



Updated slim design

The precision-crafted slim chassis in a modern natural silver finish is designed to pass MIL-STD 810G testing² and supports several HP docking options³ for gradual transitions to modern docking solutions.

High performance

Help speed up demanding business applications with an optional 8th Gen hexa-core or quad-core Intel® Core™ processor⁴ and optional discrete graphics⁵.

Built on a secure foundation

Protect your PC against the evolving malware threats of the future, with self-healing, hardware-enforced, and manageable security solutions from HP. From the BIOS to the browser HP Sure Start Gen4⁶ and HP Sure Click⁷ help secure your PC.

- Power through your day with Windows 10 Pro¹ and the powerful security, collaboration and connectivity features from HP.
- Take on demanding graphics and video tasks using high resolution 4k displays with optional AMD Radeon™ RX540 Discrete Graphics⁵.
- Never wonder if someone is watching you with the added peace-of-mind that comes from the integrated HP Privacy Camera⁸, with a physical shutter to protect from malicious surveillance.
- Protect your PC with the hardware-enforced self-healing protection of HP Sure Start Gen4⁶ that automatically recovers the BIOS.
- Help protect your PC from websites and in-browser .pdf files infected with malware, ransomware, or viruses with HP Sure Click⁷.
- Fortify your security with up to three authentication factors including passwords and optional fingerprint recognition⁹.
- The HP Manageability Integration Kit¹⁰ helps speed up image creation and management of hardware, BIOS, and security through Microsoft System Center Configuration Manager.
- Stand up to the workload with a ProBook that is designed to pass MIL-STD 810G testing².

HP ProBook 650 G4 Notebook PC Specifications Table



Available Operating System	Windows 10 Pro 64 – HP recommends Windows 10 Pro. ¹ Windows 10 Pro 64 (National Academic only) ^{1,2} Windows 10 Home 64 ¹ Windows 10 Home Single Language 64 ¹ FreeDOS 2.0
Processor Family	8th Generation Intel® Core™ i7 processor (i7-8850H); 8th Generation Intel® Core™ i7 processor (i7-8650U); 8th Generation Intel® Core™ i7 processor (i7-8550U); 8th Generation Intel® Core™ i5 processor (i5-8350U); 8th Generation Intel® Core™ i5 processor (i5-8250U); 8th Generation Intel® Core™ i3 processor (i3-8130U); 7th Generation Intel® Core™ i5 processor (i5-7300U); 7th Generation Intel® Core™ i5 processor (i5-7200U) ⁵
Available Processors	Intel® Core™ i7-8850H with Intel® UHD Graphics 630 Graphics (2.6 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 9 MB L3 cache, 6 cores) Intel® Core™ i7-8650U vPro™ processor with Intel® UHD graphics 620 (1.9 GHz base frequency, up to 4.2 GHz with Intel® Turbo Boost Technology, 8 MB cache, 4 cores) Intel® Core™ i7-8550U with Intel® UHD graphics 620 (1.8 GHz base frequency, up to 4 GHz with Intel® Turbo Boost Technology, 8 MB cache, 4 cores) Intel® Core™ i7+ 8850H vPro™ processor (Core™ i7 and 16 GB Intel® Optane™ memory) with Intel® UHD Graphics 630 (2.6 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 9 MB L3 cache, 6 cores) Intel® Core™ i7+ 8850H vPro™ processor (Core™ i7 and 118 GB Intel® Optane™ SSD) with Intel® UHD Graphics 630 (2.6 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 9 MB L3 cache, 6 cores) Intel® Core™ i5-8350U vPro™ processor with Intel® UHD Graphics 620 (1.7 GHz base frequency, up to 3.6 GHz with Intel® Turbo Boost Technology, 6 MB cache, 4 cores) Intel® Core™ i5-8250U with Intel® UHD Graphics 620 (1.6 GHz base frequency, up to 3.4 GHz with Intel® Turbo Boost Technology, 6 MB cache, 4 cores) Intel® Core™ i5-7300U vPro™ processor with Intel® HD Graphics 620 (2.6 GHz base frequency, up to 3.5 GHz with Intel® Turbo Boost Technology, 3 MB cache, 2 cores) Intel® Core™ i5-7200U with Intel® HD Graphics 620 (2.5 GHz base frequency, up to 3.1 GHz with Intel® Turbo Boost Technology, 3 MB cache, 2 cores) Intel® Core™ i3-8130U with Intel® UHD graphics 620 (2.2 GHz base frequency, up to 3.4 GHz with Intel® Turbo Boost Technology, 4 MB cache, 2 cores) <small>3,4,5,6,10,44</small>
Maximum Memory	32 GB DDR4-2400 SDRAM ⁶ (Transfer rates up to 2400 MT/s. (8th Generation processors); Transfer rates up to 2133 MT/s. (7th Generation processors)) (Transfer rates up to 2400 MT/s. Both slots are customer accessible/upgradeable. Supports dual channel memory.)
Memory Slots	2 SODIMM
Internal Storage	500 GB up to 1 TB 7200 rpm SATA ⁸ 500 GB 7200 rpm SATA FIPS 140-2 SED ^{8,9} 118 GB Intel® Optane™ SSD ^{8,10} 256 GB up to 1 TB PCIe® NVMe™ M.2 SSD ⁸ 128 GB up to 512 GB PCIe® M.2 SSD ⁸ 256 GB M.2 SATA SED SSD ⁸
Optical Drive	DVD-ROM; DVD-Writer ¹¹
Flash Cache	Intel® Optane™ 16 GB Cache
Display	15.6" diagonal FHD IPS eDP LED-backlit touch screen, 220 cd/m ² , 45% sRGB (1920 x 1080) 15.6" diagonal FHD IPS eDP anti-glare LED-backlit, 220 cd/m ² , 45% sRGB (1920 x 1080) 15.6" diagonal HD SVA eDP anti-glare LED-backlit, 220 cd/m ² , 45% sRGB (1366 x 768)
Available Graphics	Integrated: Intel® HD Graphics 620; Intel® UHD Graphics 620; Intel® UHD Graphics 630 ¹⁷ Discrete: AMD Radeon™ RX 540 (2 GB GDDR5 dedicated) ¹⁸
Wireless Technologies	HP lt4132 LTE/HSPA+ Mobile Broadband Module; Intel® Dual Band Wireless-AC 3168 802.11a/b/g/n/ac (1x1) Wi-Fi® and Bluetooth® 4.2 Combo, non-vPro™; Intel® Dual Band Wireless-AC 8265 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 4.2 Combo, non-vPro™; Realtek 802.11ac (2x2) Wi-Fi® and Bluetooth® 4.2 Combo; Intel® Dual Band Wireless-AC 8265 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 4.2 Combo, vPro™; Intel® XMM™ 7360 LTE-Advanced; Realtek 802.11ac (1x1) Wi-Fi® and Bluetooth® 4.2 Combo; Intel® Dual Band Wireless-AC 9560 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 5 Combo, vPro™ ^{12,13,14,15}
Communications	HP Module with NXP NFC Controller NPC300 I2C NCI; Intel® I219-LM GbE, vPro™; Intel® I219-V GbE, non-vPro™ ^{15,16}
Expansion Slots	1 microSD

Ports and Connectors	2 USB 3.1 Gen 1 (1 charging); 1 VGA; 1 USB 3.1 Type-C™ Gen 1 (Power delivery, DisplayPort™); 1 serial; 1 RJ-45; 1 headphone/microphone combo; 1 HDMI 1.4; 1 docking connector; 1 AC power ⁴³ (Cables are not included.)
Input Device	HP Advanced Keyboard with numeric keypad; Clickpad with multi-touch gesture support, taps enabled as default
Camera	720p HD camera ^{15,17,19}
Available Software	HP 3D DriveGuard; HP ePrint Driver + JetAdvantage; HP Hotkey Support; HP JumpStart; HP LAN Protection; HP MAC Address Manager; HP Noise Cancellation Software; HP Recovery Manager; HP Support Assistant; HP Velocity; Native Miracast support; HP PhoneWise; Buy Office (Sold separately) ^{21,22,23,24}
Security Management	Absolute persistence module; HP BIOSphere Gen4; HP DriveLock and Automatic DriveLock; HP Fingerprint Reader; HP Password Manager; HP Secure Erase; Microsoft Security Defender; Power-on authentication; Preboot authentication; TPM 2.0 embedded security chip shipped with Windows 10 (Common Criteria EAL4+ Certified); HP Sure Click; HP SureStart Gen4; HP Wireless Wakeup; HP Client Security Gen4; RAID configurations ^{28,29,30,31,32,33,34,35,36,37}
Management Features	HP Driver Packs; HP System Software Manager (SSM); HP BIOS Config Utility (BCU); HP Client Catalog; HP Manageability Integration Kit Gen2; Ivanti Management Suite ^{25,26,27}
Power	90 W USB Type-C™ adapter; HP Smart 45 W External AC power adapter; HP Smart 45 W USB Type-C™ adapter; HP Smart 65 W External AC power adapter; HP Smart 65 W USB Type-C™ adapter; HP Smart 90 W External AC power adapter; HP Smart 45 W 2-prong External AC power adapter ^{39,40} HP Long Life 3-cell, 48 Wh Li-ion ³⁹ Up to 14 hours and 30 minutes ³⁹ Battery is internal and not replaceable by customer. Serviceable by warranty.
Dimensions	14.85 x 10.12 x 0.95 in 37.7 x 25.7 x 2.39 cm
Weight	Starting at 4.8 lb (non-touch); Starting at 5.31 lb (touch) Starting at 2.18 kg (non-touch); Starting at 2.41 kg (touch) (Weight will vary by configuration.)
Energy Efficiency Compliance	ENERGY STAR® certified and EPEAT® Gold registered configurations available ³⁶
Warranty	HP Services offers 3 year and 1 year limited warranties and 90 day software limited warranty options depending on country. Batteries have a default one year limited warranty except for Long Life batteries which will have same 1 year or 3 year limited warranty as the platform. On-site service and extended coverage is also available. HP Care Pack Services are optional extended service contracts that go beyond the standard limited warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: http://www.hp.com/go/cpc . ⁴¹

HP ProBook 650 G4 Notebook PC

Accessories and services (not included)

HP Thunderbolt Dock 120W G2



Reinvent docking and boost productivity with the world's most versatile Thunderbolt™ dock¹, the small, sophisticated HP Thunderbolt Dock G2. Designed for workspace flexibility and network manageability², it delivers USB-C™³ device connectivity and optional integrated audio.⁴

Product number: 2UK37AA

HP UltraSlim Docking Station



Quickly and easily expand your display, network, and device connectivity to customize an always-ready workspace with the HP UltraSlim Docking Station, a simple one-click, slide-in side dock for select ultraslim HP EliteBook Notebook PCs.

Product number: D9Y32AA

HP USB-C Mini Dock



Be productive on the go with streamlined, pocket-sized port expansion that's fashionable and functional. The HP USB-C™ Mini Dock has a modern, textured design and packs pass-through charging¹ and data, video, network, and device connectivity² into a compact, portable dock.

Product number: 1PM64AA

HP Notebook Power Bank



Boost your notebook's¹ uptime and charge your everyday USB devices at the same time with the portable, chargeable HP Notebook Power Bank.

Product number: N9F71AA

HP 3 year Next Business Day Onsite HW Support w/Accidental Damage Protection-G2 for Notebooks



When hardware issues come up, the sooner you can get running again, the better. Have expertise at the ready with HP Hardware Next Business Day¹ Onsite Service with Accidental Damage Protection, and vastly improve your product uptime. With high-quality remote assistance or convenient onsite support available the next business day, help is there when you need it—so you can get back to work.

Product number: UC282E (for 1 year platforms), UC279E (for 3 year platforms)

Messaging Footnotes

- ¹ Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers and/or software to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com>.
- ² MIL STD 810G testing is pending and is not intended to demonstrate fitness for U.S. Department of Defense contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Damage under the MIL STD test conditions or any accidental damage requires an optional HP Accidental Damage Protection Care Pack.
- ³ Sold separately or as an optional feature.
- ⁴ Quad-core and hexa-core Intel® Core™ processors are optional. Multicore is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance.
- ⁵ Discrete graphics not available with hexa-core processors. Video conferencing requires internet connection and creative applications are sold separately.
- ⁶ HP Sure Start Gen4 is available on HP ProBook products equipped with Intel® or AMD 8th generation processors.
- ⁷ HP Sure Click is available on select HP platforms and supports Microsoft® Internet Explorer, Google Chrome, and Chromium™. Supported attachments include Microsoft Office (Word, Excel, PowerPoint) and PDF files in read only mode. Check <http://h20195.www2.hp.com/v2/GetDocument.aspx?docname=4AA7-0922ENW> for all compatible platforms as they become available.
- ⁸ HP Privacy Camera only available on non-touch screens equipped with HD camera and must be installed at the factory.
- ⁹ HP Multi Factor Authenticate requires 7th or 8th Generation Intel® Core™ processor, Intel® integrated graphics, and Intel® WLAN. Three authentication factors requires an Intel® vPro™ processor.

Technical Specifications Footnotes

- ¹ Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com/>.
- ² Some devices for academic use will automatically be updated to Windows 10 Pro Education with the Windows 10 Anniversary Update. Features vary; see <https://aka.ms/ProEducation> for Windows 10 Pro Education feature information.
- ³ Multicore is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance.
- ⁴ Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.
- ⁵ NOTE: In accordance with Microsoft's support policy, HP does not support the Windows 8 or Windows 7 operating system on products configured with Intel and AMD 7th generation and forward processors or provide any Windows 8 or Windows 7 drivers on <http://www.support.hp.com>.
- ⁶ Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration. See www.intel.com/technology/turboboost for more information.
- ⁷ Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility. If you mix memory speeds, the system will perform at the lower memory speed.
- ⁸ For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10) is reserved for system recovery software.
- ⁹ Not available with Intel® Optane™ Memory or Intel® Optane™ SSD.
- ¹⁰ Intel® Optane™ memory system acceleration does not replace or increase the DRAM in your system.
- ¹¹ DVD-Writer does not support DVD RAM. Don't copy copyright protected materials.
- ¹² Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. The specifications for the 802.11ac WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ac WLAN devices.
- ¹³ Dynamic Regulatory Solution will auto-change AC WLAN to abgn by passive scan when entering Indonesia.
- ¹⁴ WWAN module requires separately purchased service contract. Check with service provider for coverage and availability in your area. Connection speeds will vary due to location, environment, network conditions, and other factors. 4G LTE not available on all products, in all regions.
- ¹⁵ Sold separately or as an optional feature.
- ¹⁶ The term "10/100/1000" or "Gigabit" Ethernet indicates compatibility with IEEE standard 802.3ab for Gigabit Ethernet, and does not connote actual operating speed of 1 Gb/s. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.
- ¹⁷ HD content required to view HD images.
- ¹⁸ AMD Dynamic Switchable Graphics technology requires an Intel processor, plus an AMD Radeon™ discrete graphics configuration and is not available on FreeDOS and Linux OS. With AMD Dynamic Switchable Graphics technology, full enablement of all discrete graphics video and display features may not be supported on all systems (e.g. OpenGL applications will run on the integrated GPU or the APU as the case may be).
- ¹⁹ Internet access required.
- ²⁰ Resolutions are dependent upon monitor capability, and resolution and color depth settings.
- ²¹ Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming media.
- ²² HP ePrint Drive requires an Internet connection to HP web-enabled printer and HP ePrint account registration (for a list of eligible printers, supported documents and image types and other HP ePrint details, see www.hp.com/go/eprintcenter). Print times and connection speeds may vary.
- ²³ HP Support Assistant requires Windows and Internet access.
- ²⁴ HP PhoneWise Client is only available on select platforms. For supported platforms and HP PhoneWise system requirements see www.hp.com/go/HPPhoneWise.
- ²⁵ HP Driver Packs not preinstalled, however available for download at <http://www.hp.com/go/clientmanagement>.
- ²⁶ HP Manageability Integration Kit can be downloaded from <http://www.hp.com/go/clientmanagement>.
- ²⁷ Ivanti Management Suite subscription required.
- ²⁸ HP BIOSphere Gen4 requires Intel® or AMD 8th Gen processors. Features may vary depending on the platform and configurations.
- ²⁹ Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method.
- ³⁰ Absolute agent is shipped turned off, and will be activated when customers activate a purchased subscription. Subscriptions can be purchased for terms ranging multiple years. Service is limited, check with Absolute for availability outside the U.S. The Absolute Recovery Guarantee is a limited warranty. Certain conditions apply. For full details visit: <http://www.absolute.com/company/legal/agreements/ computrace-agreement>. Data Delete is an optional service provided by Absolute Software. If utilized, the Recovery Guarantee is null and void. In order to use the Data Delete service, customers must first sign a Pre-Authorization Agreement and either obtain a PIN or purchase one or more RSA SecurID tokens from Absolute Software.
- ³¹ HP Client Security Suite Gen 4 requires Windows and Intel® or AMD 8th generation processors.
- ³² HP Password Manager requires Internet Explorer or Chrome or FireFox. Some websites and applications may not be supported. User may need to enable or allow the add-on / extension in the internet browser.
- ³³ HP Fingerprint Sensor sold separately or as an optional feature.
- ³⁴ Microsoft Defender Opt in and internet connection required for updates.
- ³⁵ RAID configuration is optional and does require a second hard drive.
- ³⁶ HP Sure Click is available on select HP platforms and supports Microsoft® Internet Explorer, Google Chrome, and Chromium™. Supported attachments include Microsoft Office (Word, Excel, PowerPoint) and PDF files in read only mode. Check <http://h20195.www2.hp.com/v2/GetDocument.aspx?docname=4AA7-0922ENW> for all compatible platforms as they become available.
- ³⁷ HP Sure Start Gen4 is available on HP Elite and HP Pro 600 products equipped with 8th generation Intel® or AMD processors.
- ³⁸ Windows 10 MM14 battery life will vary depending on various factors including product model, configuration, loaded applications, features, use, wireless functionality, and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See www.bapco.com for additional details.
- ³⁹ Supports HP Fast Charging.
- ⁴⁰ Availability may vary by country.
- ⁴¹ HP Care Packs are sold separately. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit www.hp.com/go/cpc. HP services are governed by the applicable HP terms and conditions of service provided or indicated to Customer at the time of purchase. Customer may have additional statutory rights according to applicable local laws, and such rights are not in any way affected by the HP terms and conditions of service or the HP Limited Warranty provided with your HP Product.
- ⁴² EPEAT® registered where applicable. EPEAT registration varies by country. See <http://www.epeat.net> for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at www.hp.com/go/options.
- ⁴³ Serial port not available if VGA port is selected.

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 4AA7-2101ENUC, June 4th 2018





HP EliteBook x360 1030 G2

With 360° of versatility across five modes, comprehensive security, and up to 16 hours and 30 minutes of battery life³, the thin and light HP EliteBook x360 1030 is the perfect PC for highly mobile professionals. Wherever business or pleasure takes you, set a new benchmark for work and fun.

HP recommends Windows 10 Pro.



Iconic Elite design

Beauty, durability, and functionality come together like never before. The stunning HP EliteBook x360 with a precision cut, beautiful CNC aluminum unibody frame, and diamond cut accents is designed to pass twelve MIL-STD 810G tests².

Take it for a spin

Be prepared for any situation with 360° flexibility. Five use modes; work, share, present, conference, and write, deliver modern-day versatility bringing new life to collaboration and productivity.

Superb protection

Get end-to-end protection from secure and manageable PCs. Protect against BIOS attacks with HP Sure Start Gen3⁴, block malicious websites with HP Sure Click⁵, and keep visual hackers out with optional HP Sure View⁶.

- Power through your day with Windows 10 Pro¹ and the powerful, sleek, thin, and light HP EliteBook x360.
- The HP Active Pen provides a natural inking experience.⁷ The HP Collaboration Keyboard lets you share your creations with the touch of a button. Audio by Bang & Olufsen and HP Noise Cancellation let you clearly discuss your work.
- Help protect your PC from infected websites, malware, ransomware, and viruses with HP Sure Click⁵—hardware-enforced security for web browsers.
- Instantly protect against visual hacking with the optional HP Sure View⁶ integrated privacy screen. At the touch of a button your screen appears unreadable to those around you while you see your content clearly.
- Start with a genuine HP BIOS every time. HP Sure Start Gen3⁴ monitors in-memory BIOS, recovers the platform without user or admin intervention, restores the BIOS to a custom state, and is enterprise ready for centralized management.
- Work and play long with up to 16 hours and 30 minutes of battery life³, and quickly recharge your HP EliteBook x360 with an HP fast charging battery. You'll get up to 50% battery life in just 30 minutes of charging⁸.
- Combine power and speed with Windows 10¹, 7th Gen Intel[®] Core™ processors⁹, optional PCIe Gen3 SSD¹⁰, DDR4 memory¹⁰.
- HP WorkWise¹¹ is office intelligence rolled into one smartphone app.
- Stay productive with essential ports for optional docking¹⁰, and connect to networks with WiFi and optional 3G/4G LTE¹².

HP EliteBook x360 1030 G2 Specifications Table



Available Operating System	Windows 10 Pro 64 – HP recommends Windows 10 Pro. ¹ Windows 10 Home 64 ¹ Windows 10 Pro 64 (National Academic only) ^{1,25}
Processor Family	7th Generation Intel® Core™ i7 processor (i7-7600U); 7th Generation Intel® Core™ i7 processor (i7-7500U); 7th Generation Intel® Core™ i5 processor (i5-7300U); 7th Generation Intel® Core™ i5 processor (i5-7200U)
Available Processors	Intel® Core™ i7-7600U vPro™ processor with Intel® HD Graphics 620 (2.8 GHz base frequency, up to 3.9 GHz with Intel® Turbo Boost Technology, 4 MB cache, 2 cores) Intel® Core™ i7-7500U with Intel® HD Graphics 620 (2.7 GHz base frequency, up to 3.5 GHz with Intel® Turbo Boost Technology, 4 MB cache, 2 cores) Intel® Core™ i5-7300U vPro™ processor with Intel® HD Graphics 620 (2.6 GHz base frequency, up to 3.5 GHz with Intel® Turbo Boost Technology, 3 MB cache, 2 cores) Intel® Core™ i5-7200U with Intel® HD Graphics 620 (2.5 GHz base frequency, up to 3.1 GHz with Intel® Turbo Boost Technology, 3 MB cache, 2 cores) Intel® vPro™ Technology ^{2,3} <small>In accordance with Microsoft's support policy, HP does not support the Windows 8 or Windows 7 operating system on products configured with Intel and AMD 7th generation and forward processors or provide any Windows 8 or Windows 7 drivers on http://www.support.hp.com.</small>
Chipset	Chipset is integrated with processor
Maximum Memory	16 GB DDR4-2133 SDRAM ⁴ (Transfer rates up to 2133 MT/s)
Internal Storage	128 GB M.2 SSD ⁵ 256 GB up to 512 GB M.2 SATA TLC SSD ⁵ 256 GB up to 512 GB M.2 PCIe NVMe TLC SSD ⁵ 360 GB M.2 PCIe NVMe SSD ⁵ 1 TB SATA SSD ^{5,28}
Display	13.3" diagonal FHD UWVA ultra slim with Corning® Gorilla® Glass touch screen (1920 x 1080); 13.3" diagonal UHD UWVA ultra slim with Corning® Gorilla® Glass touch screen (3840 x 2160); HP Sure View integrated privacy screen 13.3" diagonal FHD UWVA eDP ultra slim with Corning® Gorilla® Glass touch screen (1920 x 1080)
Available Graphics	Integrated: Intel® HD Graphics 620 ¹¹
Wireless Technologies	HP lt4132 LTE/HSPA+ 4G Mobile Broadband; HP hs3210 WW HSPA+ Mobile Broadband; Intel® 802.11a/b/g/n/ac (2x2) and Bluetooth® 4.2 Combo (non-vPro™); Intel® 802.11a/b/g/n/ac (2x2) and Bluetooth® 4.2 Combo; Intel® 802.11a/b/g/n/ac (2x2) and Bluetooth® 4.2 Combo (vPro™); Intel® Dual Band Wireless-AC 8265 802.11 a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 4.2 Combo (vPro™ and non-vPro™) ^{6,7,8,9} (Compatible with Miracast-certified devices.)

Communications	NFC (optional) ⁷
Expansion Slots	1 microSD
Ports and Connectors	1 USB Type-C™ with Thunderbolt™; 2 USB 3.1 (1 charging); 1 HDMI 1.4; 1 external micro SIM; 1 AC power connector; 1 headphone/microphone combo (base) ¹⁰
Input Device	Spill-resistant backlit keyboard with drain and DuraKeys; Clickpad with image sensor and glass surface, multi-touch gestures enabled, taps enabled as default.
Camera	720p HD webcam, IR camera for face authentication with Windows Hello ^{11,12}
Available Software	HP DriveLock; HP Mobile Connect Pro; HP ePrint Driver+JetAdvantage; HP Hotkey Support; HP Support Assistant; HP JumpStart; HP Noise Cancellation; HP Image Assistant; Buy Office; Bing Search; Skype ^{18,19,20,22}
Security Management	HP BIOSphere; HP SureStart; HP Secure Erase; Preboot Authentication; Security lock slot; HP Client Security; HP Security Manager; HP Password Manager; Absolute Persistence Module; TPM 1.2/2.0; Microsoft Defender; HP Spare Key; HP Device Access Manager; Smart Card Reader ^{14,15,16,17}
Management Features	HP Driver Packs; HP SoftPaq Download Manager (SDM); HP System Software Manager (SSM); HP BIOS Config Utility (BCU); HP Client Catalog; HP MIK for Microsoft SCCM; LANDESK Management ^{20,21}
Power	90 W USB Type-C™ adapter; HP Smart 65 W External AC power adapter HP Long Life 3-cell, 57 Wh Li-ion ²³ Up to 16 hours and 30 minutes ²⁷ Battery is internal and not replaceable by customer. Serviceable by warranty.
Dimensions	12.48 x 8.6 x 0.59 in 31.69 x 21.85 x 1.49 cm
Weight	Starting at 2.82 lb Starting at 1.28 kg (Weight will vary by configuration.)
Energy Efficiency Compliance	ENERGY STAR® certified configurations available
Warranty	HP Services offers 3-year and 1-year limited warranties and 90 day software limited warranty options depending on country. Batteries have a default one year limited warranty. On-site service ^{1,2} and extended coverage is also available. HP Care Pack Services are optional extended service contracts that go beyond the standard limited warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: http://www.hp.com/go/cpc ²⁴

HP EliteBook x360 1030 G2

Accessories and services (not included)

HP Active Pen with App Launch



Write naturally, launch an app with the touch of a button, and maximize your productivity with the HP Active Pen with App Launch.¹
Product number: T4Z24AA

HP Business Slim Top Load Case



Help protect your Ultrabook™ (up to 14.1 diagonal inches; .75" thick) in and out of the office with the dual-compartment interior that includes a soft lining and high-density foam.
Product number: H5M91AA

HP Touch to Pair Mouse



Get additional flexibility and functionality and keep your workspace clutter-free with the world's first near field communication (NFC) wireless mouse that instantly pairs and connects to your Bluetooth®-enabled tablet or Ultrabook™.*
Product number: H6E52AA

HP 45W Smart AC Adapter



Be productive throughout the day and keep an extra adapter on hand with the lightweight and versatile HP 45W Smart AC Adapter.
Product number: H6Y88AA

HP Keyed Cable Lock 10 mm



Help keep your notebook safe in the office and high-traffic areas by tethering it to a secure surface with the HP Master Keyed Cable Lock 10mm, designed specifically for ultra-thin profile notebooks.
Product number: T1A62AA

HP 3 Year Next Business Day Onsite Hardware Support W/Accidental Damage Protection.



When hardware issues come up, the sooner you can get running again, the better. Have expertise at the ready with HP Hardware Next Business Day Onsite Service with Accidental Damage Protection, and vastly improve your product uptime. With high-quality remote assistance or convenient onsite support available the next business day, help is there when you need it—so you can get back to work
Product number: UC282E (for 1 year platforms), UC279E (for 3 year platforms)

Messaging Footnotes

- ¹ Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers and/or software to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com>.
- ² MIL STD 810G testing is pending and is not intended to demonstrate fitness for U.S. Department of Defense contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Damage under the MIL STD test conditions or any accidental damage requires an optional HP Accidental Damage Protection Care Pack.
- ³ Windows 10 MM14 battery life will vary depending on various factors including product model, configuration, loaded applications, features, use, wireless functionality, and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See www.bapco.com for additional details.
- ⁴ HP Sure Start Gen 3, available on HP EliteBook products equipped with Intel® 7th generation processors.
- ⁵ Available as a web-download for the HP EliteBook x360 1030 G2 at <https://support.hp.com/us-en/drivers/selfservice/hp-elitebook-x360-1030-g2/14169372>. Supports Microsoft® Internet Explorer and Chromium™.
- ⁶ HP Sure View integrated privacy screen is an optional feature that must be configured at purchase expected to be available Q2 2017.
- ⁷ Sold separately or as an optional feature. Inking requires Windows 10.
- ⁸ Recharges your battery up to 50% within 30 minutes when the system is off or in standby mode. Power adapter with a minimum capacity of 65 watts is required. After charging has reached 50% capacity, charging will return to normal. Charging time may vary +/-10% due to System tolerance.
- ⁹ Multi-Core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering is not a measurement of higher performance.
- ¹⁰ Optional features sold separately or as add on features.
- ¹¹ HP WorkWise smartphone app will soon be available as a free download on the App Store and Google Play.
- ¹² 4G/LTE WWAN is an optional feature that must be configured by the factory. It is not available on all products, in all regions and requires separately purchased service contract. Check with service provider for coverage and availability. Connection speeds will vary due to location, environment, network conditions, and other factors.
- ¹³ HP Manageability Integration Kit will be available soon as a download from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>.

Technical Specifications Footnotes

- ¹ Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com/>.
- ² Multicore is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering is not a measurement of higher performance.
- ³ NOTE: In accordance with Microsoft's support policy, HP does not support the Windows 8 or Windows 7 operating system on products configured with Intel and AMD 7th generation and forward processors or provide any Windows 8 or Windows 7 drivers on <http://www.support.hp.com>.
- ⁴ Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility. If you mix memory speeds, the system will perform at the lower memory speed.
- ⁵ For storage drives, GB = 1 billion bytes, TB = 1 trillion bytes. Actual formatted capacity is less. Up to 980 MB (for Windows 10) is reserved for system recovery software.
- ⁶ Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. The specifications for the 802.11ac WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ac WLAN devices.
- ⁷ Sold separately or as an optional feature.
- ⁸ Mobile Broadband requires separately purchased service contract and factory configuration. Check with service provider for coverage and availability in your area. Connection speeds will vary due to location, environment, network conditions, and other factors. 4G LTE not available on all products, and in all regions.
- ⁹ Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming media players that also support Miracast. You can use Miracast to share what you're doing on your PC and present a slide show. For more information: <http://windows.microsoft.com/en-us/windows-8/project-wireless-screen-miracast>
- ¹⁰ All cables are sold separately.
- ¹¹ HD content required to view HD images.
- ¹² Internet access required.
- ¹³ Resolutions are dependent upon monitor capability, and resolution and color depth settings.
- ¹⁴ Available only on business PCs with HP BIOS.
- ¹⁵ HP Secure Erase is for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88.
- ¹⁶ Security lock slot cable not included.
- ¹⁷ Absolute agent is shipped turned off, and will be activated when customers activate a purchased subscription. Subscriptions can be purchased for terms ranging multiple years. Service is limited, check with Absolute for availability outside the U.S. The Absolute Recovery Guarantee is a limited warranty. Certain conditions apply. For full details visit: <https://www.absolute.com/en/about/legal/agreements/absolute>. Data Delete is an optional service provided by Absolute Software. If utilized, the Recovery Guarantee is null and void. In order to use the Data Delete service, customers must first sign a Pre-Authorization Agreement and either obtain a PIN or purchase one or more RSA SecurID tokens from Absolute Software.
- ¹⁸ HP Mobile Connect is only available on preconfigured devices with WWAN. For geographic availability refer to www.hp.com/go/mobileconnect
- ¹⁹ Requires an Internet connection to HP web-enabled printer and HP ePrint account registration (for a list of eligible printers, supported documents and image types and other HP ePrint details, see www.hp.com/go/eprintcenter).
- ²⁰ Not preinstalled, however available for download at <http://www.hp.com/go/clientmanagement>
- ²¹ LANDESK Management subscription required.
- ²² Skype is not offered in China.
- ²³ Supports battery fast charge.
- ²⁴ HP Care Packs are sold separately. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit www.hp.com/go/cpc. HP services are governed by the applicable HP terms and conditions of service provided or indicated to Customer at the time of purchase. Customer may have additional statutory rights according to applicable local laws, and such rights are not in any way affected by the HP terms and conditions of service or the HP Limited Warranty provided with your HP Product.
- ²⁵ Some devices for academic use will automatically be updated to Windows 10 Pro Education with the Windows 10 Anniversary Update. Features vary; see <https://aka.ms/ProEducation> for Windows 10 Pro Education feature information.
- ²⁶ Planned to be available in April 2017.
- ²⁷ Windows 10 MM14 battery life will vary depending on various factors including product model, configuration, loaded applications, features, use, wireless functionality, and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See www.bapco.com for additional details.
- ²⁸ 1 TB SATA SSD drive will be available until June 1st, 2017.

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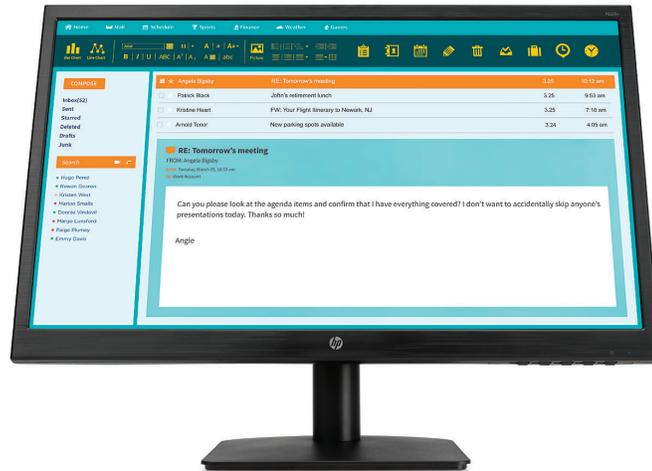
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HP N223 21.5-inch Monitor

Experience crisp detail on the Full HD N223 21.5-inch Monitor with a sharp 1920 x 1080 resolution. The convenient connectivity, adaptability, and affordable price point are ideal for everyday business.



Clear, detailed views

- See your work on an ample 21.5-inch diagonal screen with Full HD 1920 x 1080 resolution and a 10M:1 Dynamic Contrast Ratio for a sharp, crisp viewing experience.¹

Create workspace comfort

- Establish a comfortable workspace with customizable tilt adjustment, an internal power supply, and mounting capabilities with the included 100mm VESA pattern to mount the display on a wall or to an arm or stand.²

convenient connectivity

- Easily connect devices with centralized HDMI and VGA ports for digital access and legacy compatibility.

Featuring

- Reduce power consumption and help lower costs with an intelligent, energy-efficient design that is ENERGY STAR® certified. The display also includes mercury-free display backlights and arsenic-free display glass.
- Rest assured that your IT investment is supported by a three-year standard limited warranty. To extend your protection, select optional HP Care Pack Services.
- Comfortably view content day or night with the integrated low blue light function. TÜV Rheinland certified, the HP N223 lets you easily toggle the blue light option on or off at your convenience for optimal viewing.
- Perceive sharp, fluid movements with a flicker free monitor, allowing you to focus more on your work without a flicker.



Cost savings



HP FHD
(Full HD display)



Ports: no dongles



Efficient workspace

HP N223 21.5-inch Monitor Specifications Table



Product Number	3ML60AA
Display Size (diagonal)	54.6 cm (21.5")
Display Type	TN w/LED backlight
Panel Active Area	18.76 x 10.55 in; 47.66 x 26.81 cm
Viewing Angle	90° horizontal; 65° vertical
Brightness	200 cd/m ² ¹
Contrast Ratio	600:1 static; 10000000:1 dynamic ¹
Response Time	5 ms on/off ¹
Aspect Ratio	16:09
Native Resolution	FHD (1920 x 1080 @ 60 Hz)
Resolutions Supported	1920 x 1080; 1680 x 1050; 1600 x 900; 1440 x 900; 1280 x 1024; 1280 x 800; 1280 x 720; 1024 x 768; 800 x 600; 720 x 400; 640 x 480
Display Features	Anti-glare; Language selection; LED Backlights; On-screen controls; Plug and Play; User programmable; Anti-static
User Controls	Menu; Minus ("-"); Plus ("+") /Input Control; Power
Input Signal	1 HDMI (with HDCP support); 1 VGA;
Input Power	Input voltage: 100 to 240 VAC
Power Consumption	20 W (maximum), 18 W (typical), 0.5 W (standby)
Dimensions with Stand (W x D x H)	19.84 x 6.71 x 15.08 in 50.4 x 17.04 x 38.3 cm
Dimensions without Stand (W x D x H)	19.84 x 1.93 x 12.22 in 50.4 x 4.9 x 31.05 cm
Weight	5.73 lb 2.6 kg With stand
Ergonomic Features	Tilt: -5 to +15°
Environmental	Arsenic-free display glass; Mercury-free display backlights
What's in the box	AC power cord; Documentation; VGA cable
Warranty	Protected by HP, including a 3 year standard limited warranty. Optional HP Care Pack Services are extended service contracts that extend your protection beyond the standard warranties. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit www.hp.com/go/cpc

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HP Recommended Accessories and services

HP UltraSlim Docking Station



Quickly and easily expand your display, network, and device connectivity to customize an always-ready workspace with the HP UltraSlim Docking Station, a simple one-click, slide-in side dock for select ultraslim HP EliteBook Notebook PCs.

Product number: D9Y32AA

HP USB Business Speakers v2



Quickly and easily add stereo sound to your workspace with HP USB Business Speakers v2, a set of stylish desktop speakers powered by your PC's USB port.

Product number: N3R89AA

HP Single Monitor Arm



The HP Single Monitor Arm is the perfect desk accessory for your work life. Sleek and streamlined, the HP Single Monitor Arm is designed to complement the way you work.

Product number: BT861AA

HP Quick Release Bracket



HP Quick Release is an easy to use, 100 mm VESA-compliant, LCD monitor mounting solution that allows you to quickly and securely attach a flat panel monitor to a variety of stands, brackets, arms or wall mounts. HP Quick Release can also be used for mounting any combination of devices that are compatible with the 100 mm VESA Flat Display Mounting Interface Standard. The failsafe "Sure-Lock" mechanism snaps the monitor (or mounted device) securely in place, and can be further secured with a theft-deterrent security screw.

Product number: EM870AA

HP Integrated Work Center for Desktop Mini and Thin Client



Make the most of small work spaces with an HP IWC Desktop Mini/Thin Client that lets you create a compact desktop solution by combining a display¹ with an HP Desktop Mini, HP Thin Client or HP Chromebox¹ and giving you convenient front access to all of its inputs.

Product number: G1V61AA

HP Dual Head Keyed Cable Lock 10 mm



Get hardware security for your notebook and another device like a display or dock with the HP Dual Head Keyed Cable Lock, which locks both devices to the lock and then a third fixed surface.

Product number: T1A64AA

HP HDMI Standard Cable



Use the cable to connect your desktop to your standard HDMI devices and displays.

Product number: T6F94AA

HP Hot Desk Stand



Redefine workspace design with the HP Hot Desk Stand, a ready-to-go touchdown station that supports a monitor and plug-and-play dock, enhances productivity, and provides a clean and comfortable workspace for your mobile and flexible workforce at an affordable price.

Product number: W3Z73AA

Complete dual display productivity solution with 2nd Arm. Supports up to 27" diagonal, height and viewing angle adjustments.

Product number: W3Z74AA

HP 4 year Next Business Day Exchange Hardware Support for Monitors (up to 22 inch)



When you can't afford to wait for your device to be exchanged, let HP Hardware Next Business Day Advance Exchange get you back up and running as quickly as possible. You'll get remote technical assistance to help you resolve problems. Then, if needed, we'll ship you a replacement unit within the next business day¹ – along with a prepaid waybill to ship back your defective unit.

Product number: U0J10E

Messaging Footnotes

¹ All specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.

² Mounting hardware sold separately. Options sold separately.

³ HP Care Pack Services are sold separately. Service levels and response times for HP Care Pack Services may vary depending on your geographic location. Service starts from date of hardware purchase. Restrictions and limitations apply. See www.hp.com/go/cpc for details.

Technical Specifications Footnotes

¹ All specifications represent the typical specifications provided by HP's component manufacturers, actual performance may vary either higher or lower.

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HP VH24 23.8-inch Monitor

Boost productivity with the TAA-compliant HP VH24 23.8-inch Monitor. With Full HD resolution and four-way adjustable comfort, this well-priced business monitor is a product of Mexico that complies with U.S. Government procurement policies.



Clear, detailed viewing

- Take in sharp, bright picture quality with 1920 x 1080 Full HD resolution¹ and maximize your view with the 23.8-inch diagonal screen and 178 X 178 degree viewing angles with the IPS panel.

Efficiently designed with adjustable features

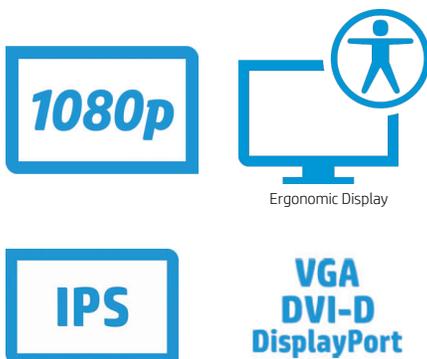
- Optimize your comfort with height, tilt, swivel and pivot adjustments for the way you work best. Plus, create an efficient workspace by attaching your HP Desktop Mini, HP Chromebox, or select HP Thin Client directly behind the monitor.²

Flexible, simple, secure connectivity

- Get the essential ports you need and want: VGA for legacy compatibility, DVI and DisplayPort™ for your newer technology, and a USB-free design that improves security by removing a point of entry for unwanted files or malware.

Featuring

- Reduce power consumption and help lower your costs with an energy-smart, ENERGY STAR® certified EPEAT® Gold registered³ and TCO certified design.
- Design the screen for how you work with HP Display Assistant software. Enable screen partitioning, adjust color preferences and help deter theft with a PIN number.
- Create a complete solution with HP accessories⁴ designed and tested to work with your display.
- Rest assured that your IT investment is supported by a four-year standard limited warranty. To extend your protection, select an optional HP Care service.⁵



HP VH24 23.8-inch Monitor Specifications Table



Product Number	MIT03AA
Display Size (diagonal)	60.45 cm (23.8")
Display Type	IPS w/LED backlight
Panel Active Area	20.74 x 11.67 in; 52.7 x 29.65 cm
Viewing Angle	178° horizontal; 178° vertical
Brightness	250 cd/m ² ¹
Contrast Ratio	1000:1 static; 5000000:1 dynamic ¹
Response Time	5 ms gray to gray ¹
Aspect Ratio	16:09
Resolutions Supported	1920 x 1080; 1680 x 1050; 1600 x 900; 1440 x 900; 1280 x 1024; 1280 x 800; 1280 x 720; 1024 x 768; 800 x 600; 720 x 400; 640 x 480
Display Features	Anti-glare; In plane switching; Language selection; LED Backlights; On-screen controls; Pivot rotation; Plug and Play; User programmable; User controls
User Controls	Color Control; Back; Exit; Menu; Minus ("-"); OK; Plus ("+"); Power; Information; Brightness; Up; Down; Image Control; Power Control; Management; Language; Contrast; Input Control
Input Signal	1 VGA; 1 DVI-D; 1 DisplayPort™ 1.2; (with HDCP support)
Input Power	Input voltage: 100 to 240 VAC
Power Consumption	30 W (maximum), 20 W (typical), 0.5 W (standby)
Dimensions with Stand (W x D x H)	21.76 x 8.58 x 19.92 in 55.72 x 21.8 x 50.59 cm
Dimensions without Stand (W x D x H)	21.76 x 1.96 x 13.47 in 55.72 x 4.98 x 34.22 cm Without stand
Weight	13.01 lb 5.9 kg With stand
Ergonomic Features	Tilt: -5 to +23°; Swivel ±360°; Pivot rotation: 90°
Environmental	Arsenic-free display glass; Mercury-free display backlights; Low halogen
What's in the box	AC power cable; HP Display Assistant software; Monitor; VGA cable; DVI cable; CD (includes User Guide, warranty, drivers)
Warranty	Protected by HP, including a 4-year standard limited warranty. Optional HP Care Pack Services are extended service contracts that extend your protection beyond the standard warranties. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit www.hp.com/go/cpc .

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Accessories and services (not included)

HP Adjustable Dual Display Stand



The HP Adjustable Dual Display Stand allows you to use two displays to maximize your productivity and optimize efficiency. Either or both displays can be rotated to landscape or portrait orientation, and the stand is depth-, height-, tilt-, and angle-adjustable so you can view both screens at eye-level as well as slightly facing each other, letting you track multiple applications and information sources at the same time. Integrated base rollers let you rotate the stand so you can more easily share your work.

Product number: AW664AA

HP Single Monitor Arm



The HP Single Monitor Arm is the perfect desk accessory for your work life. Sleek and streamlined, the HP Single Monitor Arm is designed to complement the way you work.

Product number: BT861AA

HP Quick Release Bracket



HP Quick Release is an easy to use, 100 mm VESA-compliant, LCD monitor mounting solution that allows you to quickly and securely attach a flat panel monitor to a variety of stands, brackets, arms or wall mounts. HP Quick Release can also be used for mounting any combination of devices that are compatible with the 100 mm VESA Flat Display Mounting Interface Standard. The failsafe "Sure-Lock" mechanism snaps the monitor (or mounted device) securely in place, and can be further secured with a theft-deterrent security screw.

Product number: EM870AA

HP Desktop Mini Security/Dual VESA Sleeve



Wrap your HP Desktop Mini PC in the HP Desktop Mini Security/Dual VESA Sleeve to securely mount your PC behind your display, position your solution on a wall, and lock it down with the optional HP Ultra-Slim Cable Lock.

Product number: G1K22AA

HP Business PC Security Lock v2 Kit



Help prevent chassis tampering and secure your PC and display in workspaces and public areas with the HP Business PC Security Lock v2 Kit.

Product number: N3R93AA

HP PC Mounting Bracket for Monitors



Customize an altogether better solution with the HP PC Mounting Bracket for Monitors, which lets you attach your HP Desktop Mini, HP Chromebox, or select HP Thin Client directly behind select HP Z Displays and EliteDisplays.

Product number: N6N00AA

HP 5 year Next business day Exchange Large Monitor Service



When you can't afford to wait for your device to be exchanged, let HP Hardware Next Business Day Advance Exchange get you back up and running as quickly as possible. You'll get remote technical assistance to help you resolve problems. Then, if needed, we'll ship you a replacement unit within the next business day¹ – along with a prepaid waybill to ship back your defective unit.

Product number: U0J13E

Messaging Footnotes

¹ FHD content required to view FHD images.

² Requires HP PC Mounting Bracket for Monitors, sold separately. See product Quick Specs for exact PC and thin client compatibility.

³ EPEAT® registered where applicable. EPEAT registration varies by country. See www.epeat.net for registration status in your country.

⁴ Each sold separately.

⁵ Sold separately. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit www.hp.com/go/cpc. HP Services are governed by the applicable HP terms and conditions of service provided or indicated to Customer at the time of purchase. Customer may have additional statutory rights according to applicable local laws, and such rights are not in any way affected by the HP terms and conditions of service or the HP Limited Warranty provided with your HP Product.

Technical Specifications Footnotes

¹ All specifications represent the typical specifications provided by HP's component manufacturers, actual performance may vary either higher or lower.

² External power supplies, power cords, cables and peripherals are not Low Halogen. Service parts obtained after purchase may not be Low Halogen.

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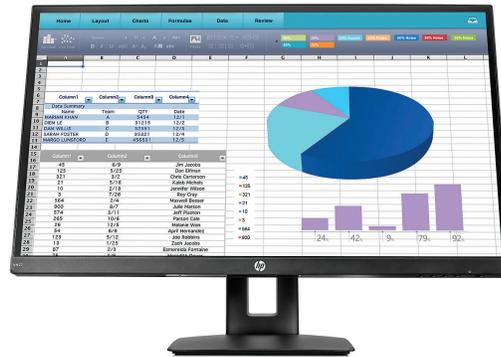
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HP VH27 27-inch Monitor

Increase productivity on the TAA compliant HP VH27 27-inch Monitor with 4-way ergonomics and a large, FHD screen. Meet budget while remaining compliant with U.S. Government procurement policies (product of Mexico).



Expansive screen size and crisp views

- See everything in detail with sharp 1920 x 1080 Full HD resolution, and maximize your view on a large 27-inch diagonal screen with an IPS panel and sleek 3-sided micro-edge bezels for a virtually seamless dual-display arrangement.

Adjustable comfort features

- Work with personalized comfort and achieve optimal productivity through customizable tilt, swivel, pivot, and 100mm height adjustments.

Flexible connectivity

- Experience highly compatible connectivity with DisplayPort™, HDMI, and VGA inputs for the essential ports you need and want at your convenience.

Featuring

- Attach your HP Desktop Mini, HP Chromebox or select HP Thin Client directly behind the display for an integrated, affordable workspace.
- Reduce power consumption and help lower your costs with an energy-smart, EPEAT® Gold registered design.
- Design the screen for how you work with HP Display Assistant software, which enables screen partitioning and helps deter theft by deactivating a monitor that's disconnected without approval.
- Create a complete solution with HP accessories designed and tested to work with your display.
- Rest assured that your IT investment is supported by a four-year standard limited warranty. To extend your protection, select an optional HP Care service.



HP VH27 27-inch Monitor Specifications Table



Product Number	2KZ36AA
Display Size (diagonal)	68.58 cm (27")
Display Type	IPS w/LED backlight
Panel Active Area	23.53 x 13.24 in; 59.78 x 33.63 cm
Viewing Angle	178° horizontal; 178° vertical
Brightness	250 cd/m ² ¹
Contrast Ratio	1000:1 static; 5000000:1 dynamic ¹
Response Time	5 ms gray to gray ¹
Aspect Ratio	16:9
Native Resolution	FHD (1920 x 1080 @ 60 Hz)
Resolutions Supported	1024 x 768; 1280 x 1024; 1280 x 720; 1280 x 800; 1440 x 900; 1600 x 900; 1680 x 1050; 1920 x 1080; 5120 x 2880; 640 x 480; 720 x 400; 800 x 600
Display Features	Anti-glare; In plane switching; Language selection; LED Backlights; On-screen controls; Pivot rotation; Plug and Play; User programmable; Anti-static
User Controls	Brightness; Color Control; Contrast; Exit; Image Control; Information; Input Control; Language; Management; Menu; Minus ("-"); OK; Plus ("+"); Power Control
Input Signal	1 VGA; 1 HDMI 1.4; 1 DisplayPort™ 1.1;(with HDCP support)
Input Power	Input voltage: 100 to 240 VAC
Power Consumption	32 W (maximum), 23 W (typical), 0.5 W (standby)
Dimensions with Stand (W x D x H)	24.46 x 8.58 x 20.67 in 62.15 x 21.8 x 52.52 cm
Dimensions without Stand (W x D x H)	24.46 x 1.81 x 14.63 in 62.15 x 4.6 x 37.16 cm
Weight	13.5 lb 6.09 kg With stand
Ergonomic Features	Tilt: -5 to +23°; Swivel 360°; Pivot rotation: 90°; Height: 100 mm
Environmental	Arsenic-free display glass; Mercury-free display backlights; TCO Certified; Mercury-free display backlighting; Low halogen ²
What's in the box	Monitor; AC power cable; DisplayPort™ cable; VGA cable; Quick Setup Poster
Warranty	Protected by HP, including a 4-year standard limited warranty. Optional HP Care Pack Services are extended service contracts that extend your protection beyond the standard warranties. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit www.hp.com/go/cpc .

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HP Recommended Accessories and services

HP Adjustable Dual Display Stand



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Product number: AW664AA

HP Single Monitor Arm



The HP Single Monitor Arm is the perfect desk accessory for your work life. Sleek and streamlined, the HP Single Monitor Arm is designed to complement the way you work.

Product number: BT861AA

HP Quick Release Bracket



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Product number: EM870AA

HP Desktop Mini Security/Dual VESA Sleeve



Wrap your HP Desktop Mini PC in the HP Desktop Mini Security/Dual VESA Sleeve to securely mount your PC behind your display, position your solution on a wall, and lock it down with the optional HP Ultra-Slim Cable Lock.

Product number: G1K22AA

HP Business PC Security Lock v2 Kit



Help prevent chassis tampering and secure your PC and display in workspaces and public areas with the HP Business PC Security Lock v2 Kit.

Product number: N3R93AA

HP PC Mounting Bracket for Monitors



Customize an altogether better solution with the HP PC Mounting Bracket for Monitors, which lets you attach your HP Desktop Mini, HP Chromebox, or select HP Thin Client directly behind select HP Z Displays and EliteDisplays.

Product number: N6N00AA

HP 5 year Next business day Exchange Large Monitor Service



When you can't afford to wait for your device to be exchanged, let HP Hardware Next Business Day Advance Exchange get you back up and running as quickly as possible. You'll get remote technical assistance to help you resolve problems. Then, if needed, we'll ship you a replacement unit within the next business day¹ – along with a prepaid waybill to ship back your defective unit.

Product number: U0J13E

Messaging Footnotes

¹ All specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower

² Sold separately. See product QuickSpecs for exact compatibility. HP PC Mounting Bracket for Monitors required and sold separately.

³ EPEAT® registered where applicable. EPEAT registration varies by country. See www.epeat.net for registration status in your country. Search keyword generator on HP's 3rd party option store for solar generator accessories at www.hp.com/go/options

⁴ Each sold separately.

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Technical Specifications Footnotes

¹ All specifications represent the typical specifications provided by HP's component manufacturers, actual performance may vary either higher or lower.

² External power supplies, power cords, cables and peripherals are not Low Halogen. Service parts obtained after purchase may not be Low Halogen.

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HP USB-C Dock G4



Secure, flexible pass-through docking for your notebook

Maximize productivity in the office with one USB-C™ cable connection to the enterprise-ready HP USB-C Dock G4.¹ It delivers device charging² to your HP notebook, supports up to three displays³, and enables connectivity to your wired network and accessories.

Multi-task like a pro

Connect the dock's cable to your device's USB-C™ port to charge¹ it while you work, access your wired network, and connect to one 4K or up to three displays², plus your accessories, through two DisplayPort™, HDMI, RJ-45, and five USB ports.

Enterprise-grade manageability

Experience advanced network manageability with PXE boot, Wake on LAN^{3,7} and MAC Address Pass Through^{3,7} support, even when the system is On or in Sleep, Hibernate or Off states.

Secure inside and out

Get optimal security with a driver-free dock that has no internal flash memory, and can be physically locked down with a lock slot and your choice of locks⁴.

Power for plenty of devices

Designed for compatibility with industry standard USB-C, charge all of your HP devices¹, from detachables to notebooks, with one dock that supports six power profiles, from 5V to 20V. Use the power button on the front of the dock to turn on your docked notebook while its lid is closed³.

World-class support

Rest easy with a one-year limited warranty.

1. Host system must support USB-C charging and video through its USB-C port. See product Quickspecs for exact charging capacities.

2. Sold separately. Single display up to 4K (3840 x 1440 @ 60 Hz), dual displays up to 2K (1920 x 1200 @ 60 Hz), triple displays up to WSXGA+ (1680 x 1050 @ 60Hz). Actual display configuration is subject to your platform's video out capability.

3. Requires host platform support in its BIOS. Internet access required and sold separately.

4. Lock sold separately

Specifications



HP USB-C Dock G4

Part number	3FF69AA
Dimensions (H x W x D)	7.79 x 2.71 x 0.87in (198 x 69 x 22mm)
Weight	0.769lbs (0.355kg)
Resolution^{2,9}	Single display: up to 3840 x 1440 @ 60Hz Dual display: up to 1920x1200 @ 60Hz Triple display: up to 1680 x 1050 @ 60Hz
Front components	One USB 3.0 port USB-C™ port with data and power out only Combo audio jack connects to headphone Power Button to power and wake host system ³
Side / rear components	Smart AC adapter One powered USB 3.0 port Two USB 2.0 ports Gigabit Ethernet port One HDMI 2.0 port Two DisplayPort ports One USB-C™ port connects to computers Kensington lock slot
Network manageability features	PXE Boot Wake on Lan (from the Off, Sleep or Hibernation states ^{3,7}) MAC Address Pass Through (from the On, Off, Sleep or Hibernation States ^{3,7}) WLAN – LAN switching ⁸
Normal operating power	90W
Average operation power	65W
Max operating power	100W
Power delivery (PD) profile	USB-C™ PD 3.0 supporting 5V/3A, 9V/3A,10V/3A, 12V/3A, 15V/3A and 20V/3A
Temperature (operating)	32 to 104 F (0 to +40C)
Relative humidity (operating)	0%~90%RH
Altitude (operating)	10000 ft (3048m)
Shock (operating)	40G, 2ms duration, half-sine wave shock
Random vibration (operating)	1.043grms
Operating systems	Windows 10, Windows 10 mobile
Option kit contents	HP USB-C Dock G4, AC power cable, 90W A/C Adapter, USB-C (1m) cable, documentation

6. Supports DisplayPort™ Alt Mode (video, charging and USB 3.1) over the USB-C™ connector. Also compatible with USB Type-C™ Thunderbolt enabled ports.

7. Your computer might support Wake on Lan from the Off, Sleep or Hibernation States, or only when the computer is on or in sleep. Your computer might support MAC Address Pass Through from the On, Off, Sleep or Hibernation states, or only when the computer is on or in sleep.

8. WLAN – LAN switching is supported only on select computers running Windows 10 operating system.

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4AA7-1869ENW, February 2018, Rev 1.



Overview

HP Desktop Mini PC Accessories

Mounting/Security

HP Desktop Mini Rack Mount Tray Kit	G1K21AA
HP Desktop Mini Security/Dual VESA Sleeve	G1K22AA
HP Desktop Mini Security/Dual VESA Sleeve v2	2JA32AA
Desktop Mini LockBox (G1/G2 models only)	P1N78AA
HP Desktop Mini Port Cover Kit (G1/G2 models only)	P3R65AA
HP Desktop Mini G4 Port Cover Kit	3TK92AA
HP Desktop Mini VESA Power Supply Holder Kit	1RL87AA
HP (Bulk 10) Desktop Mini VESA Quick Deploy Adhesive Kit	1RL88A6

Optical Drive

HP Desktop Mini DVD DVD-Writer ODD Expansion Module	K9Q83AA
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Input / Output / HDD

HP Desktop Mini 500GB HDD/ I/O Expansion Module	K9Q82AA
HP Desktop Mini I/O Expansion Module	K9Q84AA
HP G4 Mini 2.5-inch SATA Drive Bay Kit PROMO	3TK91AA

Power

HP Desktop 65w Mini Power Supply Kit	L2X04AA
HP Desktop 90w Mini Power Supply Kit	L4R65AA

Other compatible accessory options

Cables and Adapters

HP Dual Output USB Graph Adapter	C5U89AA
HP USB Graphics Adapter	NL571AA
HP DP to HDMI 1.4 Adapter	K2K92AA
DisplayPort TO DVI-D Adapter (single link) Cable	FH973AA
DisplayPort TO VGA Adapter Cable	AS615AA

Stands and Chassis

HP Quick Release (VESA mount)	EM870AA
HP Single Monitor Arm	BT861AA
HP ProDisplay Companion Stand	J7V21AA
HP Integrated WorkCenter - Desktop Mini	G1V61AA
HP DM Chassis Tower Stand	G1K23AA

Security

HP UltraSlim Keyed Cable Lock	H4D73AA
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Technical Specifications

Mounting

HP Desktop Mini Rack Mount Tray Kit

Put your HP Desktop Mini PCs to work behind the scenes with HP Desktop Mini Rack Mount Tray Kit, which holds up to eight PCs and fit into the HP 100kg Sliding Shelf.¹

Dimensions (H x W x D)	123.5 x 201.8 x 286.9mm (4.9 x 7.9 x 11.3in) 7U for installation space leaving 2in for airflow Compatible with industry-standard size rack shelf
Weight	953g (33.62oz) 1,906g for full kit (67.23 oz for full kit)
Exterior color	Jack Black – Dual unit holder Silver – Fixed mounting tray
Maximum capacity	Holds up to eight PCs and fit into the HP 100kg Sliding Shelf. ¹
Rack configuration	2 Kits populate one entire shelf
Option kit contents	4 Dual Unit Holders, 2 Fixed Mounting Trays, Installation guide, Warranty, Dependent upon rack shelf being used, customer may have option to secure mounting trays to shelves using hardware that must be purchased separately
Compatibility	HP 260 Desktop Mini, HP ProDesk 400 Desktop Mini, HP ProDesk 600 Desktop Mini, HP EliteDesk 705 Desktop Mini, HP EliteDesk 800 Desktop Mini, ThinkCentre m53 Tiny Desktop, ThinkCentre m73 Tiny Desktop, ThinkCentre m83 Tiny Desktop, ThinkCentre m93 Tiny Desktop, HP ProDesk 400 G2 Desktop Mini, HP ProDesk 600 G2 Desktop Mini.

1. Each Kit holds eight HP Desktop Mini PCs. Up to two Kits will fit into the HP 100kg Sliding Shelf, sold separately. To leave room for cabling, all eight slots may not be available in each kit.

HP Desktop Mini Security/Dual VESA Sleeve

Wrap your HP Desktop Mini PC in the HP Desktop Mini Security/Dual VESA Sleeve to securely mount your PC behind monitor or display, wall mount, or attached to almost any flat surface, position your solution on a wall, under a desk, on a display arm, and lock it down with the optional HP Ultra-Slim Cable Lock.

Dimensions (H x W x D)	45.8 x 181 x 161mm (1.8 x 7.1 x 6.3in)
Weight	390g (13.76oz)
Exterior color	Jack Black
VESA pattern	100 mm VESA standard
Possible configurations	Behind monitor or display, attached to almost any flat surface, position your solution on a wall, under a desk, or on a display arm
Option kit contents	Security/Dual VESA Sleeve, 1 security bracket to use with HP EliteDesk 800/705 Desktop Mini, HP ProDesk 600/400 Desktop Mini, 1 Security bracket to use with HP 260 Desktop Mini, 4 8mm ladder screws, Installation guide, Warranty, 7mm Spacer, 20mm screws
Compatibility	HP 260 Desktop Mini, HP ProDesk 400 Desktop Mini, HP ProDesk 600 Desktop Mini, HP EliteDesk 705 Desktop Mini, HP EliteDesk 800 Desktop Mini

Technical Specifications

HP Desktop Mini Security/Dual VESA Sleeve v2

Wrap your HP Desktop Mini PC in the HP Desktop Mini Security/Dual VESA Sleeve v2 to securely mount it—with or without an Expansion Module¹—behind your display, position the solution on a wall, and lock it down with the integrated security bracket and optional HP Ultra-Slim Cable Lock.

Dimensions (H x W x D)	45.8 x 181 x 161mm (1.8 x 7.1 x 6.3in)
Weight	Unpackaged: 0.4112 kg (0.90 lb)
Exterior color	Jack Black
VESA pattern	100 mm VESA standard
Possible configurations	Behind monitor or display, attached to almost any flat surface, position your solution on a wall, under a desk, or on a display arm
Option kit contents	1 Security/Dual VESA Sleeve; 4 ladder screws; Installation guide; Warranty
Compatibility	HP 260 Desktop Mini, HP ProDesk 400 Desktop Mini, HP ProDesk 600 Desktop Mini, HP EliteDesk 705 Desktop Mini, HP EliteDesk 800 Desktop Mini

Desktop Mini LockBox

Fortify your HP Desktop Mini in a range of settings with the HP Desktop Mini LockBox, HP's most secure enclosure for your PC, power brick, and cable connections.

Dimensions (H x W x D)	57.2 x 272 x 268 mm (2.3 x 10.7 x 10.6 in)
Weight	2163.6 g (4.77 lb)
Exterior color	Jack Black
VESA pattern	100 mm VESA standard and 75mm VESA standard
Possible configurations	<ul style="list-style-type: none">Securely enclosing the desktop and power brick, attach the box to almost any flat surface, position your solution on a wall, or under a desk.Includes space within lock box for desktop mini, power brick and all cable connections.Also locks with physical padlock/ and or HP UltraSlim Cable Lock.

Optional Wifi Enablement	If a customer desires to use an internal wireless card, they must install a Mini PC with the preinstalled WLAN card and external antennas installed via factory services
Option kit contents	Desktop Mini LockBox (includes lid and front port protection plate), Screws for securing the lid and mounting the Mini in the LockBox, Installation guide, Warranty
Compatibility	HP 260 Desktop Mini, HP ProDesk 400 Desktop Mini G1 and G2, HP ProDesk 600 Desktop Mini G1 and G2, HP EliteDesk 705 Desktop Mini G1 and G2, HP EliteDesk 800 Desktop Mini G1 and G2 *Customer must provide mounting hardware

Desktop Mini Port Cover Kit

Dimensions (H x W x D)	31.75 x 101.6 x 177.8 mm (1.25 x 4 x 7 in)
Weight	113 g (.25 lb)
Exterior Color	Jack Black
Possible configurations	Can be used in vertical and horizontal DM orientations
Compatibility	The HP Desktop Mini Port Cover Kit is compatible with the HP 260 G2 DM (Mini); HP ProDesk 400 G2 DM (Mini); HP ProDesk 600 G2 Desktop Mini; HP EliteDesk 705 G2 Desktop Mini; HP EliteDesk 705 G3 Desktop Mini; HP EliteDesk 800 G2 35W Desktop Mini; HP EliteDesk 800 G2 65W Desktop Mini; HP Collaboration PC G2

Note: Not designed to be used with an expansion module

Technical Specifications

HP Desktop Mini G4 Port Cover Kit

Help prevent unauthorized access to the rear ports of your HP Desktop Mini with HP Desktop Mini G4 Port Cover Kit.

Dimensions (H x W x D)	35 x 177 x 100 mm (1.38 x 6.97 x 3.94 in)
Weight	98 g (.22 lb)
Exterior Color	Jack Black
Possible configurations	Can be used in vertical and horizontal DM orientations
Compatibility	HP ProDesk 400 G3 Desktop Mini; HP ProDesk 600 G3 Desktop Mini; HP EliteDesk 800 G3 Desktop Mini
Option kit contents	1 Port cover; Installation guide; Warranty

Note: Not designed to be used with an expansion module. Does not work with Dual VESA Sleeve.

Technical Specifications

HP DM VESA Power Supply Holder Kit*

Simplify cable management when mounting your HP Desktop Mini with the HP DM VESA Power Supply Holder Kit, which attaches to your HP Desktop Mini Security/Dual VESA Sleeve v2 (2JA32AA) to reduce cable clutter from the PC's power supply cable and brick.

Dimensions (H x W x D)	138 x 156 x 77 mm (5.4 x 6.1 x 3 in)
Weight	110 kg (3.88 oz)
Exterior color	Jack Black
Possible configurations	Must be used attached to 2JA32AA HP Desktop Mini Security/Dual VESA Sleeve v2*.
Option kit contents	1 power supply holder bracket; Installation guide; Warranty
Compatibility	HP 260 Desktop Mini, HP ProDesk 400 Desktop Mini, HP ProDesk 600 Desktop Mini, HP EliteDesk 705 Desktop Mini, HP EliteDesk 800 Desktop Mini

*only works with HP Desktop Mini Security/Dual VESA Sleeve v2 - 2JA32AA

HP (Bulk 10) Desktop Mini VESA Quick Deploy Adhesive Kit*

Use the HP (Bulk 10) DM VESA Quick Deploy Adhs Kit to quickly and securely mount your HP Desktop Mini and HP Desktop Mini Security/Dual VESA Sleeve v2 (2JA32AA) horizontally to an aluminum, glass, or pine wood surface, no screws or tools required.

Dimensions (H x W x D)	38 x 156 x 77 mm (1.5 x 6.1 x 3 in)
Weight (1 pc.)	20 g (.71 oz)
Exterior color	Jack Black
Possible configurations	Must be used attached to 2JA32AA HP Desktop Mini Security/Dual VESA Sleeve v2*. Mounted on VESA sleeve and on a horizontal position and to aluminum, glass, pine wood surfaces only.
Option kit contents	10 Double-sided adhesive pads; Installation guide; Warranty
Compatibility	HP 260 Desktop Mini, HP ProDesk 400 Desktop Mini, HP ProDesk 600 Desktop Mini, HP EliteDesk 705 Desktop Mini, HP EliteDesk 800 Desktop Mini

*only works with HP Desktop Mini Security/Dual VESA Sleeve v2 - 2JA32AA

Optical Drive

HP Desktop Mini DVD ODD Expansion Module

Add a DVD Super-Multi Writer to your HP Desktop Mini PC with HP Desktop Mini DVD ODD Expansion Module.

Dimensions (H x W x D)	0.9 x 7 x 6.9 in (22.8 x 177 x 174.6 mm)	
Weight	712g (25.12oz)	
Color	Jack Black	
Disc capacity	Up to 8.5 GB DVD double-layer or 4.7 GB standard single-layer	
Write / Read speeds	DVD+R	Up to 8X
	DVD+RW	Up to 8X
	DVD+R DL	Up to 6X
	DVD-R DL	Up to 6X
	DVD-R	Up to 8X
	DVD-RW	Up to 6X
	CD-R	Up to 24X

Technical Specifications

Host Interface	CD-RW	Up to 24X
Connectors Single output	USB 3.0 Type B female connector	
Access times (typical reads, including setting)	Random	DVD-ROM: 160 ms (typical), CD-ROM: 140 ms (typical)
	Full Stroke	DVD-ROM: 280 ms (typical), CD-ROM: 280 ms (typical)
Power	Source	USB 3.0 Type B female connector
	DC Power Requirement	5 VDC ± 5%-100 mV ripple p-p
	DC Current	5 VDC - 1000 mA typical, 1600 mA maximum
Environmental (all conditions non-condensing)	Temperature (operating)	41° to 122° F (5° to 50° C)
	Relative Humidity (operating)	10% to 80%
	Maximum Wet Bulb Temperature (operating)	86° F (30° C)
VESA mount	Yes, 100mm	
Option kit contents	3 4mm ladder screws, 3 8mm ladder screws, 1 29mm secured torx screw, 1 54mm secured torx screw, 1 29mm torx screw, 1 54mm torx screw, 1 50mm USB 3.0 Type AB USB to Type A cable, , 1 80mm USB 3.0 Type AB USB to Type A cable, Installation guide, Warranty	
Compatibility	HP 260 Desktop Mini, HP ProDesk 400 Desktop Mini, HP ProDesk 600 Desktop Mini, HP EliteDesk 705 Desktop Mini, HP EliteDesk 800 Desktop Mini	

* These modules can be mounted to the DM directly and to another module with screws in the kit that allow the module to slide into place. All modules can be used with the PC that is wrapped in the Security/Dual VESA Sleeve, and all can be mounted onto a standard VESA mount (100mm sizing). Both options can be secured in place with a tamper-resistant screw. They are powered by a single USB connection cable. The HP 260 and ProDesk 400 can support 2 expansion modules at a time using 2 USB Type A ports on the back of the unit.

Input / Output / HDD

HP Desktop Mini 500GB HDD/ I/O Expansion Module

Add an extra hard drive to your HP Desktop Mini PC and enable compatibility with your existing and legacy peripherals with the HP Desktop Mini 500GB HDD/I/O Module.

Dimensions (H x W x D)	0.9 x 7 x 6.9 in (22.8 x 177 x 174.6 mm)
Weight	729g (27.71oz)
Color	Jack Black
Host Interface	USB 3.0 Type B female connector
Ports included on module	PS/2, Serial, USB 3.0 Type AB connector on the ODD, HDD/ I/O, and I/O modules*
	*NOTE: PC will recognize PS/2 and Serial as a USB to serial connection and is not intended use with peripherals that require native serial connectivity.
Power	USB 3.0 Type B
VESA mount	Yes, 100mm
Connectors	Signal output: USB 3.0 Type A
Capacity	500,107,862,016 bytes

Technical Specifications

Interface	Serial ATA (6.0 Gb/s)		
Synchronous Transfer Rate (Maximum)	Up to 6 Gb/s		
Cache	16 MB		
Seek Time (typical reads, includes controller overhead, including settling)	Single Track	2 ms	
	Average	11 ms	
	Full-Stroke	21 ms	
Rotational Speed	7200 rpm		
Logical Blocks	625,142,448		
System Requirements Software	Windows 8.1, Driver located on HP.com for HP EliteDesk 800 Desktop Mini, HP EliteDesk 705 Desktop Mini, HP ProDesk 600 Desktop Mini		
Option kit contents	Expansion module, 3 4mm ladder screws, 3 8mm ladder screws, 1 29mm secured torx screw, 1 54mm secured torx screw, 1 29mm torx screw, 1 54mm torx screw, 1 50mm USB 3.0 Type B USB to Type BA cable, , 1 80mm USB 3.0 Type B USB to Type A cable, Installation guide, Warranty		
Compatibility	HP 260 Desktop Mini, HP ProDesk 400 Desktop Mini, HP ProDesk 600 Desktop Mini, HP EliteDesk 705 Desktop Mini, HP EliteDesk 800 Desktop Mini		

HP Desktop Mini I/O Expansion Module

Keep working with your existing peripherals and add legacy ports to your HP Desktop Mini PC with the HP Desktop Mini I/O Module.

Dimensions (H x W x D)	0.9 x 7 x 6.9 in (22.8 x 177 x 174.6 mm)
Weight	623g (21.98oz)
Color	Jack Black
Host Interface	USB 3.0 Type B female connector
Ports included on module	PS/2, Serial, USB 3.0 Type AB connector on the ODD, HDD/ I/O, and I/O modules, 2 USB 2.0 ports
	* NOTE: PC will recognize PS/2 and Serial as a USB to serial connection and is not intended use with peripherals that require native serial connectivity.

Host Interface	
Power	USB 3.0 Type B
Operating Temperature	0-35°C (32-95°F)
Storage Temperature	-20~60°C (4~140°F)
System Requirements Software	Windows 8.1, Driver located on HP.com for HP EliteDesk 800 Desktop Mini, HP EliteDesk 705 Desktop Mini, HP ProDesk 600 Desktop Mini
VESA mount	Yes, 100 mm
Option kit contents	Expansion module, 3 4mm ladder screws, 3 8mm ladder screws, 1 29mm secured torx screw, 1 54mm secured torx screw, 1 29mm torx screw, 1 54mm torx screw, 1 50mm USB 3.0 Type AB USB to Type A cable, , 1 80mm USB 3.0 Type B USB to Type A cable, Installation guide, Warranty
Compatibility	HP 260 Desktop Mini, HP ProDesk 400 Desktop Mini, HP ProDesk 600 Desktop Mini, HP EliteDesk 705 Desktop Mini, HP EliteDesk 800 Desktop Mini

Technical Specifications

HP G4 Mini 2.5-inch SATA Drive Bay Kit **PROMO**

Add a 2.5" SSD or HDD to your HP Desktop Mini G4 with easy to install and remove HP G4 Mini 2.5-inch SATA Drive Bay Kit.

Dimensions (H x W x D) 3.38 x 4.68 x 0.91 in (8.6 x 11.9 x 2.33 cm)

Weight 623g (21.98oz)

What is In The Box HP G4 Mini 2.5-inch SATA Drive Bay Kit

Country of origin Made in China

Power

HP Desktop 65w Mini Power Supply Kit

Dimensions (H x L x W) 2.2 x 1.2 x 4.5 in (30mm x 113.5mm x 55mm)

External Power Adapter

Total cord length 6 ft.

Standard Efficiency 65W
89% efficient

Operating Voltage Range 90 - 264 VAC

Rated Voltage Range 100 - 240 VAC

Rated Line Frequency 50/60 Hz

Current Leakage (NFPA 99: 2102) Less than 500 microamps of leakage current at 120 Vac with the ground wire disconnected, as required for Non-patient Electrical Appliances and Equipment used in a patient care facility or that contact patients in normal use. Per section 10.3.5.1.

Less than 100 microamps of leakage current at 120 Vac with the ground wire intact with normal polarity, as required for Non-patient Electrical Appliances and Equipment used in a patient care facility or that contact patients in normal use. Per section 10.3.5.1.

Option kit contents Power supply, Power cable, Warranty

Compatibility The HP Desktop Mini 65w Power Supply Kit is compatible with the HP 260 G1 DM (mini); HP 260 G2 DM (Mini); HP ProDesk 400 G2 DM (Mini); HP ProDesk 400 G3 DM (Mini); HP ProDesk 600 G2 Desktop Mini; HP ProDesk 600 G3 Desktop Mini; HP EliteDesk 705 G2 Desktop Mini; HP EliteDesk 705 G3 Desktop Mini; HP EliteDesk 800 G2 35W Desktop Mini; HP EliteDesk 800 G3 TWR; HP EliteDesk 800 G3 SFF; HP EliteDesk 800 G3 35W Desktop Mini; HP Collaboration PC G2; HP Elite Slice; HP Elite Slice for Meeting Rooms

*specific parts need to be localized

HP Desktop 90w Mini Power Supply Kit

Dimensions (H x L x W) 2.2 x 1.2 x 4.5 in (31.1mm x 133mm x 58mm)

External Power Adapter

Total cord length 6 ft.

Standard Efficiency 65W active PFC
89% efficient

Operating Voltage Range 90 - 264 VAC

Rated Voltage Range 100 - 240 VAC

Rated Line Frequency 50/60 Hz

Technical Specifications

Current Leakage (NFPA 99: 2102)	Less than 500 microamps of leakage current at 120 Vac with the ground wire disconnected, as required for Non-patient Electrical Appliances and Equipment used in a patient care facility or that contact patients in normal use. Per section 10.3.5.1. Less than 100 microamps of leakage current at 120 Vac with the ground wire intact with normal polarity, as required for Non-patient Electrical Appliances and Equipment used in a patient care facility or that contact patients in normal use. Per section 10.3.5.1.
Option kit contents	Power supply, Power cable, Warranty
Compatibility	HP EliteDesk 705 Desktop Mini *specific parts need to be localized

Cables and Adapters

DisplayPort TO VGA Adapter Cable

Compatibility	The HP DisplayPort To VGA Adapter is compatible with the HP 285 (Pro) G2 MT; HP ProDesk 400 G2 SFF; HP ProDesk 400 G2.5 SFF; HP ProDesk 400 G2 MT; HP ProDesk 405 G2 MT; HP ProDesk 400 G3 SFF; HP ProDesk 400 G3 MT; HP ProDesk 400 G4 SFF; HP ProDesk 400 G4 MT; HP ProDesk 490 G3 MT; HP ProDesk 400 G2 DM (Mini); HP ProDesk 400 G3 DM (Mini); HP ProOne 400 G2 AIO Touch; HP ProOne 400 G2 AIO Non-Touch; HP ProOne 400 G3 AIO Touch; HP ProOne 400 G3 AIO Non-Touch; HP ProDesk 600 G2 MTW; HP ProDesk 600 G2 SFF; HP ProDesk 600 G2 Desktop Mini; HP ProDesk 600 G3 MTW; HP ProDesk 600 G3 SFF; HP ProDesk 600 G3 Desktop Mini; HP ProOne 600 G2 AIO 21.5" Touch; HP ProOne 600 G2 AIO 21.5" Non-Touch; HP ProOne 600 G3 AIO 21.5" Non-Touch; HP EliteDesk 705 G2 MT; HP EliteDesk 705 G3 MT; HP EliteDesk 705 G2 SFF; HP EliteDesk 705 G3 SFF; HP EliteOne 705 G2 AIO 23" Touch; HP EliteOne 705 G2 AIO 23" Non-Touch; HP EliteDesk 705 G2 Desktop Mini; HP EliteDesk 705 G3 Desktop Mini; HP EliteDesk 800 G2 TWR; HP EliteDesk 800 G2 SFF; HP EliteDesk 800 G2 35W Desktop Mini; HP EliteDesk 800 G2 65W Desktop Mini; HP EliteDesk 800 G3 TWR; HP EliteDesk 800 G3 SFF; HP EliteDesk 800 G3 35W Desktop Mini; HP EliteDesk 800 G3 65W Desktop Mini; HP Collaboration PC G2; HP EliteOne 800 G2 AIO 23" Touch; HP EliteOne 800 G2 AIO 23" Non-Touch; HP EliteOne 800 G3 AIO 23.8" NT; HP EliteOne 800 G3 AIO 23.8" Touch; HP EliteOne 1000 G1 AiO; HP Elite Slice; HP Elite Slice for Meeting Rooms; HP RP5 Retail System, Model 5810
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Service and support

Your Option Limited Warranty is a one (1) year (HP Option Limited Warranty Period) parts replacement warranty on any HP-branded or Compaq-branded options (HP Options). If your HP Option is installed in an HP Hardware Product, HP may provide warranty service either for the HP Option Limited Warranty Period or the remaining Limited Warranty Period of the HP Hardware Product in which the HP Option is being installed, whichever period is the longer but not to exceed three (3) years from the date you purchased the HP Option.

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Summary of Changes

Date of change:	Version History:		Description of change:
January 9, 2015	V1	Created	Created the document
February 17, 2015	From v1 to v2	Added	Added the other accessories chart
February 24, 2015	From v2 to v3	Changes	Added new options in the first page Added a note at the end of “ HP Desktop Mini 500GB HDD/ I/O Expansion Module”
July 1, 2015	From v3 to v4	Added	Added 7mm Spacer, 20mm screws under HP Desktop Mini Security/Dual VESA Sleeve
August 20, 2015	From v4 to v5	Change	Change “Mounting” to “Mounting/Security” on the 1 st page
		Added	Added “Desktop Mini LockBox” and it’s specs under “Mounting”
August 31, 2015	From v5 to v6	Changed	Desktop Mini LockBox weight
December 1, 2015	From v6 to v7	Added	“Desktop Mini Port Cover Kit” and it’s specs under Mounting
December 3 2015	From v7 to v8	Added	Specs for the Desktop Mini Port Cover Kit
March 15, 2016	From v8 to v9		Updated compatibility
December 5, 2016	From v9 to v10	Updated	SuperMulti references deleted
July 11. 2017	From v10 to v11	Added	HP Desktop Mini G3 Port Cover Kit, HP Desktop Mini VESA Power Supply Holder Kit, HP (Bulk 10) Desktop Mini VESA Quick Deploy Adhesive Kit
August 02, 2017	From v11 to v12	Updated	Mounting/Security section updated: Desktop Mini LockBox (G1/G2 only) P1N78AA; HP Desktop Mini Port Cover Kit (G1/G2 only) P3R65AA
September 29, 2017	From v12 to v13	Updated	HP Desktop 65w Mini Power Supply Kit specs updated
October 30, 2017	From v13 to v14	Updated	Power Section updated
November 1, 2017	From v14 to v15	Update	HP Desktop Mini 65w Power Supply Kit compatibility updated
November 8, 2017	From v15 to v16	Added	HP DisplayPort To VGA Adapter with its compatibility spec
November 9, 2017	From v16 to v17	Update	HP Desktop Mini Port Cover Kit compatibility updated
May 29, 2018	From v17 to v18	Update	HP Desktop Mini G3 Port Cover Kit renamed to G4 and HP G4 Mini 2.5-inch SATA Drive Bay Kit added
July 16, 2018	From v18 to v19	Update	Sentence added to possible configurations on HP (Bulk 10) Desktop Mini VESA Quick Deploy Adhesive Kit*
August 14, 2018	From v19 to v20	Update	Note updated to HP Desktop Min G4 Port cover Kit.

Technical Specifications

HP Storage Solutions for HP Business Notebooks

Models

Optical Drives	HP External USB DVD/RW	F2B56AA
	2013 Upgrade Bay DVD AMO - Carrier and Drive	G1Y56A
Removable Hard Drives	HP 500 GB 7200 rpm Primary SATA Hard Drive	F3B97AA
	HP 1 TB 7200 rpm Primary SATA Hard Drive	L3M56AA
	2013 Upgrade Bay 750GB HDD AMO Carrier and Drive	G1Y57AA
Solid State Drives	HP 256 GB TLC Solid State Drive 2.5"	MOF34AA
	HP 256 GB PCIe NVMe M.2 Solid State Drive	V3K66AA
	HP 256 GB Value 2280 SATA3 M.2 Solid State Drive	1DE47AA
	HP 256 GB TLC 2280 SATA3 M.2 Solid State Drive	1DE48AA
	HP 256GB TLC PCI-e 3x4 NVMe M.2 Solid State Drive	1FU87AA
	HP 512 GB PCIe NVMe M.2 Solid State Drive	V3K67AA
	HP 512 GB TLC PCI-e 3x4 NVMe M.2 Solid State Drive	1FU88AA
	HP 1 TB 2280 PCI-E 3x4 NVME M.2 Solid State Drive	X2E90AA
	HP 512 GB TLC 2.5 Solid State Drive New!	2JB96AA
	HP 128 GB TLC 2280 M.2 Solid State Drive New!	2JB95AA
	HP 256GB SED TLC SATA- 3 M.2 SSD New!	3JP90AA
HP 512GB TLC SATA- 3 M.2 SSD New!	3JP91AA	
Brackets	HP Mobile Workstation HDD/SSD Bracket	J2D73AA

Technical Specifications

HP Storage Solutions

HP storage solutions for your HP business notebook provide additional flexibility and expandability with a range of options that include optical drives, hard drives, and solid state drives.

Optical Drives

HP External USB DVD/RW

With the HP External USB Optical Drive, any available USB port on your notebook or Ultrabook™ becomes a ticket to optical storage. Simply connect the drive with the included USB cable, and get immediate read/write access to your optical media.

Key Benefits

- Write to or access large files, media or music from CDs or DVDs
 - Connect easily through a USB 2.0 port
 - Lightweight, compact design stores easily into a carrying case or backpack
-

2013 Upgrade Bay DVD AMO - Carrier and Drive

Create CDs and DVDs, back up or archive permanent data files on CD or DVD media with the HP 2013 Upgrade Bay DVD AMO - Carrier and Drive.

Key Benefits

- Write to or access large files, media or music from CDs or DVDs
 - Up to 4.7 GB of data storage capacity (up to 8.5 GB double layer).
 - Lightweight, compact design stores easily into a carrying case or backpack.
-

Removable Hard Drives

HP 500 GB/750 GB/ 1 TB 7200rpm Primary SATA Hard Drive

The HP Hard Drives are convenient and affordable solutions for users who require additional storage or a faster dedicated second hard drive.

Key Benefits

- Extend the life of your HP Business Notebook by providing additional storage
 - Easy low-cost back-up solution without burdening network resources
 - Switch drives between most HP business notebooks
 - SMART predictive failure analysis (PFA)
-

2013 Upgrade Bay 750 GB HDD AMO Carrier and Drive

The 2013 HP Upgrade Bay 750 GB HDD AMO Carrier and Drive is a convenient and affordable solution for users who require additional storage or a faster dedicated second hard drive.

Key Benefits

- Easy back-up solution without burdening network resources.
 - Warm swappable.
 - High speed SATA data transfer.
-

Technical Specifications

- Power/drive activity LED indicator.

Solid State Drives

HP 240 GB and 256, 512 GB, or 1 TB Solid State Drives

The HP 240 GB, 512 GB, and 1 TB Solid State Drives provide many performance and durability improvements over traditional Hard Disk Drive (HDD) technology. With no moving parts, solid state drives do not need to spin up or mechanically seek files like conventional hard disk drives do. These drive characteristics significantly improve boot-up, shut down, and application loading times as well as overall application responsiveness.

The HP 256 GB SED Solid State Drive includes Trusted Computing Group (TCG) Opal-compliant self-encryption for enhanced data security that adds a layer of authentication to your drive.

Key Benefits

- Store your data with a hard drive with no moving parts
- Get faster transfer speeds and higher cell endurance with Multi Level Cell (MLC) NAND flash memory
- Significantly improve boot up, shut down, and application loading times
- Improved protocol for enhanced data integrity
- Performance increase to up to 6 Gb/s maximum external (burst) data transfer rate
- Native Command Queuing allows the drive to have several write or read commands outstanding at the same time

Bracket

HP Mobile Workstation HDD/SSD Bracket

Easily replace or upgrade your hard drive or solid state drive with the HP Mobile Workstation HDD/SSD Bracket.

Simply insert the drive (sold separately) into the bracket, and the bracket into the available drive slot on your HP Mobile Workstation or HP ZBook.

Rest easy with a one-year parts replacement limited warranty.

Optical Drives

HP External USB DVD/RW Drive	Manual tray-load
Interface	USB 2.0
Dimensions (HxWxD)	0.55 x 5.41 x 5.94 in (1.40 x 14.40 x 13.75 cm)
Form Factor	External
Access Times	CD 1/3 Stroke: 140 ms DVD 1/3 Stroke: 160 ms
Supported Media (read)	DVD-ROM, DVD-R DVD-R , DVD-R DL, DVD-RW, DVD-RAM, DVD+R, DVD+R DL, and +RW CD-ROM, CD-ROM XA, CD-DA

Technical Specifications

	Super Audio CD CD-R discs CD-RW discs CPRM (DVD-R/RW/RAM) supported	
Supported Media (write)	DVD-R DVD-R DL DVD-RW DVD-RAM DVD+R DVD+R DL DVD+RW CD-R/RW	
Maximum speed		Normal
Write	DVD-RW DVD+RW CD-RW	6X maximum by ZCLV 8X maximum by ZCLV 24 X maximum by ZCLV
Read	DVD-R/RW/ROM DVD-R DL DVD-RAM DVD-Video M-DISC(DVD+R SL) DVD+R/+RW DVD+R DL CD-R/RW/ROM CD-DA	8 X maximum 8 X maximum 6 X maximum 4 X maximum 8 X maximum 8 X maximum 8 X maximum 24 X maximum 24 X maximum
Environmental (all conditions, non-condensing)	Temperature (operating) Read and Write Relative Humidity (operating) Read Write Temperature (non-operating) Relative Humidity (non-operating)	5 to 40 °C 10% to 80% 15% to 85% (Non-Condensing) 15% to 80% (Depend on the Temperature) -30 to 40 °C 10% to 90% (Non-Condensing)
Operating systems supported	Windows 8, Windows 7, Windows Vista, Windows XP, Windows 2008, Windows 2003, Mac OS X	
System requirements	Pentium IV 2.4 GHz or higher, compatible (Recommended: Pentium IV 3.2 GHz or Higher) RAM: 256 MB or higher (Recommended: 128 MB) HDD: 20 GB or more of available space Video Memory: 64 MB or higher (Recommend: 128 MB) Interface: USB 2.0	
Option kit contents	HP Mobile USB DVD/RW Drive, software, documentation	
Compatibility	All HP Business Notebook PCs, HP Mobile Workstations	

Note: Actual speeds may vary. Intended only for creation and storage of original material and other lawful uses. Double-layer discs may not be compatible with many existing single-layer DVD drives and players.

Technical Specifications

2013 Upgrade Bay DVD AMO - Carrier and Drive	Drive	Manual tray-load
	Orientation	Horizontal or vertical
	Operating Temperature	5 to 50 °C
	Interface	SATA 1.0
	Transfer Mode	1X CD-ROM = 150 Kbytes/second 1X DVD-ROM = 1350 Kbytes/second (1KB = 1024 Bytes) DVD+R Write 10800 KB/s up to 8X DVD+R DL Write 5400 KB/s up to 6X DVD+RW Write 10800 KB/s up to 8X DVD-R Write 10800 KB/s up to 8X. DVD-R DL Write 5400 KB/s up to 6X DVD-RW Write 8100 KB/s up to 6X DVD-RAM Write 6750 KB/s up to 5X CD-R Write 3600 KB/s up to 24X. CD-RW Write 2400 KB/s up to 16X CD-ROM Read 3600 KB/s up to 24X. DVD-ROM Read 10800 KB/s up to 8X.
	Weight	4.94 lb (140 g)
	Dimensions (HxWxD)	5.51 x 5.09 x .62 in 13.99 x 12.93 x 1.58 cm
	Form Factor	Commands for DVD Devices. Small Form Factor Connector Standards
	Capacity	Read Write
	Access Times	CD DVD
	Max Data transfer rates (sustained)	24X CD-ROM 8X DVD 24X CD-R 16X CD-RW 8X DVD+R 4X DVD+RW 8X DVD-R 4X DVD-RW 2.4X DVD+R(9) 5X DVD-RAM
	Supported Media (read)	DVD-R DVR-W DVD+RW DVD+R DVD+R DL DVD-R DL DVD-RAM
	Supported Media (write)	CD-R CD-RW DVD-R DVD-R DL

Technical Specifications

	DVD-RW DVD+R DVD+R DL DVD+RW DVD-RAM
Max Media Capacity (read)	9.40 GB
Max Media Capacity (write)	8.50 GB
Power	5 VDC < 800 mA Read (typical at O.D.) < 1,000 mA Write (typical at O.D.) <1600 mA (maximum-excluding spike current <1ms duration) <65 mA (stand-by - partial if supported) <40 mA (stand-by - slumber)
Environmental (all conditions, non-condensing)	Temperature (operating) Relative Humidity (operating) Maximum Wet Bulb Temperature (operating)
Operating systems supported	Windows 7 and Windows 8
Option kit contents	2013 Upgrade Bay DVD AMO - Carrier and Drive and documentation
Compatibility	HP ZBook 15/17 Mobile Workstations

Note: Actual speeds may vary. Intended only for creation and storage of original material and other lawful uses. Double-layer discs may not be compatible with many existing single-layer DVD drives and players.

Removable Hard Drives

HP 500 GB 7200rpm Primary SATA Hard Drive	Drive Weight	0.25 lb (115g)
	Capacity	500 GB
	Height	0.27 in (7 mm)
	Width	2.75 in (70 mm)
	Interface	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ
	Transfer Rate	Synchronous (maximum) 150 MB/s (Drive Capability)
	Seek Time (typical reads, including settling)	Single Track 1.5ms Average 11ms Maximum 22ms
	Rotational Speed	7200 rpm
	Logical Blocks	976,773,168
	Operating Temperature	32° to 140° F (0° to 60° C) [case temp]
	Features	ATA Security
	Compatibility	HP ProBook 430, 440, 450, 470, 445 , 450, 470, 640, 650, 645, 655 , 4440s, 4540s, 4740s, 4445s/4446s, 4545s, 6470b, 8470p, 6570b, 8570p Notebook PCs

Note: GB = 1 billion bytes. Actual formatted capacity is less. Up to 465 GB is user available.

Technical Specifications

HP 1 TB 7200rpm Primary SATA Hard Drive	Drive Weight	115g	
	Capacity	1000GB	
	Height	9.5mm	
	Width	70mm	
	Interface	ATA-8, SATA 3.0	
	Transfer Rate	Synchronous (maximum) 600MB/s	
	Seek Time (typical reads, including settling)	Single Track	2ms
		Average	13ms
		Maximum	15ms
	Rotational Speed	7200 rpm	
	Logical Blocks	1,465,149,168	
	Operating Temperature	32° to 140° F (0° to 60° C) [case temp]	
	Features	ATA Security	
	Compatibility	HP EliteBook 700, 800 Notebook PCs, HP ZBook 14/15/17 Mobile Workstations	

Note: 1 TB = a trillion bytes. Actual formatted capacity is less. Up to 931 GB is user available.

HP 2013 Upgrade Bay 750 GB Hard Drive	Weight (without HDD)	1.59 lb (45 g)
	Dimensions (HxWxD)	5.30 x 5.04 x .60 in
		13.45 x 12.80 x 1.53 cm
	Formatted Capacity	750 GB
	Total logical sectors	1465149168
	Interface	SATA 3.0
	Data Transfer rate @ Disk to Buffer SATA	170 Mbytes/s up to 600MB/s
	RPM	7200
	Operating systems supported	Windows 7 and Windows 8
	Operating Temperature	0 to 60°C
	Option kit contents	HP 2013 Upgrade Bay 750 GB Hard Drive and documentation
	Compatibility	HP ZBook 15, 17 Mobile Workstations

Note: GB = 1 billion bytes. Actual formatted capacity is less. Up to 698 GB is user available.

Solid State Drives

Technical Specifications

HP 256 GB M.2 Solid State Drive	Capacity*	256 GB
	NAND Flash Memory	Multi Level Cell (MLC) with wear leveling controller
	Interface type	SATA 6 Gb/sec (SATA Gen3 compliant)
	Dimensions-external (W x H x D)	2.74 x 0.276 x 3 in (2.2 x 8 x 0.15 cm)
	Weight	<0.02 lb (10 g)
	Internal transfer rate	Write speed Up to 465 MB/s
		Read speed Up to 515 MB/s
	Host transfer rate	Ultra DMA mode Up to 100 MB/s (Support Ultra DMA 5)
	Power	DC power requirement 3.3 VDC 3.3%-100 mV ripple pk-pk
		Total power consumption < 6.6 Watt (max value)
	Environmental (all conditions, non-condensing)	Temperature (operating) 32° to 158° F (0° to 70° C)
		Relative Humidity (operating) 5% to 95%
		Maximum Wet Bulb Temperature (operating) 104° F (40° C)
	Operating systems supported	Windows® 7 Home Basic 32-bit, Windows 7 Home Premium 32- and 64-bit, Windows 7 Professional 32- and 64-bit, Windows XP Professional 32-bit, Windows XP Professional x64 or Windows XP Home. No driver is required for this device, although the HP-tested driver is recommended. Native support is provided by the operating system.
	Regulations	UL, CSA, EN60950-1:2006, CISPR Pub 22 Class B, CNS 13438, AS/NZS CISPR 22:2002 Class B,
	Option kit contents	HP 256GB SSD M.2, documentation
	Compatibility	TBD

Note: GB = 1 billion bytes. Actual formatted capacity is less. Up to 238 GB is user available.

HP 256 GB TLC Solid State Drive	Capacity*	256 GB
	NAND Flash Memory	
	Interface type	SATA 3 (6Gbps)
	Dimensions-external (W x H)	2.5 x .27 in (63.5 mm x 7mm)
	Weight	0.10 lb (45 g)
	Interface	SATA 3 (6Gbps)
	READY TIME, MAXIMUM (to Not Busy)	1.0 s
	Access times, Logical	TYP.
	Data Transfer rate (4k sector Random / 128k Sequential)	0.1 ms
	Sequential Read	Up to 510 MB/s

Technical Specifications

Random Read	Up to 90K IOPS
Sequential Write	Up to 280 MB/s
Random Write	Up to 70K IOPS
Logical Blocks	500118192
Operating Temperature	0 to 70 °C
Option kit contents	HP 256 GB Solid State Drive, documentation
Compatibility	HP 245, 250, 250, 255 G4

Note: GB = 1 billion bytes. Actual formatted capacity is less. Up to 238 GB is user available.

Technical Specifications

HP 256 GB PCIe NVMe M.2 Capacity*	256 GB	
Solid State Drive	Interface type	M.2 PCIe Gen 3x4 NVMe
	Form Factor	M.2 2280 Single Sided
	Dimensions-external (W x H x D)	80.15 x 22.15 x 2.38 (mm)
	Weight	<0.02 lb (10 g)
	Internal transfer rate	Sequential Write speed Up to 1260 MB/s
		Sequential Read speed Up to 2150 MB/s
	Host transfer rate	Ultra DMA mode Up to 100 MB/s (Support Ultra DMA 5)
	Power	DC power requirement 3.3 VDC 3.3%-100 mV ripple pk-pk
		Total power consumption < 6.6 Watt (max value)
	Environmental (all conditions, non-condensing)	Temperature (operating) 32° to 158° F (0° to 70° C)
		Relative Humidity (operating) 5% to 95%
		Maximum Wet Bulb Temperature (operating) 104° F (40° C)
	Operating systems supported	Windows® 7 Home Basic 32-bit, Windows 7 Home Premium 32- and 64-bit, Windows 7 Professional 32- and 64-bit, Windows XP Professional 32-bit, Windows XP Professional x64 or Windows XP Home. No driver is required for this device, although the HP-tested driver is recommended. Native support is provided by the operating system.
	Regulations	UL, CSA, EN60950-1:2006, CISPR Pub 22 Class B, CNS 13438, AS/NZS CISPR 22:2002 Class B~~
	Option kit contents	256 GB SSD M.2, documentation
	Compatibility	ZBook 15, 17 G3

Note: GB = 1 billion bytes. Actual formatted capacity is less. Up to 167 GB is user available.

Technical Specifications

HP 512 GB PCIe NVMe M.2 Capacity*		512 GB
Solid State Drive	Interface type	M.2 PCIe Gen 3x4 NVMe
	Form Factor	M.2 2280 Double Sided
	Dimensions-external (W x H x D)	80.15 x 22.15 x 2.38 (mm)
	Weight	<0.02 lb (10 g)
	Internal transfer rate	Sequential Write speed Up to 1500 MB/s
		Sequential Read speed Up to 2150 MB/s
	Host transfer rate	Ultra DMA mode Up to 100 MB/s (Support Ultra DMA 5)
	Power	DC power requirement 3.3 VDC 3.3%-100 mV ripple pk-pk
		Total power consumption < 6.6 Watt (max value)
	Environmental (all conditions, non-condensing)	Temperature (operating) 32° to 158° F (0° to 70° C)
		Relative Humidity (operating) 5% to 95%
		Maximum Wet Bulb Temperature (operating) 104° F (40° C)
	Operating systems supported	Windows® 7 Home Basic 32-bit, Windows 7 Home Premium 32- and 64-bit, Windows 7 Professional 32- and 64-bit, Windows XP Professional 32-bit, Windows XP Professional x64 or Windows XP Home. No driver is required for this device, although the HP-tested driver is recommended. Native support is provided by the operating system.
	Regulations	UL, CSA, EN60950-1:2006, CISPR Pub 22 Class B, CNS 13438, AS/NZS CISPR 22:2002 Class B~~
	Option kit contents	512 GB SSD M.2, documentation
	Compatibility	ZBook 15, 17 G3

Note: GB = 1 billion bytes. Actual formatted capacity is less. Up to 167 GB is user available.

Technical Specifications

HP 1 TB PCI-E 3x4 NVME 2280 M.2 Solid State Drive	Capacity*	1 TB
	Interface type	PCIe NVMe Gen3X4
	Form Factor	M.2 2280
	Dimensions-external (W x H x D)	0.87 x 0.14 in (22 x 3.65 mm)
	Weight	0.02 lb (10 g)
	Internal transfer rate	Sequential Write speed 2,400 MB/s
		Sequential Read speed 1,500 MB/s
	Host transfer rate	Ultra DMA mode
	Power	DC power requirement
		Total power consumption
		Nominal voltage +3.3 V
	Environmental (all conditions, non- condensing)	Temperature (operating) 0 to 70 C
		Relative Humidity (operating) 5 to 95 %
		Maximum Wet Bulb Temperature (operating) 35 C
	Operating systems supported	Win 7 Pro 64, Win 10 Home 64 Chinese Market CPPP Win 10 Home 64 High-end Win 10 Home 64 High-end Chinese Market Win 10 Home 64 High-end Single Language Win 10 Pro 64 Win 10 Pro 64 Downgrade Win 7 64 FreeDOS 2.0
	Regulations	RoHS UL CSA EN 60950-1 FCC AS/ NZ CISPR BSMI KCC CE CISPR 22 - Class B
	Option kit contents	HP 1 TB Solid State Drive 2280 M.2 PCI-E 3x4 NVME, documentation
	Compatibility	ZBook 15U G3 ZBook 15 G3 ZBook 15 Studio G3 ZBook 17 G3

Note: GB = 1 billion bytes. Actual formatted capacity is less. Up to 167 GB is user available.

Technical Specifications

HP 256GB Value 2280 SATA3 M.2 SSD

Capacity*	256 GB	
NAND Flash Memory	Flash 5st Generation. 1T ODP 8CE NAND Density	
Interface type	SATA 6 Gb/sec (Partially Complies with revision 3.2)	
Dimensions-external (H x W x L)	0.09 x 0.86 x 3.1 in (0.23 x 2.2 x 8 cm)	
Weight	0.01 lb (8 g)	
Internal transfer rate	Write speed	Up to 515 MB/s
	Read speed	Up to 535 MB/s
Power	Supply Voltage	3.3V ± 5%
	Voltage Ripple/Noise (max.)	100mV p-p
Environmental (all conditions, non- condensing)	Temperature (operating)	0 ~ 70 °C
	Relative Humidity (non- condensing)	5% to 95%
	Shock (1/2 sine pulse)	1,500 G (0.5ms)
Regulations	CE Comunaute Europeenne, BSMI Bureau of Standards, Metrology and Inspection, KCC Korea Communications commission, VCCI Voluntary Control Council for Interference, C-Tick Radio Telecommunication Labeling, FCC Federal Communications Commission, IC Industry Canada, UL Underwriters Laboratories, Inc., TUV Technischer Uberwachungs Verine e.V, CB Scheme of the IECEE for Mutual Recognition of Test Certificates for Electrical Equipment	
Option kit contents	HP 256GB SSD M.2, documentation	
Compatibility	HP ProBook 430, 440, 450, 470 G4	

Note: GB = 1 billion bytes. Actual formatted capacity is less. Up to 167 GB is user available.

Technical Specifications

HP 256GB TLC 2280 SATA3 M. 2 SSD	Capacity*	256 GB	
	NAND Flash Memory	Flash 1st Generation. 4T HDP 16CE, 2T ODP 8CE, 1T QDP 4CE NAND Density	
	Interface type	SATA 6 Gb/sec (Partially Complies with revision 3.2)	
	Dimensions-external (H x W x L)	0.09 x 0.86 x 3.1 in (0.23 x 2.2 x 8 cm)	
	Weight	0.01 lb (9 g)	
	Internal transfer rate	Write speed	Up to 515 MB/s
		Read speed	Up to 530 MB/s
	Power	Supply Voltage	3.3V ± 5%
		Voltage Ripple/Noise (max.)	100mV p-p
	Environmental (all conditions, non- condensing)	Temperature (operating)	0 ~ 70 °C
		Humidity (non-condensing)	5% to 95%
		Linear Shock (1/2 sine pulse)	1,500 G (0.5ms)
	Regulations	CE Comunaute Europeenne, BSMI Bureau of Standards, Metrology and Inspection, KCC Korea Communications commission, VCCI Voluntary Control Council for Interference, C-Tick Radio Telecommunication Labeling, FCC Federal Communications Commission, IC Industry Canada, UL Underwriters Laboratories, Inc., TUV Technischer Uberwachungs Verine e.V, CB Scheme of the IECEE for Mutual Recognition of Test Certificates for Electrical Equipment	
Option kit contents	HP 256GB SSD M.2, documentation		
Compatibility	HP ProBook 430, 440, G3, 640, 650 G2 HP EliteBook 840, 850, G3		

Note: GB = 1 billion bytes. Actual formatted capacity is less. Up to 167 GB is user available.

Technical Specifications

HP 256GB TLC PCI-e 3x4 NVMe M.2 SSD	Capacity*	256 GB	
	Interface type	PCI-E	
	Dimensions-external (H x W x L)	0.86 x 3.14 x 0.09 in (2.2 x 8 x 0.23 cm)	
	Weight	0.01 lb (8 g)	
	Internal transfer rate	Write speed	Up to 515 MB/s
		Read speed	Up to 535 MB/s
		Ultra DMA mode	
	Host transfer rate		
	Power	DC power requirement	3.3V
		Total power consumption	80mW in active mode
	Environmental (all conditions, non- condensing)	Temperature (operating)	0 ~ 70 °C
		Relative Humidity (non- condensing)	5% to 95%
	Operating systems supported	Windows 8, 8.1, 10	
	Regulations	CE Comunaute Europeenne, BSMI Bureau of Standards, Metrology and Inspection, KCC Korea Communications commission, VCCI Voluntary Control Council for Interference, C-Tick Radio Telecommunication Labeling, FCC Federal Communications Commission, IC Industry Canada, UL Underwriters Laboratories, Inc., TUV Technischer Uberwachungs Verine e.V, CB Scheme of the IECEE for Mutual Recognition of Test Certificates for Electrical Equipment	
Option kit contents	M.2 Drive, Product Notice, Warranty		
Compatibility	HP EliteBook 840/850 G4, 720 G4, 820 G4, 745/755 G4 HP ProBook 640/650/645/655 G3		

Note: GB = 1 billion bytes. Actual formatted capacity is less. Up to 167 GB is user available.

Technical Specifications

HP 512GB TLC PCI-e 3x4 NVMe M.2 SSD	Capacity*	512 GB		
	Interface type	PCI-E		
	Form Factor	M2		
	Dimensions-external (H x W x L)	0.86 x 3.14 x 0.09 in (2.2 x 8 x 0.23 cm)		
	Weight	0.01 lb (8 g)		
	Internal transfer rate	Write speed	Up to 515 MB/s	
		Read speed	Up to 535 MB/s	
		Ultra DMA mode		
	Host transfer rate			
	Power	DC power requirement	3.3V	
		Total power consumption	80mW in active mode	
		Temperature (operating)	0 ~ 70 °C	
	Environmental (all conditions, non- condensing)	Relative Humidity (non- condensing)	5% to 95%	
		Operating systems supported	Windows 8, 8.1, 10	
Regulations	CE Comunaute Europeenne, BSMI Bureau of Standards, Metrology and Inspection, KCC Korea Communications commission, VCCI Voluntary Control Council for Interference, C-Tick Radio Telecommunication Labeling, FCC Federal Communications Commission, IC Industry Canada, UL Underwriters Laboratories, Inc., TUV Technischer Uberwachungs Verine e.V, CB Scheme of the IECEE for Mutual Recognition of Test Certificates for Electrical Equipment			
Option kit contents	M.2 Drive, Product Notice, Warranty			
Compatibility	HP EliteBook 840/850 G4, 720 G4, 820 G4, 745/755 G4 HP ProBook 640/650/645/655 G3			

Note: GB = 1 billion bytes. Actual formatted capacity is less. Up to 167 GB is user available.

Technical Specifications

HP 512GB TLC 2.5 SSD	Capacity*	512 GB
	Interface type	SATA
	Form Factor	M.2 2280 Double Sided
	Dimensions-external (H x W x L)	80.15 x 22.15 x 2.38 (mm)
	Weight	0.21 lb (10 g)
	Internal transfer rate	Sequential Write speed 515MB/s for sequential write speed
		Read speed 530MB/s for sequential read
	Host transfer rate	Ultra DMA mode
	Power	DC power requirement 5V
		Total power consumption 90mW in active mode
	Environmental (all conditions, non-condensing)	Temperature (operating) 0 ~ 70 degree C
		Relative Humidity (operating) 5% to 95%
		Maximum Wet Bulb Temperature 104° F (40° C)
	Operating systems supported	
Regulations		
Option kit contents	512 GB SSD M.2, M.2 screw, documentation	
Compatibility		

Note: GB = 1 billion bytes. Actual formatted capacity is less. Up to 167 GB is user available.

Technical Specifications

HP 128 GB TLC 2280 M.2 Solid State Drive	Capacity*	128 GB
	Interface type	SATA
	Form Factor	M.2 2280 Double Sided
	Dimensions-external (H x W x L)	80.15 x 22.15 x 2.38 (mm)
	Weight	0.21 lb (10 g)
	Internal transfer rate	Sequential Write speed 515MB/s for sequential write speed
		Read speed 530MB/s for sequential read
	Host transfer rate	Ultra DMA mode
	Power	DC power requirement 3.3V
		Total power consumption 80mW in active mode
	Environmental (all conditions, non-condensing)	Temperature (operating) 0 ~ 70 degree C
		Relative Humidity (operating) 5% to 95%
	Operating systems supported	Maximum Wet Bulb Temperature (operating) 104° F (40° C)
Regulations		
Option kit contents	128 GB SSD M.2, M.2 screw, documentation	
Compatibility		

Note: GB = 1 billion bytes. Actual formatted capacity is less. Up to 167 GB is user available.

Technical Specifications

HP 256 GB SED TLC SATA-3 M.2 SSD	Capacity*	256 GB
	Interface type	SATA-3
	Form Factor	M.2 2280
	Dimensions-external (H x W x L)	80 x 22 x 2.38 (mm)
	Weight	0.02 lb (9 g)
	Internal transfer rate	Sequential Write speed Up to 515 MB/s
		Read speed Up to 530 MB/s
	Host transfer rate	Ultra DMA mode
	Power	DC power requirement 3.3V +- 5%
		Total power consumption 100mW Active Power
		Nominal voltage +3.3 VOLTS
	Environmental (all conditions, non-condensing)	Temperature (operating) 0 TO 70 °C
		Relative Humidity (operating) 5 to 95 %
		Maximum Wet Bulb Temperature (operating) 40 °C
	Operating systems supported	Win 7 Pro 64, Win 10 Home 64 Chinese Market CPPP Win 10 Home 64 High-end Win 10 Home 64 High-end Chinese Market Win 10 Home 64 High-end Single Language Win 10 Pro 64 Win 10 Pro 64 Downgrade Win 7 64 FreeDOS 2.0
	Regulations	RoHS UL CSA EN 60950-1 FCC AS/ NZ CISPR BSMI KCC CE CISPR 22 - Class B
	Option kit contents	
	Compatibility	

Note: GB = 1 billion bytes. Actual formatted capacity is less. Up to 167 GB is user available.

Technical Specifications

HP 512GB TLC SATA-3 M.2 Capacity* SSD	512 GB	
Interface type	SATA-3	
Form Factor	M.2 2280	
Dimensions-external (H x W x L)	80 x 22 x 2.38 (mm)	
Weight	0.02 lb (9 g)	
Internal transfer rate	Sequential Write speed	Up to 515 MB/s
	Read speed	Up to 530 MB/s
Host transfer rate	Ultra DMA mode	
Power	DC power requirement	3.3V +- 5%
	Total power consumption	100mW Active Power
	Nominal voltage	+3.3 VOLTS
Environmental (all conditions, non- condensing)	Temperature (operating)	0 TO 70 °C
	Relative Humidity (operating)	5 to 95 %
	Maximum Wet Bulb Temperature (operating)	40 °C
Operating systems supported	Win 7 Pro 64, Win 10 Home 64 Chinese Market CPPP Win 10 Home 64 High-end Win 10 Home 64 High-end Chinese Market Win 10 Home 64 High-end Single Language Win 10 Pro 64 Win 10 Pro 64 Downgrade Win 7 64 FreeDOS 2.0	
Regulations	RoHS UL CSA EN 60950-1 FCC AS/ NZ CISPR BSMI KCC CE CISPR 22 - Class B	
Option kit contents		
Compatibility		

Note: GB = 1 billion bytes. Actual formatted capacity is less. Up to 167 GB is user available.

Technical Specifications

Spares Information

Optical Drives	HP External USB DVD/RW	TBD
	HP Upgrade Bay -- SuperMulti (DL) DVD+/-RW SATA Drive	375197-001

Removable Hard Drives	HP 2011 Upgrade Bay 500 GB Hard Drive	657405-001 (drive) 657406-001 (cradle) 657407-001 (bezel kit)
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Note: GB = 1 billion bytes. Actual formatted capacity is less. Up to 465 GB is user available.

Service and Support

Each HP Storage Solution carries a one-year limited warranty. Additional support is available 24 hours a day, seven days a week by phone as well as online support forums.

Note: Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.

Summary of Changes

Date of change:	Version 1 to 2		Description of change:
June 5, 2014	v30to v30.1	Added	SSDs and updated the compatibility section
July 1, 2014	v30.1 to v31	Updated	Updated HP 500 GB 7200rpm specs for height
July 30, 2014	v31 to v32	Added	HP 256 GB SED Opal 2 Solid State Drive
January 27, 2015	v32 to v33	Added	HP 1TB 7200rpm Primary SATA Hard Drive and HP 256 GB Solid State Drive M.2 2260 Added new disclaimers
February 6, 2015	v33	Removed	HP 2011 Upgrade Bay 500 GB Hard Drive and HP 256 GB SED Solid State Drive
February 23, 2015	v33 to v34	Added	HP 256 GB Solid State Drive TLC 2.5"
November 17, 2015	v34 to v35	Added	HP 240 GB Solid State Drive
		Updated	Legal disclaimer Storage disclaimer
January 20, 2016	v35 to v36	Added	HP 256 GB M.2 PCIe NVMe Solid State Drive V3K66AA HP 512 GB M.2 PCIe NVMe Solid State Drive V3K67AA
April 1, 2016	v36 to v37	Added	HP 1 TB Solid State Drive 2280 M.2 PCI-E 3x4 NVME
January 26, 2017	V37 to 38	Added	HP 256GB Value 2280M2 SATA3 SSD, 1DE47AA HP 256GB TLC 2280M2 SATA3 SSD, 1DE48AA
April 18, 2017	V38 to 39	Added Removed	HP 256GB TLC PCI-e 3x4 NVMe M.2 SSD 1FU87AA HP 512GB TLC PCI-e 3x4 NVMe M.2 SSD 1FU88AA HP 240 GB Solid State Drive 2.5" T3Y75AA HP 256 GB SED Opal 2 Solid State Drive 2.5" K1Z11AA HP 512 GB Solid State Drive 2.5" J2V75AA
June 29, 2017	V39 to V40	Added	HP 512GB TLC 2.5 SSD - 2JB96AA & HP 128 GB TLC 2280 M.2 SSD - 2JB95AA added
January 2, 2018	V40 to V41	Added	HP 256GB SED TLC SATA- 3 M.2 SSD 3JP90AA HP 512GB TLC SATA- 3 M.2 SSD 3JP91AA

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SanDisk® X600 3D NAND SATA SSD (Solid State Drive)

A RELIABLE AND DURABLE STORAGE SOLUTION FOR
IoT EMBEDDED AND INDUSTRIAL APPLICATIONS

A Robust and Reliable Solution

The SanDisk® X600 3D NAND SATA SSD combines Western Digital's advanced 64-layer 3D NAND technology with a proven SSD platform to deliver the reliability, durability, capacity, and performance required for IoT embedded systems.

The SanDisk X600 3D NAND SATA SSD features nCache™ 2.0 and DataGuard™ Client technologies with high-endurance Western Digital™ 3D NAND. This combination enhances endurance and enables seamless recovery from unexpected events. Moreover, using SMART attributes, the SanDisk X600 3D NAND SATA SSD monitors and analyzes its health and alerts the system for any major or maintenance events.

The SanDisk X600 3D NAND SATA SSD provides leading-edge performance, with sequential read/write speeds up to 560/530MB/s. This means quick boot-up and application loading, leading to more customers served, reduced downtime and optimized operation.

With on-the-fly hardware-based encryption, the SanDisk X600 3D NAND SATA SSD (X600 SED models only) provides complete end-to-end encryption to the storage, system and infrastructure. It supports password protection, AES-256-bit encryption, TCG-OPAL 2.01 standard and PSID.

Quality and Consistency from NAND to SSD

SanDisk X600 SSDs are rigorously validated from NAND to device. Products go through over 500 mixed OEM test suites, stress testing with multiple patterns at the drive level, and endurance testing including RDT and 4-corners lab tests. OEM customers are further supported by a stable roadmap, 2-year availability, consistent supply and fast access to samples.

Western Digital has a dedicated support team, design-in tools, application validation, SSD design-in documentation, joint sales support, and an automated integration and validation lab for a quick turn-around time in case of failure analysis.

A Versatile Storage Solution for a Variety of Embedded Applications

With multiple form factors and a variety of capacities, the SanDisk X600 3D NAND SATA SSD is an ideal solution for a wide range of embedded platforms. The 2.5"/7mm cased form factor can work as a drop-in replacement for HDDs while the M.2 2280 can deliver up to 2TB in a thin, single-sided form factor. With capacities from 128GB through 2TB the SanDisk X600 3D NAND SATA SSD can be successfully designed into a broad set of edge devices, including:

- **Interactive kiosks, ATMs and Point-of-Sales (POS)** in the banking, travel, retail, hospitality and healthcare industries that require high-volume transaction processing
- **Industrial applications** such as network equipment, industrial machinery, medical equipment, or embedded PC that need the durability and endurance that this SSD delivers
- **Media and entertainment applications** such as vehicle and airplane infotainment systems, video-on-demand and video surveillance that require high capacity and reliability



SATA	SAS	PCIe
------	-----	------

X600 KEY FEATURES

WESTERN DIGITAL 3D NAND DELIVERS CAPACITIES UP TO 2TB FOR A MULTITUDE OF EMBEDDED APPLICATIONS

ACTIVE POWER DRAW UP TO 25% LESS POWER THAN THE PREVIOUS 2D GENERATION*

2.5"/7MM CASED OR M.2 2280 FORM FACTORS PROVIDE NEEDED SPACE SAVINGS AND DESIGN FLEXIBILITY

LEADING EDGE SATA PERFORMANCE UP TO 560MB/S SEQUENTIAL READ

*Compared against 512GB capacity during sequential reads.

SanDisk X600 3D NAND SATA SSD Product Features and Specifications

Specifications are subject to change

Form Factor	2.5"/7mm cased, M.2 2280				
Interface^{1,2}	SATA 6 Gb/s				
Size & Weight	2.5"/7mm cased:	128GB - 1TB:	7.00mm x 69.85mm x 100.2mm @ 37.4g 2TB: 7.00mm x 69.85mm x 100.2mm @ 59.7g		
	M.2 2280:	128GB - 1TB:	2.23mm x 22.00mm x 80.0mm @ 7 ± 1g 2TB: 2.38mm x 22.00mm x 80.0mm @ 7 ± 1g		
Performance [4KB QD32]^{2,3}	128GB	256GB	512GB	1TB	2TB
Sequential Read up to (MB/s)	530	550	560	560	560
Sequential Write up to (MB/s)	490	525	530	530	530
Random Read up to (IOPS)	82K	95K	95K	95K	95K
Random Write up to (IOPS)	74K	81K	84K	84K	84K
Endurance (TBW)⁴	72	100	200	400	500
Power⁵	128GB	250GB	500GB	1TB	2TB
Avg. Active Power (mW)	52	52	52	60	60
Max Read Operating (mW)	2050	2200	2050	2550	2650
Max Write Operating (mW)	1700	2250	3350	3750	3800
Slumber (mW)	52	56	56	56	56
Reliability					
MTTF⁶	Up to 1.75M hours				
Environmental					
Operating Temperatures	0°C to 70°C				
Non-operating Temperatures	-55°C to 85°C				
Operating Vibration	5.0 gRMS, 10 - 2000 Hz				
Non-operating Vibration	4.9 gRMS, 7 - 800 Hz				
Shock	1,500 G @ 0.5 msec half sine				
Certifications	FCC, UL, TUV, KC, BSMI, VCCI, Morocco				
Limited Warranty⁷	3 years				

¹ Backwards compatible to SATA 3 Gb/s and SATA 1.5 Gb/s.

² As used for storage capacity, one megabyte (MB) = one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment. As used for buffer or cache, one megabyte (MB) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabit per second (Gb/s) = one billion bits per second. Effective maximum SATA 6 Gb/s transfer rate calculated according to the Serial ATA specification published by the SATA-IO organization as of the date of this specification sheet. Visit www.sata-io.org for details.

³ Measured using CrystalDiskMark, 1000MB LBA range, on Laptop Asus N550J HM86 Express chipset, Windows 8.1 Pro with Intel IRST version 14.8.16.1063, secondary drive with Intel® Core™ i7-4700HQ 2.4GHz, 8GB DDR3 1600MHz RAM.

⁴ TBW (terabytes written) values calculated using JEDEC client workload (JESD219) and vary by product capacity.

⁵ Power measurements at 25°C. Based on firmware version with DIPM enabled. Measured using MobileMark® 2014 on Lenovo T560, Intel® Core™ i5-6200U 2.30GHz Processor, DDR3L 4GB 1600MHz RAM, Windows 10 with Intel Driver IRST 14.8.0.1042.

⁶ MTTF = Mean Time To Failure based on internal testing using Telcordia stress part testing.

⁷ See <http://www.sandisk.com/wug> for regional specific warranty details.

SanDisk®

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951 SanDisk Drive
Milpitas, CA 95035-7933, USA
www.sandisk.com

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	Capacity	Form Factor	SKU
X600	128GB	2.5"/7mm cased	SD9SB8W-128G
X600	256GB	2.5"/7mm cased	SD9SB8W-256G
X600	512GB	2.5"/7mm cased	SD9SB8W-512G
X600	1TB	2.5"/7mm cased	SD9SB8W-1T00
X600	2TB	2.5"/7mm cased	SD9SB8W-2T00
X600	128GB	M.2 2280	SD9SN8W-128G
X600	256GB	M.2 2280	SD9SN8W-256G
X600	512GB	M.2 2280	SD9SN8W-512G
X600	1TB	M.2 2280	SD9SN8W-1T00
X600	2TB	M.2 2280	SD9SN8W-2T00
X600 SED	128GB	2.5"/7mm cased	SD9TB8W-128G
X600 SED	256GB	2.5"/7mm cased	SD9TB8W-256G
X600 SED	512GB	2.5"/7mm cased	SD9TB8W-512G
X600 SED	1TB	2.5"/7mm cased	SD9TB8W-1T00
X600 SED	2TB	2.5"/7mm cased	SD9TB8W-2T00
X600 SED	128GB	M.2 2280	SD9TN8W-128G
X600 SED	256GB	M.2 2280	SD9TN8W-256G
X600 SED	512GB	M.2 2280	SD9TN8W-512G
X600 SED	1TB	M.2 2280	SD9TN8W-1T00
X600 SED	2TB	M.2 2280	SD9TN8W-2T00



HP Sales Central

AMD Radeon Pro WX 7100 8GB Graphics Card (Z0B14AA)

Active as of 1/11/2017



Overview

Meet your demanding Design & Manufacturing and Media & Entertainment VR and immersive computing workflows head on with the AMD Radeon™ Pro WX 7100, a single slot form factor card based on AMD's new Polaris architecture.

Power through large and complex models and datasets

Speed up the time required to complete single-precision operations in video effects and rendering, signal processing, transcoding, and digital rendering applications with up to 5.73 TFLOPS of compute performance.¹

Amazing multi-display visuals

Drive up to two, 5K (5120 x 2880 resolution) dual-cable displays @ 60 Hz, or one single-cable 5K display @ 60 Hz. Leverage AMD's LiquidVR™ Technology to experience realistic virtual designs and interaction in a bold new way.

Work at new levels of efficiency and speed

Edit 4K video, layer in multiple effects, and color correct on the fly, or load massive assemblies and manipulate them in real time with 8 GB of ultra-fast GDDR5 memory and a 256-bit memory interface.

Specifications

Ports

4 Display Port 1.4

What's in the box

Graphic Card
Documentation

Warranty

The Radeon™ Pro WX 7100 has a three-year limited warranty or the remainder of the warranty of the HP product in which it is installed. Technical support is available seven days a week, 24 hours a day by phone, as well as online support forums. Parts and labor are available on-site within the next business day. Telephone support is available for parts diagnosis and installation. Certain restrictions and exclusions apply.

Overview

¹ Performance may vary based on system configuration.

Assets

Quick specs (1)

AMD Graphics

Research or buy HP printers, desktops, laptops, and more at the Official HP Inc. Website.

Reference guide (1)

HP Business Desktop PCs graphics card options - Quick reference guide

Partner and Channel

Quick reference guide

Images - Product (1)



Left facing

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HP Z4 G4 Workstation
3WF10UT

Active

HP Z4 G4 Workstation
3WF15UT

Active

HP Z4 G4 Workstation
3WF18UT

Active

HP Z4 G4 Workstation
3WF76UT

Active

HP Z6 G4 Workstation
1WU31UT

Active

HP Z6 G4 Workstation
1WU32UT

Active

HP Z6 G4 Workstation
2WZ66UT

Active

HP Z6 G4 Workstation
2WZ67UT

Active

HP Z6 G4 Workstation
2XM73UT

Active

HP Z6 G4 Workstation
3GF36UT

Active

HP Z6 G4 Workstation
3GF39UT

Active

HP Z6 G4 Workstation
3GF40UT

Active

HP Z6 G4 Workstation
3GF48UT

Active

HP Z8 G4 Workstation
1FZ80UT

Active

HP Z8 G4 Workstation

1WU28UT

Active

HP Z8 G4 Workstation

3GF37UT

Active

HP Z8 G4 Workstation

3GF38UT

Active

HP Z8 G4 Workstation

3GF41UT

Active

HP Z8 G4 Workstation

3GF42UT

Active

HP Z8 G4 Workstation

3GF46UT

Active

HP Z240 Tower Workstation

2TF24UT

Active

HP Z240 Tower Workstation

2TF25UT

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HP Z240 Tower Workstation

2TF80UT

Active

HP Z240 Tower Workstation

2VN18UT

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HP Z240 Tower Workstation

2VN19UT

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HP Z240 Tower Workstation

2VN20UT

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HP Z240 Tower Workstation

2VN21UT

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HP Z240 Tower Workstation

2VN22UT

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HP Z240 Tower Workstation

2VN23UT

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HP Z240 Tower Workstation

2VN24UT

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HP Z240 Tower Workstation

2VN26UT

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HP Z240 Tower Workstation

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HP Z240 Tower Workstation

2VN29UT

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HP Z240 Tower Workstation

2VN31UT

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HP Z240 Tower Workstation

2VN32UT

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HP Z240 Tower Workstation

2VN33UT

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HP Z240 Tower Workstation

2VN35UT

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HP Z240 Tower Workstation

2VN57UT

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HP Z240 Tower Workstation

2VN59UT

Active

HP Z240 Tower Workstation

2VN62UT

Active

HP Z240 Tower Workstation

2VN63UT

Active

HP Z240 Tower Workstation

2WX38UT

Active

HP Z240 Tower Workstation

3JK87UT

Active

HP Z240 Tower Workstation

3WD77UT

Active

HP Z240 Tower Workstation (ENERGY STAR)

L9K67UA

Active

HP Z240 Tower Workstation (ENERGY STAR)

Y5B17UT

Active

HP Z440 Workstation

1HX14UA

Detailed Specifications

API supported

DirectX®12; OpenGL® 4.5; OpenCL™ 2.0; Vulkan™ 1.0

Compatibility

The AMD Radeon Pro WX 7100 8 GB Graphics Card is supported on the following HP Personal Workstation: Z230 CMT, Z240 Tower, Z440, Z640 and Z840.

Ports

4 Display Port 1.4

Resolution (maximum)

5K support @ 60Hz

UNSPSC code

43201401

Warranty

The Radeon™ Pro WX 7100 has a three-year limited warranty or the remainder of the warranty of the HP product in which it is installed. Technical support is available seven days a week, 24 hours a day by phone, as well as online support forums. Parts and labor are available on-site within the next business day. Telephone support is available for parts diagnosis and installation. Certain restrictions and exclusions apply.

What's in the box

Graphic Card; Documentation;

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Product: HP ProDesk 400 G5 Microtower Business PC (ENERGY STAR)
CAB: Green Electronics Council CAB
Country: United States
Product Type: Desktops
Manufacturer: HP Inc.
URL: <http://www.hp.com>
Rating: 
Registration Date: 5/28/2018
Product Status:  Active
Exceptions:
Manufacturer Part #:
UPC:
EAN:
Consumer or Institutional: Not Indicated

EPEAT Criteria Detail

- Yes R** 4.1.1.1 Compliance with provisions of European RoHS Directive upon its effective date
- Yes O** 4.1.2.1 Elimination of intentionally added cadmium
- Yes O** 4.1.5.1 Elimination of intentionally added hexavalent chromium
- Yes R** 4.1.6.1 Elimination of intentionally added SCCP flame retardants and plasticizers in certain applications
- Yes O** 4.1.6.2 Large plastic parts free of certain flame retardants classified under European Council Directive 67/548/EEC
- Yes O** 4.1.7.1 Batteries free of lead, cadmium and mercury
- Yes O** 4.1.8.1 Large plastic parts free of PVC
- Yes R** 4.2.1.1 Declaration of postconsumer recycled plastic content (%): 20
- Yes O** 4.2.1.2 Minimum content of postconsumer recycled plastic
- No O** 4.2.1.3 Higher content of postconsumer recycled plastic
- Yes R** 4.2.2.1 Declaration of renewable/bio-based plastic materials content (%): 0
- No O** 4.2.2.2 Minimum content of renewable/bio-based plastic material
- Yes R** 4.2.3.1 Declaration of product weight (lbs): 13.47 Pounds
- Yes R** 4.3.1.1 Identification of materials with special handling needs
- Yes R** 4.3.1.2 Elimination of paints or coatings that are not compatible with recycling or reuse
- Yes R** 4.3.1.3 Easy disassembly of external enclosure

- Yes R** 4.3.1.4 Marking of plastic components
- Yes R** 4.3.1.5 Identification and removal of components containing hazardous materials
- Yes O** 4.3.1.6 Reduced number of plastic material types
- Yes O** 4.3.1.7 Molded/glued in metal eliminated or removable
- Yes R** 4.3.1.8 Minimum 65 percent reusable/recyclable
- Yes O** 4.3.1.9 Minimum 90 percent reusable/recyclable
- Yes O** 4.3.2.1 Manual separation of plastics
- Yes O** 4.3.2.2 Marking of plastics
- Yes R** 4.4.1.1 Availability of additional three year warranty or service agreement
- Yes R** 4.4.2.1 Upgradeable with common tools
- Yes O** 4.4.2.2 Modular design
- Yes O** 4.4.3.1 Availability of replacement parts
- Yes R** 4.5.1.1 ENERGY STAR®: 6.1-Computers;-
- No O** 4.5.1.2 Early adoption of new ENERGY STAR® specification:
- Yes O** 4.5.2.1 Renewable energy accessory available
- No O** 4.5.2.2 Renewable energy accessory standard
- Yes R** 4.8.1.1 Reduction/elimination of intentionally added toxics in packaging
- Yes R** 4.8.2.1 Separable packing materials
- Yes O** 4.8.2.2 Packaging 90% recyclable and plastics labeled
- Yes R** 4.8.3.1 Declaration of recycled content in packaging Corrugated containers <300 psi=80-80;Other plastic packaging=0-0;Other plastic packaging=0-0;
- Yes O** 4.8.3.2 Minimum postconsumer content guidelines
- Yes O** 4.8.4.1 Provision of take-back program for packaging
- No O** 4.8.5.1 Documentation of reusable packaging
- Yes R** 4.6.1.1 Provision of product take-back service
- Yes O** 4.6.1.2 Auditing of recycling vendors
- Yes R** 4.6.2.1 Provision of rechargeable battery take-back service: RBRC Licensee
- Yes R** 4.7.1.1 Demonstration of corporate environmental policy consistent with ISO 14001
- Yes R** 4.7.2.1 Self-certified environmental management system for design and manufacturing organizations
- Yes O** 4.7.2.2 Third-party certified environmental management system for design and manufacturing organizations
- Yes R** 4.7.3.1 Corporate report consistent with Performance Track or GRI
- Yes O** 4.7.3.2 Corporate report based on GRI

EPEAT Criteria Summary

Criteria Category Summary	Optional Points
4.1 Reduction/elimination of environmentally sensitive materials	5/5
4.2 Materials selection	1/3
4.3 Design for end of life	5/5
4.4 Product longevity/life cycle extension	2/2
4.5 Energy conservation	1/2
4.6 End of life management	1/1
4.7 Corporate performance	2/2
4.8 Packaging	3/4
Total Optional Points:	20/24

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Product: HP Z4 G4 Workstation (ENERGY STAR)

CAB: Green Electronics Council CAB

Country: United States

Product Type: Workstations

Manufacturer: HP Inc.

URL: <http://www.hp.com>

Rating: 

Registration Date: 12/4/2017

Product Status:  Active

Exceptions: Product is in conformance with EPEAT only when product is configured with an operating system (except FreeDOS and Linux) and high efficiency power supply certified to the ENERGY STAR specification.

Manufacturer

Part #:

UPC:

EAN:

Consumer or Institutional: Not Indicated

EPEAT Criteria Detail

Yes R 4.1.1.1 Compliance with provisions of European RoHS Directive upon its effective date

Yes O 4.1.2.1 Elimination of intentionally added cadmium

Yes O 4.1.5.1 Elimination of intentionally added hexavalent chromium

Yes R 4.1.6.1 Elimination of intentionally added SCCP flame retardants and plasticizers in certain applications

Yes O 4.1.6.2 Large plastic parts free of certain flame retardants classified under European Council Directive 67/548/EEC

Yes O 4.1.7.1 Batteries free of lead, cadmium and mercury

Yes O 4.1.8.1 Large plastic parts free of PVC

Yes R 4.2.1.1 Declaration of postconsumer recycled plastic content (%): 7.2

No O 4.2.1.2 Minimum content of postconsumer recycled plastic

No O 4.2.1.3 Higher content of postconsumer recycled plastic

- Yes R** 4.2.2.1 Declaration of renewable/bio-based plastic materials content (%): 0
- No O** 4.2.2.2 Minimum content of renewable/bio-based plastic material
- Yes R** 4.2.3.1 Declaration of product weight (lbs): 26.54 Pounds
- Yes R** 4.3.1.1 Identification of materials with special handling needs
- Yes R** 4.3.1.2 Elimination of paints or coatings that are not compatible with recycling or reuse
- Yes R** 4.3.1.3 Easy disassembly of external enclosure
- Yes R** 4.3.1.4 Marking of plastic components
- Yes R** 4.3.1.5 Identification and removal of components containing hazardous materials
- Yes O** 4.3.1.6 Reduced number of plastic material types
- Yes O** 4.3.1.7 Molded/glued in metal eliminated or removable
- Yes R** 4.3.1.8 Minimum 65 percent reusable/recyclable
- Yes O** 4.3.1.9 Minimum 90 percent reusable/recyclable
- Yes O** 4.3.2.1 Manual separation of plastics
- Yes O** 4.3.2.2 Marking of plastics
- Yes R** 4.4.1.1 Availability of additional three year warranty or service agreement
- Yes R** 4.4.2.1 Upgradeable with common tools
- Yes O** 4.4.2.2 Modular design
- Yes O** 4.4.3.1 Availability of replacement parts
- Yes R** 4.5.1.1 ENERGY STAR®: 6.1-Computers;-
- Yes O** 4.5.2.1 Renewable energy accessory available
- No O** 4.5.2.2 Renewable energy accessory standard
- Yes R** 4.8.1.1 Reduction/elimination of intentionally added toxics in packaging
- Yes R** 4.8.2.1 Separable packing materials
- Yes O** 4.8.2.2 Packaging 90% recyclable and plastics labeled
- Yes R** 4.8.3.1 Declaration of recycled content in packaging Corrugated containers <300 psi=30-30;Other plastic packaging=0-0;Plastic film, wraps and bags=0-0;
- Yes O** 4.8.3.2 Minimum postconsumer content guidelines
- Yes O** 4.8.4.1 Provision of take-back program for packaging
- No O** 4.8.5.1 Documentation of reusable packaging
- Yes R** 4.6.1.1 Provision of product take-back service
- Yes O** 4.6.1.2 Auditing of recycling vendors
- Yes R** 4.6.2.1 Provision of rechargeable battery take-back service: RBRC Licensee
- Yes R** 4.7.1.1 Demonstration of corporate environmental policy consistent with ISO 14001
- Yes R** 4.7.2.1 Self-certified environmental management system for design and manufacturing organizations
- Yes O** 4.7.2.2 Third-party certified environmental management system for design and manufacturing organizations
- Yes R** 4.7.3.1 Corporate report consistent with Performance Track or GRI
- Yes O** 4.7.3.2 Corporate report based on GRI

EPEAT Criteria Summary

Criteria Category Summary	Optional Points
4.1 Reduction/elimination of environmentally sensitive materials	5/5
4.2 Materials selection	0/3
4.3 Design for end of life	5/5
4.4 Product longevity/life cycle extension	2/2
4.5 Energy conservation	1/2
4.6 End of life management	1/1
4.7 Corporate performance	2/2
4.8 Packaging	3/4

Total Optional Points: 19/24

This Product is also registered in:

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Product: HP ProBook 650 G4 Notebook PC (ENERGY STAR)

CAB: Green Electronics Council CAB

Country: United States

Product Type: Notebooks

Manufacturer: HP Inc.

URL: <http://www.hp.com>

Rating: 

Registration Date: 4/9/2018

Monitor

Type:

Monitor Size:

Product Status:  Active

Exceptions: Product is in conformance with EPEAT only when product is configured with an operating system (except FreeDOS and Linux) and high efficiency power supply certified to the ENERGY STAR specification.

Manufacturer

Part #:

UPC:

EAN:

Consumer or Institutional: Not Indicated

EPEAT Criteria Detail

Yes R 4.1.1.1 Compliance with provisions of European RoHS Directive upon its effective date

Yes O 4.1.2.1 Elimination of intentionally added cadmium

Yes R 4.1.3.1 Reporting on amount of mercury used in light sources (mg) 1,0,

Yes O 4.1.3.2 Low threshold for amount of mercury used in light sources

Yes O 4.1.3.3 Elimination of intentionally added mercury used in light sources

Yes O 4.1.4.1 Elimination of intentionally added lead in certain applications

Yes O 4.1.5.1 Elimination of intentionally added hexavalent chromium

Yes R 4.1.6.1 Elimination of intentionally added SCCP flame retardants and plasticizers in certain applications

- Yes O** 4.1.6.2 Large plastic parts free of certain flame retardants classified under European Council Directive 67/548/EEC
- Yes O** 4.1.7.1 Batteries free of lead, cadmium and mercury
- Yes O** 4.1.8.1 Large plastic parts free of PVC
- Yes R** 4.2.1.1 Declaration of postconsumer recycled plastic content (%): 4.4
- No O** 4.2.1.2 Minimum content of postconsumer recycled plastic
- No O** 4.2.1.3 Higher content of postconsumer recycled plastic
- Yes R** 4.2.2.1 Declaration of renewable/bio-based plastic materials content (%): 0
- No O** 4.2.2.2 Minimum content of renewable/bio-based plastic material
- Yes R** 4.2.3.1 Declaration of product weight (lbs): 6.36 Pounds
- Yes R** 4.3.1.1 Identification of materials with special handling needs
- Yes R** 4.3.1.2 Elimination of paints or coatings that are not compatible with recycling or reuse
- Yes R** 4.3.1.3 Easy disassembly of external enclosure
- Yes R** 4.3.1.4 Marking of plastic components
- Yes R** 4.3.1.5 Identification and removal of components containing hazardous materials
- Yes O** 4.3.1.6 Reduced number of plastic material types
- Yes O** 4.3.1.7 Molded/glued in metal eliminated or removable
- Yes R** 4.3.1.8 Minimum 65 percent reusable/recyclable
- Yes O** 4.3.1.9 Minimum 90 percent reusable/recyclable
- Yes O** 4.3.2.1 Manual separation of plastics
- Yes O** 4.3.2.2 Marking of plastics
- Yes R** 4.4.1.1 Availability of additional three year warranty or service agreement
- Yes R** 4.4.2.1 Upgradeable with common tools
- Yes O** 4.4.2.2 Modular design
- Yes O** 4.4.3.1 Availability of replacement parts
- Yes R** 4.5.1.1 ENERGY STAR[®]: 6.1-Computers;2318914
- No O** 4.5.1.2 Early adoption of new ENERGY STAR[®] specification:
- Yes O** 4.5.2.1 Renewable energy accessory available
- No O** 4.5.2.2 Renewable energy accessory standard
- Yes R** 4.8.1.1 Reduction/elimination of intentionally added toxics in packaging
- Yes R** 4.8.2.1 Separable packing materials
- Yes O** 4.8.2.2 Packaging 90% recyclable and plastics labeled
- Yes R** 4.8.3.1 Declaration of recycled content in packaging Corrugated containers <300 psi=70-70;Rigid plastic packaging=50-50;Plastic film, wraps and bags=50-50;Other plastic packaging=50-50;
- Yes O** 4.8.3.2 Minimum postconsumer content guidelines
- Yes O** 4.8.4.1 Provision of take-back program for packaging
- No O** 4.8.5.1 Documentation of reusable packaging
- Yes R** 4.6.1.1 Provision of product take-back service
- Yes O** 4.6.1.2 Auditing of recycling vendors
- Yes R** 4.6.2.1 Provision of rechargeable battery take-back service: RBRC Licensee
- Yes R** 4.7.1.1 Demonstration of corporate environmental policy consistent with ISO 14001
- Yes R** 4.7.2.1 Self-certified environmental management system for design and manufacturing organizations
- Yes O** 4.7.2.2 Third-party certified environmental management system for design and manufacturing organizations
- Yes R** 4.7.3.1 Corporate report consistent with Performance Track or GRI
- Yes O** 4.7.3.2 Corporate report based on GRI

EPEAT Criteria Summary

Criteria Category Summary	Optional Points
4.1 Reduction/elimination of environmentally sensitive materials	8/8
4.2 Materials selection	0/3
4.3 Design for end of life	5/5

4.4 Product longevity/life cycle extension	2/2
4.5 Energy conservation	1/2
4.6 End of life management	1/1
4.7 Corporate performance	2/2
4.8 Packaging	3/4
Total Optional Points:	22/27

This Product is also registered in:

- [Australia](#)
- [Belgium](#)
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- [Mexico](#)
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Product: HP EliteBook x360 1030 G2 Notebook PC (ENERGY STAR)

CAB: Green Electronics Council CAB

Country: United States

Product Type: Notebooks

Manufacturer: HP Inc.

URL: <http://www.hp.com/>

Rating:

Registration Date: 1/17/2017

Monitor Type:

Monitor Size:

Product Status: Active

Exceptions: Product is in conformance with EPEAT only when product is configured with an operating system (except FreeDOS and Linux) and high efficiency power supply certified to the ENERGY STAR specification.

Manufacturer Part

#:

UPC:

EAN:

Consumer or Institutional: Not Indicated

EPEAT Criteria Detail

Yes R 4.1.1.1 Compliance with provisions of European RoHS Directive upon its effective date

Yes O 4.1.2.1 Elimination of intentionally added cadmium

Yes R 4.1.3.1 Reporting on amount of mercury used in light sources (mg) 1,0,

Yes O 4.1.3.2 Low threshold for amount of mercury used in light sources

Yes O 4.1.3.3 Elimination of intentionally added mercury used in light sources

Yes O 4.1.4.1 Elimination of intentionally added lead in certain applications

- Yes O** 4.1.5.1 Elimination of intentionally added hexavalent chromium
- Yes R** 4.1.6.1 Elimination of intentionally added SCCP flame retardants and plasticizers in certain applications
- Yes O** 4.1.6.2 Large plastic parts free of certain flame retardants classified under European Council Directive 67/548/EEC
- Yes O** 4.1.7.1 Batteries free of lead, cadmium and mercury
- Yes O** 4.1.8.1 Large plastic parts free of PVC
- Yes R** 4.2.1.1 Declaration of postconsumer recycled plastic content (%): 0.0
- No O** 4.2.1.2 Minimum content of postconsumer recycled plastic
- No O** 4.2.1.3 Higher content of postconsumer recycled plastic
- Yes R** 4.2.2.1 Declaration of renewable/bio-based plastic materials content (%): 0
- No O** 4.2.2.2 Minimum content of renewable/bio-based plastic material
- Yes R** 4.2.3.1 Declaration of product weight (lbs): 3.65 Pounds
- Yes R** 4.3.1.1 Identification of materials with special handling needs
- Yes R** 4.3.1.2 Elimination of paints or coatings that are not compatible with recycling or reuse
- Yes R** 4.3.1.3 Easy disassembly of external enclosure
- Yes R** 4.3.1.4 Marking of plastic components
- Yes R** 4.3.1.5 Identification and removal of components containing hazardous materials
- Yes O** 4.3.1.6 Reduced number of plastic material types
- Yes O** 4.3.1.7 Molded/glued in metal eliminated or removable
- Yes R** 4.3.1.8 Minimum 65 percent reusable/recyclable
- Yes O** 4.3.1.9 Minimum 90 percent reusable/recyclable
- Yes O** 4.3.2.1 Manual separation of plastics
- Yes O** 4.3.2.2 Marking of plastics
- Yes R** 4.4.1.1 Availability of additional three year warranty or service agreement
- Yes R** 4.4.2.1 Upgradeable with common tools
- Yes O** 4.4.2.2 Modular design
- Yes O** 4.4.3.1 Availability of replacement parts
- Yes R** 4.5.1.1 ENERGY STAR®: 6.1-Computers;2286712
- Yes O** 4.5.2.1 Renewable energy accessory available
- No O** 4.5.2.2 Renewable energy accessory standard
- Yes R** 4.8.1.1 Reduction/elimination of intentionally added toxics in packaging
- Yes R** 4.8.2.1 Separable packing materials
- Yes O** 4.8.2.2 Packaging 90% recyclable and plastics labeled
- Yes R** 4.8.3.1 Declaration of recycled content in packaging Brown papers=70-70;Other plastic packaging=50-50;Plastic film, wraps and bags=50-50;Rigid plastic packaging=50-50;
- Yes O** 4.8.3.2 Minimum postconsumer content guidelines
- Yes O** 4.8.4.1 Provision of take-back program for packaging
- No O** 4.8.5.1 Documentation of reusable packaging
- Yes R** 4.6.1.1 Provision of product take-back service
- Yes O** 4.6.1.2 Auditing of recycling vendors
- Yes R** 4.6.2.1 Provision of rechargeable battery take-back service: RBRC Licensee
- Yes R** 4.7.1.1 Demonstration of corporate environmental policy consistent with ISO 14001
- Yes R** 4.7.2.1 Self-certified environmental management system for design and manufacturing organizations
- Yes O** 4.7.2.2 Third-party certified environmental management system for design and manufacturing organizations
- Yes R** 4.7.3.1 Corporate report consistent with Performance Track or GRI
- Yes O** 4.7.3.2 Corporate report based on GRI

EPEAT Criteria Summary

Criteria Category Summary	Optional Points
4.1 Reduction/elimination of environmentally sensitive materials	8/8
4.2 Materials selection	0/3
4.3 Design for end of life	5/5
4.4 Product longevity/life cycle extension	2/2
4.5 Energy conservation	1/2
4.6 End of life management	1/1
4.7 Corporate performance	2/2
4.8 Packaging	3/4
Total Optional Points:	22/27

This Product is also registered in:

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Product: HP N223 22-in Monitor
CAB: Green Electronics Council CAB
Country: United States
Product Type: Monitors
Manufacturer: HP Inc.
URL: <http://www.hp.com>
Rating: 
Registration Date: 8/6/2018
Product Status:  Active
Exceptions:
Manufacturer Part #:
UPC:
EAN:
Consumer or Institutional: Not Indicated

EPEAT Criteria Detail

- Yes R** 4.1.1.1 Compliance with provisions of European RoHS Directive upon its effective date
- Yes O** 4.1.2.1 Elimination of intentionally added cadmium
- Yes R** 4.1.3.1 Reporting on amount of mercury used in light sources (mg) 1,0,
- Yes O** 4.1.3.2 Low threshold for amount of mercury used in light sources
- Yes O** 4.1.3.3 Elimination of intentionally added mercury used in light sources
- No O** 4.1.4.1 Elimination of intentionally added lead in certain applications
- Yes O** 4.1.5.1 Elimination of intentionally added hexavalent chromium
- Yes R** 4.1.6.1 Elimination of intentionally added SCCP flame retardants and plasticizers in certain applications
- Yes O** 4.1.6.2 Large plastic parts free of certain flame retardants classified under European Council Directive 67/548/EEC
- N/A O** 4.1.7.1 Batteries free of lead, cadmium and mercury
- Yes O** 4.1.8.1 Large plastic parts free of PVC
- Yes R** 4.2.1.1 Declaration of postconsumer recycled plastic content (%): 0.0
- No O** 4.2.1.2 Minimum content of postconsumer recycled plastic
- No O** 4.2.1.3 Higher content of postconsumer recycled plastic
- Yes R** 4.2.2.1 Declaration of renewable/bio-based plastic materials content (%): 0
- No O** 4.2.2.2 Minimum content of renewable/bio-based plastic material

- Yes R** 4.2.3.1 Declaration of product weight (lbs): 6.24 Pounds
- Yes R** 4.3.1.1 Identification of materials with special handling needs
- Yes R** 4.3.1.2 Elimination of paints or coatings that are not compatible with recycling or reuse
- Yes R** 4.3.1.3 Easy disassembly of external enclosure
- Yes R** 4.3.1.4 Marking of plastic components
- Yes R** 4.3.1.5 Identification and removal of components containing hazardous materials
- Yes O** 4.3.1.6 Reduced number of plastic material types
- Yes O** 4.3.1.7 Molded/glued in metal eliminated or removable
- Yes R** 4.3.1.8 Minimum 65 percent reusable/recyclable
- Yes O** 4.3.1.9 Minimum 90 percent reusable/recyclable
- Yes O** 4.3.2.1 Manual separation of plastics
- Yes O** 4.3.2.2 Marking of plastics
- Yes R** 4.4.1.1 Availability of additional three year warranty or service agreement
- Yes O** 4.4.3.1 Availability of replacement parts
- Yes R** 4.5.1.1 ENERGY STAR®: 7.0/7.1-Displays;-
- Yes O** 4.5.2.1 Renewable energy accessory available
- No O** 4.5.2.2 Renewable energy accessory standard
- Yes R** 4.8.1.1 Reduction/elimination of intentionally added toxics in packaging
- Yes R** 4.8.2.1 Separable packing materials
- No O** 4.8.2.2 Packaging 90% recyclable and plastics labeled
- Yes R** 4.8.3.1 Declaration of recycled content in packaging Brown papers=80-80;Rigid plastic packaging=0-0;Other plastic packaging=0-0;
- Yes O** 4.8.3.2 Minimum postconsumer content guidelines
- Yes O** 4.8.4.1 Provision of take-back program for packaging
- No O** 4.8.5.1 Documentation of reusable packaging
- Yes R** 4.6.1.1 Provision of product take-back service
- Yes O** 4.6.1.2 Auditing of recycling vendors
- Yes R** 4.6.2.1 Provision of rechargeable battery take-back service: RBRC Licensee
- Yes R** 4.7.1.1 Demonstration of corporate environmental policy consistent with ISO 14001
- Yes R** 4.7.2.1 Self-certified environmental management system for design and manufacturing organizations
- Yes O** 4.7.2.2 Third-party certified environmental management system for design and manufacturing organizations
- Yes R** 4.7.3.1 Corporate report consistent with Performance Track or GRI
- Yes O** 4.7.3.2 Corporate report based on GRI

EPEAT Criteria Summary

Criteria Category Summary	Optional Points
4.1 Reduction/elimination of environmentally sensitive materials	6/7
4.2 Materials selection	0/3
4.3 Design for end of life	5/5
4.4 Product longevity/life cycle extension	1/1
4.5 Energy conservation	1/2
4.6 End of life management	1/1
4.7 Corporate performance	2/2
4.8 Packaging	2/4

Total Optional Points: 18/25

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Product: HP VH24 23.8-inch Monitor
CAB: Green Electronics Council CAB
Country: United States
Product Type: Monitors
Manufacturer: HP Inc.
URL: <http://www.hp.com>
Rating: 
Registration Date: 2/1/2017
Product Status:  Active
Exceptions:
Manufacturer Part #:
UPC:
EAN:
Consumer or Institutional: Not Indicated

EPEAT Criteria Detail

- Yes R** 4.1.1.1 Compliance with provisions of European RoHS Directive upon its effective date
- Yes O** 4.1.2.1 Elimination of intentionally added cadmium
- Yes R** 4.1.3.1 Reporting on amount of mercury used in light sources (mg) 1,0,
- Yes O** 4.1.3.2 Low threshold for amount of mercury used in light sources
- No O** 4.1.3.3 Elimination of intentionally added mercury used in light sources
- Yes O** 4.1.4.1 Elimination of intentionally added lead in certain applications
- Yes O** 4.1.5.1 Elimination of intentionally added hexavalent chromium
- Yes R** 4.1.6.1 Elimination of intentionally added SCCP flame retardants and plasticizers in certain applications
- Yes O** 4.1.6.2 Large plastic parts free of certain flame retardants classified under European Council Directive 67/548/EEC
- N/A O** 4.1.7.1 Batteries free of lead, cadmium and mercury
- Yes O** 4.1.8.1 Large plastic parts free of PVC
- Yes R** 4.2.1.1 Declaration of postconsumer recycled plastic content (%): 46.9
- Yes O** 4.2.1.2 Minimum content of postconsumer recycled plastic
- Yes O** 4.2.1.3 Higher content of postconsumer recycled plastic
- Yes R** 4.2.2.1 Declaration of renewable/bio-based plastic materials content (%): 0
- No O** 4.2.2.2 Minimum content of renewable/bio-based plastic material

- Yes R** 4.2.3.1 Declaration of product weight (lbs): 13.27 Pounds
- Yes R** 4.3.1.1 Identification of materials with special handling needs
- Yes R** 4.3.1.2 Elimination of paints or coatings that are not compatible with recycling or reuse
- Yes R** 4.3.1.3 Easy disassembly of external enclosure
- Yes R** 4.3.1.4 Marking of plastic components
- Yes R** 4.3.1.5 Identification and removal of components containing hazardous materials
- Yes O** 4.3.1.6 Reduced number of plastic material types
- Yes O** 4.3.1.7 Molded/glued in metal eliminated or removable
- Yes R** 4.3.1.8 Minimum 65 percent reusable/recyclable
- Yes O** 4.3.1.9 Minimum 90 percent reusable/recyclable
- Yes O** 4.3.2.1 Manual separation of plastics
- Yes O** 4.3.2.2 Marking of plastics
- Yes R** 4.4.1.1 Availability of additional three year warranty or service agreement
- Yes O** 4.4.3.1 Availability of replacement parts
- Yes R** 4.5.1.1 ENERGY STAR®: 7.0/7.1-Displays
- Yes O** 4.5.2.1 Renewable energy accessory available
- No O** 4.5.2.2 Renewable energy accessory standard
- Yes R** 4.8.1.1 Reduction/elimination of intentionally added toxics in packaging
- Yes R** 4.8.2.1 Separable packing materials
- No O** 4.8.2.2 Packaging 90% recyclable and plastics labeled
- Yes R** 4.8.3.1 Declaration of recycled content in packaging Corrugated containers <300 psi=80-80;Brown papers=80-80;
- Yes O** 4.8.3.2 Minimum postconsumer content guidelines
- Yes O** 4.8.4.1 Provision of take-back program for packaging
- No O** 4.8.5.1 Documentation of reusable packaging
- Yes R** 4.6.1.1 Provision of product take-back service
- Yes O** 4.6.1.2 Auditing of recycling vendors
- Yes R** 4.6.2.1 Provision of rechargeable battery take-back service: RBRC Licensee
- Yes R** 4.7.1.1 Demonstration of corporate environmental policy consistent with ISO 14001
- Yes R** 4.7.2.1 Self-certified environmental management system for design and manufacturing organizations
- Yes O** 4.7.2.2 Third-party certified environmental management system for design and manufacturing organizations
- Yes R** 4.7.3.1 Corporate report consistent with Performance Track or GRI
- Yes O** 4.7.3.2 Corporate report based on GRI

EPEAT Criteria Summary

Criteria Category Summary	Optional Points
4.1 Reduction/elimination of environmentally sensitive materials	6/7
4.2 Materials selection	2/3
4.3 Design for end of life	5/5
4.4 Product longevity/life cycle extension	1/1
4.5 Energy conservation	1/2
4.6 End of life management	1/1
4.7 Corporate performance	2/2
4.8 Packaging	2/4
Total Optional Points:	20/25

This Product is also registered in:

none

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Product: HP VH27 Display
CAB: Green Electronics Council CAB
Country: United States
Product Type: Monitors
Manufacturer: HP Inc.
URL: <http://www.hp.com>
Rating: 
Registration Date: 11/6/2017
Product Status:  Active
Exceptions:
Manufacturer Part #:
UPC:
EAN:
Consumer or Institutional: Not Indicated

EPEAT Criteria Detail

Yes R 4.1.1.1 Compliance with provisions of European RoHS Directive upon its effective date

Yes O 4.1.2.1 Elimination of intentionally added cadmium

Yes R 4.1.3.1 Reporting on amount of mercury used in light sources (mg) 1,0,

Yes O 4.1.3.2 Low threshold for amount of mercury used in light sources

Yes O 4.1.3.3 Elimination of intentionally added mercury used in light sources

Yes O 4.1.4.1 Elimination of intentionally added lead in certain applications

Yes O 4.1.5.1 Elimination of intentionally added hexavalent chromium

Yes R 4.1.6.1 Elimination of intentionally added SCCP flame retardants and plasticizers in certain applications

Yes O 4.1.6.2 Large plastic parts free of certain flame retardants classified under European Council Directive 67/548/EEC

N/A O 4.1.7.1 Batteries free of lead, cadmium and mercury

Yes O 4.1.8.1 Large plastic parts free of PVC

Yes R 4.2.1.1 Declaration of postconsumer recycled plastic content (%): 42.5

Yes O 4.2.1.2 Minimum content of postconsumer recycled plastic

Yes O 4.2.1.3 Higher content of postconsumer recycled plastic

Yes R 4.2.2.1 Declaration of renewable/bio-based plastic materials content (%): 0

No O 4.2.2.2 Minimum content of renewable/bio-based plastic material

- Yes R 4.2.3.1 Declaration of product weight (lbs): 14.26 Pounds
- Yes R 4.3.1.1 Identification of materials with special handling needs
- Yes R 4.3.1.2 Elimination of paints or coatings that are not compatible with recycling or reuse
- Yes R 4.3.1.3 Easy disassembly of external enclosure
- Yes R 4.3.1.4 Marking of plastic components
- Yes R 4.3.1.5 Identification and removal of components containing hazardous materials
- Yes O 4.3.1.6 Reduced number of plastic material types
- Yes O 4.3.1.7 Molded/glued in metal eliminated or removable
- Yes R 4.3.1.8 Minimum 65 percent reusable/recyclable
- Yes O 4.3.1.9 Minimum 90 percent reusable/recyclable
- Yes O 4.3.2.1 Manual separation of plastics
- Yes O 4.3.2.2 Marking of plastics
- Yes R 4.4.1.1 Availability of additional three year warranty or service agreement
- Yes O 4.4.3.1 Availability of replacement parts
- Yes R 4.5.1.1 ENERGY STAR®: 7.0/7.1-Displays;2304133
- No O 4.5.2.1 Renewable energy accessory available
- No O 4.5.2.2 Renewable energy accessory standard
- Yes R 4.8.1.1 Reduction/elimination of intentionally added toxics in packaging
- Yes R 4.8.2.1 Separable packing materials
- No O 4.8.2.2 Packaging 90% recyclable and plastics labeled
- Yes R 4.8.3.1 Declaration of recycled content in packaging Corrugated containers <300 psi=80-80;Rigid plastic packaging=0-0;Other plastic packaging=0-0;Brown papers=80-80;
- Yes O 4.8.3.2 Minimum postconsumer content guidelines
- Yes O 4.8.4.1 Provision of take-back program for packaging
- No O 4.8.5.1 Documentation of reusable packaging
- Yes R 4.6.1.1 Provision of product take-back service
- Yes O 4.6.1.2 Auditing of recycling vendors
- Yes R 4.6.2.1 Provision of rechargeable battery take-back service: RBRC Licensee
- Yes R 4.7.1.1 Demonstration of corporate environmental policy consistent with ISO 14001
- Yes R 4.7.2.1 Self-certified environmental management system for design and manufacturing organizations
- Yes O 4.7.2.2 Third-party certified environmental management system for design and manufacturing organizations
- Yes R 4.7.3.1 Corporate report consistent with Performance Track or GRI
- Yes O 4.7.3.2 Corporate report based on GRI

EPEAT Criteria Summary

Criteria Category Summary	Optional Points
4.1 Reduction/elimination of environmentally sensitive materials	7/7
4.2 Materials selection	2/3
4.3 Design for end of life	5/5
4.4 Product longevity/life cycle extension	1/1
4.5 Energy conservation	0/2
4.6 End of life management	1/1
4.7 Corporate performance	2/2
4.8 Packaging	2/4

Total Optional Points: 20/25

This Product is also registered in:

- [Brazil](#)
- [Canada](#)
- [Mexico](#)

Attachment 5 – HP Documentation for Alternate Proposed Products

As requested in Instructions to Bidders, subsection 10, Alternate Models and in Specifications, subsections 3.1.9.1.2 and 3.1.9.1.5, Technical Requirements, specification sheets/product literature for the following proposed products are included in the datasheets and EPEAT certifications on the subsequent pages.

Datasheets

- **Alternate for Standard PC and Power PC:** HP EliteDesk 705 G4 Microtower (AMD)
- **Alternate for Standard Laptop and Power Laptop:** HP ProBook 650 G4 (with Integrated DVD-RW Drive)
- **Alternate Upgraded Video Card:** NVIDIA Quadro P4000 8BG Graphics Card
- **Alternate Adapters for Docking Station:** C2G DisplayPort Dongle (DVI-D and VGA) Adapters

Note: The C2G DisplayPort Dongle Adapters are to be used with the proposed HP Elite USB-C G4 Docking Station (for laptops and tablets), provided in **Table 12**. For pricing purposes, the C2G DisplayPort Dongle Adapters and the HP Elite USB-C G4 Docking Station are included in the bundled price in **Exhibit_A Pricing Page – Revised 9-10-2018**, subsection Alternate Products.

EPEAT Certifications

- **Alternate Standard PC and Power PC:** HP EliteDesk 705 G4 Microtower (AMD)
- **Alternate Standard Laptop and Power Laptop:** HP ProBook 650 G4 (with Integrated DVD-RW Drive)





HP EliteDesk 705 G4 Microtower PC

Powered for the enterprise, the HP EliteDesk 705 MT is one of our most secure PCs that delivers impressive value with the performance and expandability required by today's high-productivity workforce in a new space-saving and stylish design.



HP recommends Windows 10 Pro.

- Windows 10 Pro¹
- HP Sure Start Gen4²

Pure performance and enhanced visual experience

Enjoy the powerful performance of the latest 65W AMD Ryzen™ 3 PRO and Ryzen™ 5 PRO Processors³ or amplify performance with the optional 95W AMD Ryzen™ 7 PRO Processor^[3, 4] with up to 8 cores, 16 threads⁴, and high-end discrete graphics for viewing VR content.

Expansion that extends your investment

Configure the HP EliteDesk 705 MT expandability with four bays and four slots including one three-quarter length double-wide slot for high-end graphics. Plus, two additional M.2 slots, and plenty of configurable ports.

Strong security, powerful manageability.

Get powerful protection and simplified management. HP Sure Start Gen4² protects against BIOS attacks while the HP Manageability Integration Kit⁵ allows you to easily manage devices through Microsoft System Center Configuration Manager.

Reliability for the long haul

This work-ready PC is designed for a long life-cycle with up to 18-months of platform stability. It passed 120,000 hours of testing in the HP Total Test Process⁶, is designed to undergo MIL-STD 810G testing⁷, and has an optional removable dust filter⁴.

Featuring

- Power through your day with Windows 10 Pro with built-in security, collaboration, and connectivity.¹
- Protect the firmware that antivirus can't reach! The hardware-enforced self-healing protection offered by HP Sure Start Gen4 automatically recovers the BIOS from malware, rootkits, or corruption.²
- Keep your critical processes running, even if malware tries to shut them down. HP Sure Run extends hardware enforced self-healing protection into the operating system to guard against malicious attacks on applications and processes.⁸
- Help protect your PC from websites, attachments, malware, ransomware, and viruses with hardware-enforced security from HP Sure Click.⁹
- Quickly and securely restore PCs to the latest image using a network connection with optional HP Sure Recover.¹⁰
- ITDMs can quickly help create, improve, and secure custom Windows images with HP Image Assistant Gen3.
- The HP Manageability Integration Kit helps speed up image creation and management of hardware, BIOS, and security through Microsoft System Center Configuration Manager.⁵
- Keep data out of reach and defend against theft, attacks, and unauthorized users with HP Client Security Manager Gen4.¹¹

HP EliteDesk 705 G4 Microtower PC Specifications Table



Form Factor	Microtower
Available Operating System	Windows 10 Pro 64 – HP recommends Windows 10 Pro. ¹ Windows 10 Pro 64 (National Academic only) ² Windows 10 Home 64 ¹ FreeDOS 2.0
Processor Family⁸	7th Generation AMD A6 APU processor (A6-9500) 7th Generation AMD A8 APU processor (A8-9600) 7th Generation AMD A10 APU processor (A10-9700) AMD Ryzen™ 3 PRO processor AMD Ryzen™ 5 PRO processor
Available Processors³	AMD PRO A6-9500 APU with Radeon™ R5 Graphics (3.5 GHz base frequency, up to 3.8 GHz burst frequency, 1 MB cache, 2 cores) AMD PRO A8-9600 APU with Radeon™ R7 Graphics (3.1 GHz base frequency, up to 3.4 GHz burst frequency, 2 MB cache, 4 cores) AMD PRO A10-9700 APU with Radeon™ R7 Graphics (3.5 GHz base frequency, up to 3.8 GHz burst frequency, 2 MB cache, 4 cores) AMD Ryzen™ 3 2200G Quad-Core with Radeon™ Vega 8 Graphics (3.5 GHz base frequency, up to 3.7 GHz burst frequency, 6 MB cache) AMD Ryzen™ 5 2400G Quad-Core with Radeon™ RX Vega 11 Graphics (3.6 GHz base frequency, up to 3.9 GHz burst frequency, 6 MB cache)
Chipset	AMD B350 FCH
Maximum Memory	64 GB DDR4-2666 SDRAM (Transfer rates up to 2666 MT/s.)
Memory Slots	4 DIMM
Internal Storage	2 TB 5400 rpm SATA ⁷ 500 GB SATA SED ⁷ 500 GB 7200 rpm SATA FIPS SED ⁷ 128 GB up to 512 GB SATA SSD ⁷ 256 GB up to 512 GB SATA SED Opal 2 SSD ⁷ 256 GB up to 512 GB SATA FIPS SSD ⁷ 128 GB up to 512 GB PCIe® NVMe™ SSD ⁷ 128 GB up to 1 TB PCIe® NVMe™ TLC M.2 SSD ⁷ 256 GB up to 512 GB PCIe® NVMe™ SED Opal 2 TLC M.2 SSD ⁷
Additional storage	5-in-1 SD card reader
Optical Drive	HP 9.5 mm Slim DVD-Writer ^{12,31}
Available Graphics	Integrated: AMD Radeon™ R5 Graphics; AMD Radeon™ R7 Graphics; AMD Radeon™ Vega 8 Graphics; AMD Radeon™ RX Vega 11 Graphics Discrete: AMD Radeon™ R7 430 Graphics (2 GB GDDR5 dedicated); AMD Radeon™ RX 550 Graphics (4 GB GDDR5 dedicated); AMD Radeon™ RX 580 Graphics (4 GB GDDR5 dedicated) ¹²
Audio	Conexant CX20632 codec, universal audio jack for headset front port, audio line in and out rear ports (3.5 mm), multi-streaming capable
Communications	LAN: Realtek RTL8111EPH GbE WLAN: Intel® Dual Band Wireless-AC 9260 802.11ac (2x2) and Bluetooth® 5 M.2, non-vPro™

Expansion Slots	1 M.2 2230; 1 M.2 2230/2280; 1 PCIe x16; 3 PCIe x1 (1 M.2 slot for WLAN and 1 M.2 2230/2280 slot for storage.)
Ports and Connectors	Front: 1 headset connector; 1 USB 2.0; 1 USB 2.0 (fast charging); 1 USB Type-C™ (charging); 2 USB 3.1 Gen 1 Rear: 1 audio-in; 1 audio-out; 1 power connector; 1 RJ-45; 2 DisplayPort™ 1.2; 2 USB 3.1 Gen 1; 4 USB 2.0 ¹³ Optional: 1 DisplayPort™ 1.2; 1 HDMI 2.0; 1 serial; 1 USB 3.1 Type-C™ Gen 1 (DisplayPort™); 1 VGA
Internal Drive Bays	One 3.5" HDD; Two 2.5" HDD ^{12,31}
External Drive Bays	1 slim ODD; One 5.25" ODD ^{12,31}
Available Software	Absolute Persistence module; HP ePrint Driver + JetAdvantage; HP Hotkey Support; HP Jumpstart; HP Noise Cancellation Software; HP PhoneWise; HP Recovery Manager; HP Secure Erase; HP Support Assistant; HP Velocity; Microsoft Defender; Native Miracast Support; HP Wireless Wakeup; Buy Office (sold separately); HP LAN-Wireless Protection; HP Sure Recover ^{4,16,17,18,19,20,21,22}
Security Management	DriveLock; Hood sensor; HP BIOSphere; HP Credential Manager; HP Device Access Manager; HP Password Manager; HP Power On Authentication; HP Security Manager; HP Spare Key; Power-on password (via BIOS); RAID configurations; SATA port disablement (via BIOS); Serial enable/disable (via BIOS); Setup password (via BIOS); Support for chassis padlocks and cable lock devices; USB enable/disable (via BIOS); Master Boot Record Security; HP Client Security Suite Gen 4; HP Sure Start Gen 4; Pre-boot Authentication; HP Sure Run; Trusted Platform Module TPM 2.0 Embedded Security Chip shipped with Windows 10 (Common Criteria EAL4+ Certified)(FIPS 140-2 Level 2 Certified) ^{6,25,26,27,28,29,30}
Management Features	HP BIOS Config Utility (download); HP Client Catalog (download); HP Driver Packs (download); HP System Software Manager (download); Update BIOS via Cloud or Network (BIOS feature); Ivanti Management Suite; HP Management Integration Kit for Microsoft System Center Configuration Management Gen 2 ^{5,23,24}
Power	250 W internal power supply, up to 92% efficiency, active PFC; 400 W internal power supply, up to 92% efficiency, active PFC
Dimensions	6.69 x 10.79 x 13.3 in 17 x 27.4 x 33.8 cm
Weight	15.74 lb 7.14 kg (Exact weight depends on configuration.)
Environmental	Low halogen ¹¹
Energy Efficiency Compliance	ENERGY STAR® certified; EPEAT® Gold ¹⁰
Warranty	3 year (3-3-3) limited warranty and service offering includes 3 years of parts, labor and on-site repair. Terms and conditions vary by country. Certain restrictions and exclusions apply.

HP EliteDesk 705 G4 Microtower PC

Accessories and services (not included)

**HP EliteDisplay E243
23.8-inch Monitor**



Style meets substance in a strikingly modern business display crafted for optimal viewing, productivity, and ergonomics. The HP EliteDisplay E243 23.8-inch Monitor has a 3-sided micro-edge bezel for seamless multi-display tiling and 4-way adjustability so you can comfortably power through your day.

Product number: 1FH47A8

HP EliteDisplay E273 27-inch Monitor



Style meets substance in a strikingly modern business display crafted for optimal viewing, productivity, and ergonomics. The HP EliteDisplay E273 27-inch Monitor has a 3-sided micro-edge bezel for seamless multi-display tiling and 4-way adjustability so you can comfortably power through your day.

Product number: 1FH50A8

**HP 500GB 7200rpm SATA
(NCQ/Smart IV) 6.0 Gbp/s Hard Drive**



Maximize performance of HP Business PCs and meet your storage demands with high-capacity drives.

Product number: QK554AT

HP TLC 256 GB SATA SSD



Expand the storage capabilities of your desktop with the HP TLC 256 GB SATA SSD¹, which includes TLC flash and the same reliability you already get from current from SSD drives.

Product number: P1N68AT

HP USB Business Speakers v2



Quickly and easily add stereo sound to your workspace with HP USB Business Speakers v2, a set of stylish desktop speakers powered by your PC's USB port.

Product number: N3R89AT

**HP PCIe NVMe TLC 512GB SSD
M.2 Drive**



Reduce boot up, calculation, and graphics response times and revolutionize how your HP Business Desktop handles large files with the HP PCIe NVMe TLC 512GB SSD M.2 Drive, a remarkably affordable and innovative PCIe-based NVMe memory SSD storage solution.

Product number: X8U75AA

**HP 4 year Next Business Day
Onsite Hardware Support for
Desktops**



When hardware issues come up, the sooner you can get running again, the better. Have expertise at the ready with HP Hardware Next Business Day¹ Onsite Service, and vastly improve your product uptime. With high-quality remote assistance or convenient onsite support available the next business day, help is there when you need it—so you can get back to work.

Product number: U7897E (for 4 year platforms), U7899E (for 5 year platforms)

Messaging Footnotes

- ¹ Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com>.
- ² HP Sure Start Gen4 is available on HP Elite and HP Pro 600 products equipped with 8th generation Intel® or AMD processors.
- ³ Multi-core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. AMD's numbering is not a measurement of clock speed.
- ⁴ Sold separately or as an optional feature.
- ⁵ HP Manageability Integration Kit can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>.
- ⁶ HP Total Test Process testing is not a guarantee of future performance under these test conditions. Accidental damage requires an optional HP Accidental Damage Protection Care Pack.
- ⁷ MIL-STD testing is pending and is not intended to demonstrate fitness for U.S. Department of Defense contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Damage under the MIL STD test conditions or any accidental damage requires an optional HP Accidental Damage Protection Care Pack.
- ⁸ HP Sure Run is available on HP Elite products equipped with 8th generation Intel® or AMD processors.
- ⁹ HP Sure Click is available on select HP platforms and supports Microsoft® Internet Explorer, Google Chrome, and Chromium™. Supported attachments include Microsoft Office (Word, Excel, PowerPoint) and PDF files in read only mode. Check <http://h20195.www2.hp.com/v2/GetDocument.aspx?docname=4AA7-0922ENW> for all compatible platforms as they become available.
- ¹⁰ HP Sure Recover is available on HP Elite PCs with 8th generation Intel® or AMD processors and requires an open, wired network connection. You must back up important files, data, photos, videos, etc. before using HP Sure Recover to avoid loss of data.
- ¹¹ HP Client Security Manager Gen4 requires Windows and Intel® or AMD 8th Gen processors.

Technical Specifications Footnotes

- ¹ Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com/>.
- ² Some devices for academic use will automatically be updated to Windows 10 Pro Education with the Windows 10 Anniversary Update. Features vary; see <https://aka.ms/ProEducation> for Windows 10 Pro Education feature information.
- ³ Multi-core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. AMD's numbering is not a measurement of clock speed.
- ⁴ Native Miracast Support: is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming.
- ⁵ HP Driver Packs: not preinstalled, however available for download at <http://www.hp.com/go/clientmanagement>
- ⁶ HP BIOSphere: HP BIOSphere Gen4 features may vary depending on the PC platform and configurations requires 8th Gen Intel® processors.
- ⁷ For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB (for Windows 10) of system disk is reserved for the system recovery software.
- ⁸ NOTE: Your product does not support Windows 8 or Windows 7. In accordance with Microsoft's support policy, HP does not support the Windows 8 or Windows 7 operating system on products configured with Intel® and AMD 7th generation and forward processors or provide any Windows 8 or Windows 7 drivers on <http://www.support.hp.com>
- ⁹ USB Antimicrobial Mouse: Not available in all regions; HP USB Hardened Mouse: Not available in all regions.
- ¹⁰ EPEAT® registered where applicable. EPEAT registration varies by country. See www.epeat.net for registration status by country. See HP's 3rd party option store for solar energy accessory at www.hp.com/go/options.
- ¹¹ External power supplies, power cords, cables and peripherals are not Low Halogen. Service parts obtained after purchase may not be Low Halogen.
- ¹² Sold separately or as an optional feature.
- ¹³ The MT can support a single graphics card up to 75W. When configured with dual graphics cards support is limited to 35W for each.
- ¹⁴ USB Antimicrobial Mouse: Not available in all regions; HP USB Hardened Mouse: Not available in all regions.
- ¹⁵ Absolute Persistence module: Absolute agent is shipped turned off, and will be activated when customers activate a purchased subscription. Subscriptions can be purchased for terms ranging multiple years. Service is limited, check with Absolute for availability outside the U.S. The Absolute Recovery Guarantee is a limited warranty. Certain conditions apply. For full details visit: <http://www.absolute.com/company/legal/agreements/computrace-agreement>. Data Delete is an optional service provided by Absolute Software. If utilized, the Recovery Guarantee is null and void. In order to use the Data Delete service, customers must first sign a Pre-Authorization Agreement and either obtain a PIN or purchase one or more RSA SecurID tokens from Absolute Software.
- ¹⁶ HP ePrint Driver + JetAdvantage: requires an Internet connection to HP web-enabled printer and HP ePrint account registration (for a list of eligible printers, supported documents and image types and other HP ePrint details, see www.hp.com/go/eprintcenter). Print times and connection speeds may vary.
- ¹⁷ HP Support Assistant: requires Windows and Internet access.
- ¹⁸ Microsoft Defender: Microsoft Defender Opt in and internet connection required for updates.
- ¹⁹ HP PhoneWise: HP PhoneWise Client is only available on select platforms. For supported platforms and HP PhoneWise system requirements see www.hp.com/go/HPPhoneWise
- ²⁰ HP Sure Recover: is available on HP Elite PCs with 8th generation Intel® or AMD processors and requires an open, wired network connection. Not available on platforms with multiple internal storage drives, Intel® Optane™. You must back up important files, data, photos, videos, etc. before use to avoid loss of data.
- ²¹ HP Secure Erase: for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method.
- ²² HP Management Integration Kit for Microsoft System Center Configuration Management Gen 2: HP Manageability Integration Kit can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>
- ²³ Ivanti Management Suite: subscription required.
- ²⁴ HP Client Security Suite Gen 4: requires Windows and Intel® or AMD 8th generation processors.
- ²⁵ HP Password Manager: requires Internet Explorer or Chrome or FireFox. Some websites and applications may not be supported. User may need to enable or allow the add-on / extension in the internet browser.
- ²⁶ HP Sure Start Gen 4: is available on HP Elite and HP Pro 600 products equipped with 8th generation Intel® or AMD processors.
- ²⁷ Trusted Platform Module TPM 2.0 Embedded Security Chip shipped with Windows 10 (Common Criteria EAL4+ Certified)(FIPS 140-2 Level 2 Certified): Firmware TPM is version 2.0. Hardware TPM is v1.2, which is a subset of the TPM 2.0 specification version v0.89 as implemented by Intel Platform Trust Technology (PTT).
- ²⁸ RAID configurations: is optional and does require a second hard drive.
- ²⁹ HP Sure Run: is available on HP Elite products equipped with 8th generation Intel® or AMD processors.
- ³⁰ HD-DVD disks cannot be played on this drive. No support for DVD-RAM. Actual speeds may vary. Don't copy copyright-protected materials. Double Layer discs can store more data than single layer discs. Discs burned with this drive may not be compatible with many existing single-layer DVD drives and players.

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HP ProBook 650 G4 Notebook PC



The all new modern slim design of the HP ProBook 650 delivers enterprise-grade performance, security, and manageability while working with today's technology and continuing to support connectivity to legacy devices.

HP recommends Windows 10 Pro.



Updated slim design

The precision-crafted slim chassis in a modern natural silver finish is designed to pass MIL-STD 810G testing² and supports several HP docking options³ for gradual transitions to modern docking solutions.

High performance

Help speed up demanding business applications with an optional 8th Gen hexa-core or quad-core Intel® Core™ processor⁴ and optional discrete graphics⁵.

Built on a secure foundation

Protect your PC against the evolving malware threats of the future, with self-healing, hardware-enforced, and manageable security solutions from HP. From the BIOS to the browser HP Sure Start Gen4⁶ and HP Sure Click⁷ help secure your PC.

- Power through your day with Windows 10 Pro¹ and the powerful security, collaboration and connectivity features from HP.
- Take on demanding graphics and video tasks using high resolution 4k displays with optional AMD Radeon™ RX540 Discrete Graphics⁵.
- Never wonder if someone is watching you with the added peace-of-mind that comes from the integrated HP Privacy Camera⁸, with a physical shutter to protect from malicious surveillance.
- Protect your PC with the hardware-enforced self-healing protection of HP Sure Start Gen4⁶ that automatically recovers the BIOS.
- Help protect your PC from websites and in-browser .pdf files infected with malware, ransomware, or viruses with HP Sure Click⁷.
- Fortify your security with up to three authentication factors including passwords and optional fingerprint recognition⁹.
- The HP Manageability Integration Kit¹⁰ helps speed up image creation and management of hardware, BIOS, and security through Microsoft System Center Configuration Manager.
- Stand up to the workload with a ProBook that is designed to pass MIL-STD 810G testing².

HP ProBook 650 G4 Notebook PC Specifications Table



Available Operating System	Windows 10 Pro 64 – HP recommends Windows 10 Pro. ¹ Windows 10 Pro 64 (National Academic only) ^{1,2} Windows 10 Home 64 ¹ Windows 10 Home Single Language 64 ¹ FreeDOS 2.0
Processor Family	8th Generation Intel® Core™ i7 processor (i7-8850H); 8th Generation Intel® Core™ i7 processor (i7-8650U); 8th Generation Intel® Core™ i7 processor (i7-8550U); 8th Generation Intel® Core™ i5 processor (i5-8350U); 8th Generation Intel® Core™ i5 processor (i5-8250U); 8th Generation Intel® Core™ i3 processor (i3-8130U); 7th Generation Intel® Core™ i5 processor (i5-7300U); 7th Generation Intel® Core™ i5 processor (i5-7200U) ⁵
Available Processors	Intel® Core™ i7-8850H with Intel® UHD Graphics 630 Graphics (2.6 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 9 MB L3 cache, 6 cores) Intel® Core™ i7-8650U vPro™ processor with Intel® UHD graphics 620 (1.9 GHz base frequency, up to 4.2 GHz with Intel® Turbo Boost Technology, 8 MB cache, 4 cores) Intel® Core™ i7-8550U with Intel® UHD graphics 620 (1.8 GHz base frequency, up to 4 GHz with Intel® Turbo Boost Technology, 8 MB cache, 4 cores) Intel® Core™ i7+ 8850H vPro™ processor (Core™ i7 and 16 GB Intel® Optane™ memory) with Intel® UHD Graphics 630 (2.6 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 9 MB L3 cache, 6 cores) Intel® Core™ i7+ 8850H vPro™ processor (Core™ i7 and 118 GB Intel® Optane™ SSD) with Intel® UHD Graphics 630 (2.6 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 9 MB L3 cache, 6 cores) Intel® Core™ i5-8350U vPro™ processor with Intel® UHD Graphics 620 (1.7 GHz base frequency, up to 3.6 GHz with Intel® Turbo Boost Technology, 6 MB cache, 4 cores) Intel® Core™ i5-8250U with Intel® UHD Graphics 620 (1.6 GHz base frequency, up to 3.4 GHz with Intel® Turbo Boost Technology, 6 MB cache, 4 cores) Intel® Core™ i5-7300U vPro™ processor with Intel® HD Graphics 620 (2.6 GHz base frequency, up to 3.5 GHz with Intel® Turbo Boost Technology, 3 MB cache, 2 cores) Intel® Core™ i5-7200U with Intel® HD Graphics 620 (2.5 GHz base frequency, up to 3.1 GHz with Intel® Turbo Boost Technology, 3 MB cache, 2 cores) Intel® Core™ i3-8130U with Intel® UHD graphics 620 (2.2 GHz base frequency, up to 3.4 GHz with Intel® Turbo Boost Technology, 4 MB cache, 2 cores) <small>3,4,5,6,10,44</small>
Maximum Memory	32 GB DDR4-2400 SDRAM ⁶ (Transfer rates up to 2400 MT/s. (8th Generation processors); Transfer rates up to 2133 MT/s. (7th Generation processors)) (Transfer rates up to 2400 MT/s. Both slots are customer accessible/upgradeable. Supports dual channel memory.)
Memory Slots	2 SODIMM
Internal Storage	500 GB up to 1 TB 7200 rpm SATA ⁸ 500 GB 7200 rpm SATA FIPS 140-2 SED ^{8,9} 118 GB Intel® Optane™ SSD ^{8,10} 256 GB up to 1 TB PCIe® NVMe™ M.2 SSD ⁸ 128 GB up to 512 GB PCIe® M.2 SSD ⁸ 256 GB M.2 SATA SED SSD ⁸
Optical Drive	DVD-ROM; DVD-Writer ¹¹
Flash Cache	Intel® Optane™ 16 GB Cache
Display	15.6" diagonal FHD IPS eDP LED-backlit touch screen, 220 cd/m ² , 45% sRGB (1920 x 1080) 15.6" diagonal FHD IPS eDP anti-glare LED-backlit, 220 cd/m ² , 45% sRGB (1920 x 1080) 15.6" diagonal HD SVA eDP anti-glare LED-backlit, 220 cd/m ² , 45% sRGB (1366 x 768)
Available Graphics	Integrated: Intel® HD Graphics 620; Intel® UHD Graphics 620; Intel® UHD Graphics 630 ¹⁷ Discrete: AMD Radeon™ RX 540 (2 GB GDDR5 dedicated) ¹⁸
Wireless Technologies	HP lt4132 LTE/HSPA+ Mobile Broadband Module; Intel® Dual Band Wireless-AC 3168 802.11a/b/g/n/ac (1x1) Wi-Fi® and Bluetooth® 4.2 Combo, non-vPro™; Intel® Dual Band Wireless-AC 8265 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 4.2 Combo, non-vPro™; Realtek 802.11ac (2x2) Wi-Fi® and Bluetooth® 4.2 Combo; Intel® Dual Band Wireless-AC 8265 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 4.2 Combo, vPro™; Intel® XMM™ 7360 LTE-Advanced; Realtek 802.11ac (1x1) Wi-Fi® and Bluetooth® 4.2 Combo; Intel® Dual Band Wireless-AC 9560 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 5 Combo, vPro™ ^{12,13,14,15}
Communications	HP Module with NXP NFC Controller NPC300 I2C NCI; Intel® I219-LM GbE, vPro™; Intel® I219-V GbE, non-vPro™ ^{15,16}
Expansion Slots	1 microSD

Ports and Connectors	2 USB 3.1 Gen 1 (1 charging); 1 VGA; 1 USB 3.1 Type-C™ Gen 1 (Power delivery, DisplayPort™); 1 serial; 1 RJ-45; 1 headphone/microphone combo; 1 HDMI 1.4; 1 docking connector; 1 AC power ⁴³ (Cables are not included.)
Input Device	HP Advanced Keyboard with numeric keypad; Clickpad with multi-touch gesture support, taps enabled as default
Camera	720p HD camera ^{15,17,19}
Available Software	HP 3D DriveGuard; HP ePrint Driver + JetAdvantage; HP Hotkey Support; HP JumpStart; HP LAN Protection; HP MAC Address Manager; HP Noise Cancellation Software; HP Recovery Manager; HP Support Assistant; HP Velocity; Native Miracast support; HP PhoneWise; Buy Office (Sold separately) ^{21,22,23,24}
Security Management	Absolute persistence module; HP BIOSphere Gen4; HP DriveLock and Automatic DriveLock; HP Fingerprint Reader; HP Password Manager; HP Secure Erase; Microsoft Security Defender; Power-on authentication; Preboot authentication; TPM 2.0 embedded security chip shipped with Windows 10 (Common Criteria EAL4+ Certified); HP Sure Click; HP SureStart Gen4; HP Wireless Wakeup; HP Client Security Gen4; RAID configurations ^{28,29,30,31,32,33,34,35,36,37}
Management Features	HP Driver Packs; HP System Software Manager (SSM); HP BIOS Config Utility (BCU); HP Client Catalog; HP Manageability Integration Kit Gen2; Ivanti Management Suite ^{25,26,27}
Power	90 W USB Type-C™ adapter; HP Smart 45 W External AC power adapter; HP Smart 45 W USB Type-C™ adapter; HP Smart 65 W External AC power adapter; HP Smart 65 W USB Type-C™ adapter; HP Smart 90 W External AC power adapter; HP Smart 45 W 2-prong External AC power adapter ^{39,40} HP Long Life 3-cell, 48 Wh Li-ion ³⁹ Up to 14 hours and 30 minutes ³⁹ Battery is internal and not replaceable by customer. Serviceable by warranty.
Dimensions	14.85 x 10.12 x 0.95 in 37.7 x 25.7 x 2.39 cm
Weight	Starting at 4.8 lb (non-touch); Starting at 5.31 lb (touch) Starting at 2.18 kg (non-touch); Starting at 2.41 kg (touch) (Weight will vary by configuration.)
Energy Efficiency Compliance	ENERGY STAR® certified and EPEAT® Gold registered configurations available ³⁶
Warranty	HP Services offers 3 year and 1 year limited warranties and 90 day software limited warranty options depending on country. Batteries have a default one year limited warranty except for Long Life batteries which will have same 1 year or 3 year limited warranty as the platform. On-site service and extended coverage is also available. HP Care Pack Services are optional extended service contracts that go beyond the standard limited warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: http://www.hp.com/go/cpc . ⁴¹

HP ProBook 650 G4 Notebook PC

Accessories and services (not included)

HP Thunderbolt Dock 120W G2



Reinvent docking and boost productivity with the world's most versatile Thunderbolt™ dock¹, the small, sophisticated HP Thunderbolt Dock G2. Designed for workspace flexibility and network manageability², it delivers USB-C™³ device connectivity and optional integrated audio.⁴

Product number: 2UK37AA

HP UltraSlim Docking Station



Quickly and easily expand your display, network, and device connectivity to customize an always-ready workspace with the HP UltraSlim Docking Station, a simple one-click, slide-in side dock for select ultraslim HP EliteBook Notebook PCs.

Product number: D9Y32AA

HP USB-C Mini Dock



Be productive on the go with streamlined, pocket-sized port expansion that's fashionable and functional. The HP USB-C™ Mini Dock has a modern, textured design and packs pass-through charging¹ and data, video, network, and device connectivity² into a compact, portable dock.

Product number: 1PM64AA

HP Notebook Power Bank



Boost your notebook's¹ uptime and charge your everyday USB devices at the same time with the portable, chargeable HP Notebook Power Bank.

Product number: N9F71AA

HP 3 year Next Business Day Onsite HW Support w/Accidental Damage Protection-G2 for Notebooks



When hardware issues come up, the sooner you can get running again, the better. Have expertise at the ready with HP Hardware Next Business Day¹ Onsite Service with Accidental Damage Protection, and vastly improve your product uptime. With high-quality remote assistance or convenient onsite support available the next business day, help is there when you need it—so you can get back to work.

Product number: UC282E (for 1 year platforms), UC279E (for 3 year platforms)

Messaging Footnotes

- ¹ Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers and/or software to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com>.
- ² MIL STD 810G testing is pending and is not intended to demonstrate fitness for U.S. Department of Defense contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Damage under the MIL STD test conditions or any accidental damage requires an optional HP Accidental Damage Protection Care Pack.
- ³ Sold separately or as an optional feature.
- ⁴ Quad-core and hexa-core Intel® Core™ processors are optional. Multicore is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance.
- ⁵ Discrete graphics not available with hexa-core processors. Video conferencing requires internet connection and creative applications are sold separately.
- ⁶ HP Sure Start Gen4 is available on HP ProBook products equipped with Intel® or AMD 8th generation processors.
- ⁷ HP Sure Click is available on select HP platforms and supports Microsoft® Internet Explorer, Google Chrome, and Chromium™. Supported attachments include Microsoft Office (Word, Excel, PowerPoint) and PDF files in read only mode. Check <http://h20195.www2.hp.com/v2/GetDocument.aspx?docname=4AA7-0922ENW> for all compatible platforms as they become available.
- ⁸ HP Privacy Camera only available on non-touch screens equipped with HD camera and must be installed at the factory.
- ⁹ HP Multi Factor Authenticate requires 7th or 8th Generation Intel® Core™ processor, Intel® integrated graphics, and Intel® WLAN. Three authentication factors requires an Intel® vPro™ processor.

Technical Specifications Footnotes

- ¹ Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com/>.
- ² Some devices for academic use will automatically be updated to Windows 10 Pro Education with the Windows 10 Anniversary Update. Features vary; see <https://aka.ms/ProEducation> for Windows 10 Pro Education feature information.
- ³ Multicore is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance.
- ⁴ Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.
- ⁵ NOTE: In accordance with Microsoft's support policy, HP does not support the Windows 8 or Windows 7 operating system on products configured with Intel and AMD 7th generation and forward processors or provide any Windows 8 or Windows 7 drivers on <http://www.support.hp.com>.
- ⁶ Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration. See www.intel.com/technology/turboboost for more information.
- ⁷ Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility. If you mix memory speeds, the system will perform at the lower memory speed.
- ⁸ For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10) is reserved for system recovery software.
- ⁹ Not available with Intel® Optane™ Memory or Intel® Optane™ SSD.
- ¹⁰ Intel® Optane™ memory system acceleration does not replace or increase the DRAM in your system.
- ¹¹ DVD-Writer does not support DVD RAM. Don't copy copyright protected materials.
- ¹² Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. The specifications for the 802.11ac WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ac WLAN devices.
- ¹³ Dynamic Regulatory Solution will auto-change AC WLAN to abgn by passive scan when entering Indonesia.
- ¹⁴ WWAN module requires separately purchased service contract. Check with service provider for coverage and availability in your area. Connection speeds will vary due to location, environment, network conditions, and other factors. 4G LTE not available on all products, in all regions.
- ¹⁵ Sold separately or as an optional feature.
- ¹⁶ The term "10/100/1000" or "Gigabit" Ethernet indicates compatibility with IEEE standard 802.3ab for Gigabit Ethernet, and does not connote actual operating speed of 1 Gb/s. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.
- ¹⁷ HD content required to view HD images.
- ¹⁸ AMD Dynamic Switchable Graphics technology requires an Intel processor, plus an AMD Radeon™ discrete graphics configuration and is not available on FreeDOS and Linux OS. With AMD Dynamic Switchable Graphics technology, full enablement of all discrete graphics video and display features may not be supported on all systems (e.g. OpenGL applications will run on the integrated GPU or the APU as the case may be).
- ¹⁹ Internet access required.
- ²⁰ Resolutions are dependent upon monitor capability, and resolution and color depth settings.
- ²¹ Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming media.
- ²² HP ePrint Drive requires an Internet connection to HP web-enabled printer and HP ePrint account registration (for a list of eligible printers, supported documents and image types and other HP ePrint details, see www.hp.com/go/eprintcenter). Print times and connection speeds may vary.
- ²³ HP Support Assistant requires Windows and Internet access.
- ²⁴ HP PhoneWise Client is only available on select platforms. For supported platforms and HP PhoneWise system requirements see www.hp.com/go/HPPhoneWise.
- ²⁵ HP Driver Packs not preinstalled, however available for download at <http://www.hp.com/go/clientmanagement>.
- ²⁶ HP Manageability Integration Kit can be downloaded from <http://www.hp.com/go/clientmanagement>.
- ²⁷ Ivanti Management Suite subscription required.
- ²⁸ HP BIOSphere Gen4 requires Intel® or AMD 8th Gen processors. Features may vary depending on the platform and configurations.
- ²⁹ Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method.
- ³⁰ Absolute agent is shipped turned off, and will be activated when customers activate a purchased subscription. Subscriptions can be purchased for terms ranging multiple years. Service is limited, check with Absolute for availability outside the U.S. The Absolute Recovery Guarantee is a limited warranty. Certain conditions apply. For full details visit: <http://www.absolute.com/company/legal/agreements/ computrace-agreement>. Data Delete is an optional service provided by Absolute Software. If utilized, the Recovery Guarantee is null and void. In order to use the Data Delete service, customers must first sign a Pre-Authorization Agreement and either obtain a PIN or purchase one or more RSA SecurID tokens from Absolute Software.
- ³¹ HP Client Security Suite Gen 4 requires Windows and Intel® or AMD 8th generation processors.
- ³² HP Password Manager requires Internet Explorer or Chrome or FireFox. Some websites and applications may not be supported. User may need to enable or allow the add-on / extension in the internet browser.
- ³³ HP Fingerprint Sensor sold separately or as an optional feature.
- ³⁴ Microsoft Defender Opt in and internet connection required for updates.
- ³⁵ RAID configuration is optional and does require a second hard drive.
- ³⁶ HP Sure Click is available on select HP platforms and supports Microsoft® Internet Explorer, Google Chrome, and Chromium™. Supported attachments include Microsoft Office (Word, Excel, PowerPoint) and PDF files in read only mode. Check <http://h20195.www2.hp.com/v2/GetDocument.aspx?docname=4AA7-0922ENW> for all compatible platforms as they become available.
- ³⁷ HP Sure Start Gen4 is available on HP Elite and HP Pro 600 products equipped with 8th generation Intel® or AMD processors.
- ³⁸ Windows 10 MM14 battery life will vary depending on various factors including product model, configuration, loaded applications, features, use, wireless functionality, and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See www.bapco.com for additional details.
- ³⁹ Supports HP Fast Charging.
- ⁴⁰ Availability may vary by country.
- ⁴¹ HP Care Packs are sold separately. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit www.hp.com/go/cpc. HP services are governed by the applicable HP terms and conditions of service provided or indicated to Customer at the time of purchase. Customer may have additional statutory rights according to applicable local laws, and such rights are not in any way affected by the HP terms and conditions of service or the HP Limited Warranty provided with your HP Product.
- ⁴² EPEAT® registered where applicable. EPEAT registration varies by country. See <http://www.epeat.net> for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at www.hp.com/go/options.
- ⁴³ Serial port not available if VGA port is selected.

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 4AA7-2101ENUC, June 4th 2018





HP Sales Central

NVIDIA Quadro P4000 (8GB) Graphics Card (1ME40AA)

Active as of 8/20/2018

Overview



Experience lifelike VR workflows with large models and renders and complex visual effects and simulations on up to three 5K displays with the NVIDIA® Quadro® P4000, powered by NVIDIA Pascal™ GPU technology.

Streamlined projects with fast, dedicated memory.

Improve interactive performance with models, scenes, and assemblies and get high levels of realism with more layers, effects, and textures with a card that has 8GB GDDR5 memory.

Tuned and tested drivers

Focus on doing your best work with a card that supports the latest releases of OpenGL, DirectX, Vulkan™, and NVIDIA® CUDA® to help ensure compatibility with your frequently-used professional applications.

Extraordinary visuals and optimized multi-display productivity.

Get high brightness and color saturation, over 10K:1 CR, and support for up to three 5K displays or one 8K display with DisplayPort™ 1.4, then easily frame-lock and manage with NVIDIA® technologies. Create and playback HDR video with H.264 and HEVC engines.

Ready for fully-immersive VR

Create and experience amazing virtual reality with the NVIDIA VRWorks™ suite of APIs, libraries, and engines and support for HMD displays.

Specifications

Minimum dimensions (W x D x H)

4.4 x 9.5 in (Single-slot)

Weight

19.75 oz

UPC number

(ABA) 190781617150

What's in the box

Graphic card

Warranty

The NVIDIA Quadro P4000 has a one-year limited warranty or the remainder of the warranty of the HP product in which it is installed. Technical support is available seven days a week, 24 hours a day by phone, as well as online support forums. Parts and labor are available on-site within the next business day. Telephone support is available for parts diagnosis and installation. Certain restrictions and exclusions apply.

Assets

Quick specs (1)

NVIDIA Graphics

Research or buy HP printers, desktops, laptops, and more at the Official HP Inc. Website.

Reference guide (1)

HP Business Desktop PCs graphics card options - Quick reference guide

Partner and Channel

Quick reference guide

Images - Product (2)



Center facing

- 54 x 41 (jpg) 54 x 41 (png)
- 100 x 70 (jpg) 96 x 72 (png)
- 96 x 72 (png) 99 x 74 (png)
- 153 x 115 (png) 180 x 135 (png)
- 240 x 180 (jpg) 240 x 180 (png)
- 247 x 185 (png) 170 x 190 (jpg)
- 257 x 193 (png) 320 x 240 (jpg)
- 320 x 240 (png) 474 x 356 (png)
- 513 x 385 (png) 400 x 400 (jpg)
- 400 x 400 (png) 573 x 430 (png)
- 800 x 600 (png) 1659 x 1246 (png)
- 3541 x 1687 (png)



Left facing

- 54 x 41 (jpg) 54 x 41 (png)
- 100 x 70 (jpg) 96 x 72 (jpg)
- 96 x 72 (png) 99 x 74 (png)
- 153 x 115 (png) 180 x 135 (png)
- 240 x 180 (jpg) 240 x 180 (png)
- 247 x 185 (png) 170 x 190 (jpg)
- 257 x 193 (png) 320 x 240 (jpg)
- 320 x 240 (png) 474 x 356 (png)
- 513 x 385 (png) 400 x 400 (jpg)
- 400 x 400 (png) 573 x 430 (png)
- 800 x 600 (png) 1659 x 1246 (png)
- 3717 x 3371 (png)

Search additional assets (Asset Hub)

Search for additional assets

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Workstations

HP Z Workstation

[Active](#)

HP Z2 Tower G4 Workstation
4YL42UT

[Active](#)

HP Z2 Tower G4 Workstation
4YL44UT

[Active](#)

HP Z2 Tower G4 Workstation
4YN93UT

[Active](#)

HP Z2 Tower G4 Workstation
5DU86UT

[Active](#)

HP Z2 Tower G4 Workstation
5DU87UT

[Active](#)

HP Z2 Tower G4 Workstation
5DU90UT

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5DU92UT

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5DU94UT

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5DU96UT

[Active](#)

HP Z2 Tower G4 Workstation
5DV13UT

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5DV27UT

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5DV38UT

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5DV46UT

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HP Z4 G4 Workstation
2XN14UT

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HP Z4 G4 Workstation
3FQ50UT

Active

HP Z4 G4 Workstation
3FQ51UT

Active

HP Z4 G4 Workstation
3KX03UT

Active

HP Z4 G4 Workstation
3KX04UT

Active

HP Z4 G4 Workstation
3KX06UT

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HP Z4 G4 Workstation
3KX07UT

Active

HP Z4 G4 Workstation
3KX08UT

Active

HP Z4 G4 Workstation
3KX10UT

Active

HP Z4 G4 Workstation
3KX12UT

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HP Z4 G4 Workstation
3KX18UT

Active

HP Z4 G4 Workstation
3KX26UT

Active

HP Z4 G4 Workstation
3WE02UT

Active

HP Z4 G4 Workstation
3WE04UT

Active

HP Z4 G4 Workstation

3WF10UT

Active

HP Z4 G4 Workstation

3WF15UT

Active

HP Z4 G4 Workstation

3WF18UT

Active

HP Z4 G4 Workstation

3WF76UT

Active

HP Z6 G4 Workstation

1WU31UT

Active

HP Z6 G4 Workstation

1WU32UT

Active

HP Z6 G4 Workstation

2WZ66UT

Active

HP Z6 G4 Workstation

2WZ67UT

Active

HP Z6 G4 Workstation

2XM73UT

Active

HP Z6 G4 Workstation

3GF36UT

Active

HP Z6 G4 Workstation

3GF39UT

Active

HP Z6 G4 Workstation

3GF40UT

Active

HP Z6 G4 Workstation

3GF48UT

Active

HP Z8 G4 Workstation

1FZ80UT

Active

HP Z8 G4 Workstation

1WU28UT

Active

HP Z8 G4 Workstation

3GF37UT

Active

HP Z8 G4 Workstation

3GF38UT

Active

HP Z8 G4 Workstation

3GF41UT

Active

HP Z8 G4 Workstation

3GF42UT

Active

HP Z8 G4 Workstation

3GF46UT

Active

HP Z240 Tower Workstation

2TF24UT

Active

HP Z240 Tower Workstation

2TF25UT

Active

HP Z240 Tower Workstation

2TF80UT

Active

HP Z240 Tower Workstation

2VN18UT

Active

HP Z240 Tower Workstation

2VN19UT

Active

HP Z240 Tower Workstation

2VN20UT

Active

HP Z240 Tower Workstation

2VN21UT

Active

HP Z240 Tower Workstation

2VN22UT

Active

HP Z240 Tower Workstation

2VN23UT

Active

HP Z240 Tower Workstation

2VN24UT

Active

HP Z240 Tower Workstation

2VN26UT

Active

HP Z240 Tower Workstation

2VN27UT

Active

HP Z240 Tower Workstation

2VN29UT

Active

HP Z240 Tower Workstation

2VN31UT

Active

HP Z240 Tower Workstation

2VN32UT

Active

HP Z240 Tower Workstation

2VN33UT

Active

HP Z240 Tower Workstation

2VN35UT

Active

HP Z240 Tower Workstation

2VN57UT

Active

HP Z240 Tower Workstation

2VN59UT

Active

HP Z240 Tower Workstation

2VN62UT

Active

HP Z240 Tower Workstation

2VN63UT

Active

HP Z240 Tower Workstation

2WX38UT

Active

HP Z240 Tower Workstation

3JK87UT

Active

HP Z240 Tower Workstation

3WD77UT

Active

HP Z240 Tower Workstation (ENERGY STAR)

L9K67UA

Active

HP Z240 Tower Workstation (ENERGY STAR)

Y5B17UT

Active

HP Z440 Workstation

1HX14UA

Detailed Specifications

Compatibility

Compatible with HP Z240 Tower, HP Z440, HP Z640, and HP Z840 Workstations.

Minimum dimensions (W x D x H)

11.17 x 24.13 cm (Single-slot)

Minimum dimensions (W x D x H)

4.4 x 9.5 in (Single-slot)

UNSPSC code

43201401

UPC number

(ABA) 190781617150

Warranty

The NVIDIA Quadro P4000 has a one-year limited warranty or the remainder of the warranty of the HP product in which it is installed. Technical support is available seven days a week, 24 hours a day by phone, as well as online support forums. Parts and labor are available on-site within the next business day. Telephone support is available for parts diagnosis and installation. Certain restrictions and exclusions apply.

Weight

19.75 oz

Weight

475 g

What's in the box

Graphic card

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DisplayPort Dongle Adapters

- Adapts a DisplayPort Source device to VGA, DVI or HDMI compatible displays
- Supports DisplayPort 1.2 specification
- Supports up to a 1080p resolution (HDMI model)
- Supports up to a 1920x1200 resolution (DVI & VGA models)
- Lifetime Warranty

Specifications: DisplayPort Dongle Adapters

Electrical Specifications:

Voltage Rating:	30v
Conductor Resistance:	@ 20°C max
Insulation Resistance:	10MΩ/km
Time Delay:	5.2ns/m (max)
Attenuation:	5.02dB@100-450MHz 7.69dB@1GHz
	12.595dB@2GHz 17.495dB@3GHz
	22.395dB@4GHz 27.295dB@5GHz
	32.195dB@6GHz 37.095dB@7GHz

Physical Specifications:

Operating Temperature:	0°C to 50°C
Storage Temperature:	-25°C to 70°C
Approvals:	CE
Warranty:	3 Years

Conductor (2 Conductor, 5 Pair):

Conductor:	30AWG (7/0.1TC)
Insulation:	FM-PE, ID:0.8±0.05mm
Color:	White/Brown, White/Red, White/Orange, White/Green White/Blue
Drain:	30AWG (7/0.1TC) HD-PE ID:0.56±0.05
Shield:	AL-Mylar Wrap Coverage—100%

Conductor (5 Conductors):

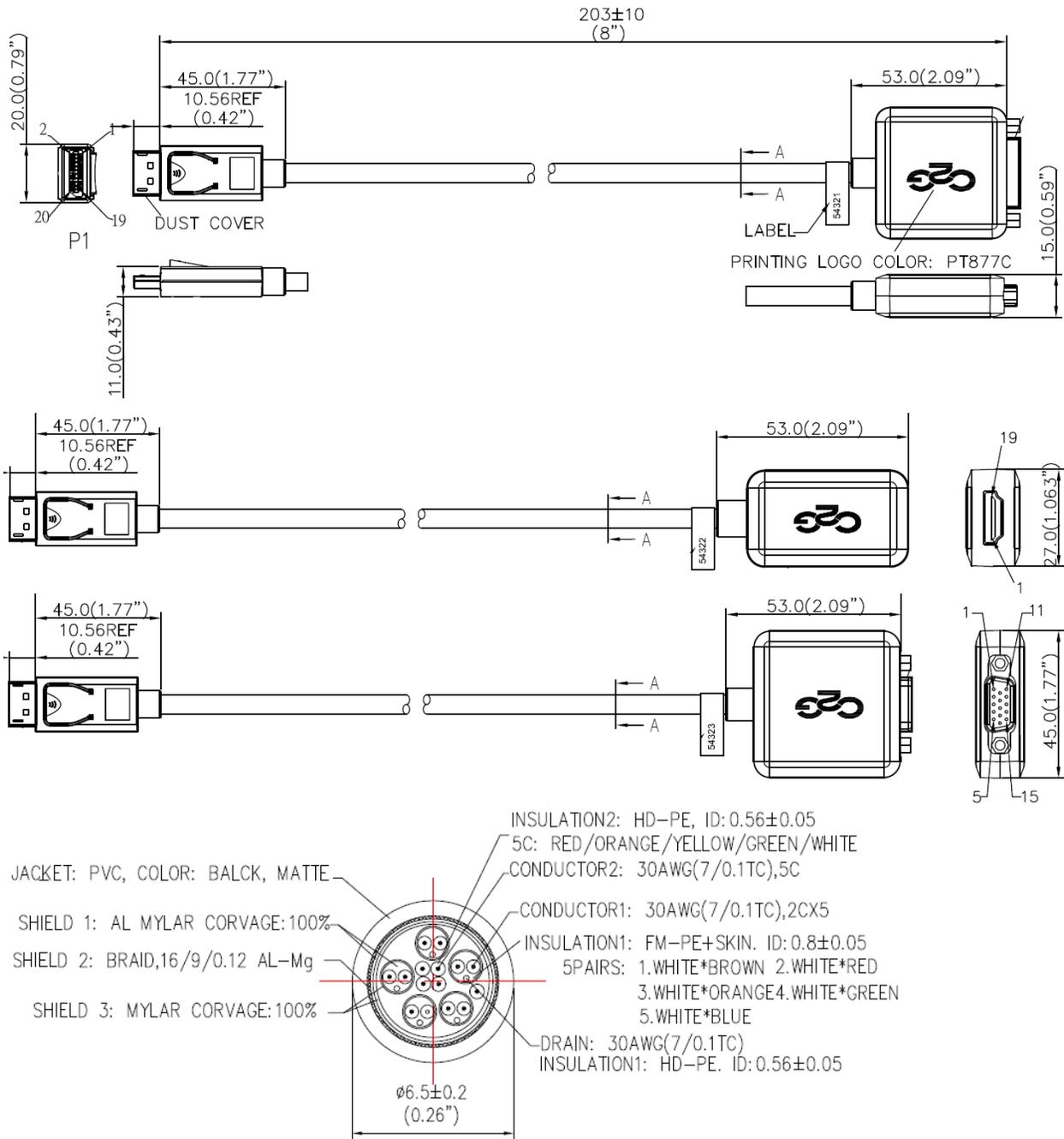
Conductor:	30AWG (7/0.1TC)
Insulation:	HD-PE, ID:0.56±0.05mm
Color:	Red/Orange/Yellow/Green/ White

Overall Cable

Jacket:	PVC
Shield:	AL-Mylar—Coverage 100% Braid—16/9/0.12
Drain:	2:30AWG (7/0.10 BC)
OD:	6.5±0.2



Specifications: DisplayPort Dongle Adapters



Part Number	Description	Weight (lbs)
54321	8in DisplayPort to Single Link DVI-D Female Adapter Converter—Black	0.116
54322	8in DisplayPort Male to HDMI Female Adapter Converter—Black	0.114
54323	8in DisplayPort Male to VGA Female Adapter Converter—Black	0.115



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Product: HP EliteDesk 705 G4 Microtower Business PC (ENERGY STAR)

CAB: Green Electronics Council CAB

Country: United States

Product Type: Desktops

Manufacturer: HP Inc.

URL: <http://www.hp.com>

Rating: 

Registration Date: 6/11/2018

Product Status:  Active

Exceptions: Product is in conformance with EPEAT only when product is configured with an operating system (except FreeDOS and Linux) and high efficiency power supply certified to the ENERGY STAR specification

Manufacturer

Part #:

UPC:

EAN:

Consumer or Institutional: Not Indicated

EPEAT Criteria Detail

Yes R 4.1.1.1 Compliance with provisions of European RoHS Directive upon its effective date

Yes O 4.1.2.1 Elimination of intentionally added cadmium

Yes O 4.1.5.1 Elimination of intentionally added hexavalent chromium

Yes R 4.1.6.1 Elimination of intentionally added SCCP flame retardants and plasticizers in certain applications

Yes O 4.1.6.2 Large plastic parts free of certain flame retardants classified under European Council Directive 67/548/EEC

Yes O 4.1.7.1 Batteries free of lead, cadmium and mercury

Yes O 4.1.8.1 Large plastic parts free of PVC

Yes R 4.2.1.1 Declaration of postconsumer recycled plastic content (%): 19.63

Yes O 4.2.1.2 Minimum content of postconsumer recycled plastic

No O 4.2.1.3 Higher content of postconsumer recycled plastic

- Yes R** 4.2.2.1 Declaration of renewable/bio-based plastic materials content (%): 0
- No O** 4.2.2.2 Minimum content of renewable/bio-based plastic material
- Yes R** 4.2.3.1 Declaration of product weight (lbs): 14.23 Pounds
- Yes R** 4.3.1.1 Identification of materials with special handling needs
- Yes R** 4.3.1.2 Elimination of paints or coatings that are not compatible with recycling or reuse
- Yes R** 4.3.1.3 Easy disassembly of external enclosure
- Yes R** 4.3.1.4 Marking of plastic components
- Yes R** 4.3.1.5 Identification and removal of components containing hazardous materials
- Yes O** 4.3.1.6 Reduced number of plastic material types
- Yes O** 4.3.1.7 Molded/glued in metal eliminated or removable
- Yes R** 4.3.1.8 Minimum 65 percent reusable/recyclable
- Yes O** 4.3.1.9 Minimum 90 percent reusable/recyclable
- Yes O** 4.3.2.1 Manual separation of plastics
- Yes O** 4.3.2.2 Marking of plastics
- Yes R** 4.4.1.1 Availability of additional three year warranty or service agreement
- Yes R** 4.4.2.1 Upgradeable with common tools
- Yes O** 4.4.2.2 Modular design
- Yes O** 4.4.3.1 Availability of replacement parts
- Yes R** 4.5.1.1 ENERGY STAR®: 7.0-Computers;-
- Yes O** 4.5.1.2 Early adoption of new ENERGY STAR® specification: 7.0-Computers
- No O** 4.5.2.1 Renewable energy accessory available
- No O** 4.5.2.2 Renewable energy accessory standard
- Yes R** 4.8.1.1 Reduction/elimination of intentionally added toxics in packaging
- Yes R** 4.8.2.1 Separable packing materials
- Yes O** 4.8.2.2 Packaging 90% recyclable and plastics labeled
- Yes R** 4.8.3.1 Declaration of recycled content in packaging Corrugated containers <300 psi=35-35;Other plastic packaging=0-0;Plastic film, wraps and bags=0-0;
- Yes O** 4.8.3.2 Minimum postconsumer content guidelines
- Yes O** 4.8.4.1 Provision of take-back program for packaging
- No O** 4.8.5.1 Documentation of reusable packaging
- Yes R** 4.6.1.1 Provision of product take-back service
- Yes O** 4.6.1.2 Auditing of recycling vendors
- Yes R** 4.6.2.1 Provision of rechargeable battery take-back service: RBRC Licensee
- Yes R** 4.7.1.1 Demonstration of corporate environmental policy consistent with ISO 14001
- Yes R** 4.7.2.1 Self-certified environmental management system for design and manufacturing organizations
- Yes O** 4.7.2.2 Third-party certified environmental management system for design and manufacturing organizations
- Yes R** 4.7.3.1 Corporate report consistent with Performance Track or GRI
- Yes O** 4.7.3.2 Corporate report based on GRI

EPEAT Criteria Summary

Criteria Category Summary	Optional Points
4.1 Reduction/elimination of environmentally sensitive materials	5/5
4.2 Materials selection	1/3
4.3 Design for end of life	5/5
4.4 Product longevity/life cycle extension	2/2
4.5 Energy conservation	1/2
4.6 End of life management	1/1
4.7 Corporate performance	2/2
4.8 Packaging	3/4

This Product is also registered in:

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- [China](#)
- [France](#)
- [Germany](#)
- [India](#)
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Product: HP ProBook 650 G4 Notebook PC (ENERGY STAR)

CAB: Green Electronics Council CAB

Country: United States

Product Type: Notebooks

Manufacturer: HP Inc.

URL: <http://www.hp.com>

Rating: 

Registration Date: 4/9/2018

Monitor

Type:

Monitor Size:

Product Status:  Active

Exceptions: Product is in conformance with EPEAT only when product is configured with an operating system (except FreeDOS and Linux) and high efficiency power supply certified to the ENERGY STAR specification.

Manufacturer

Part #:

UPC:

EAN:

Consumer or Institutional: Not Indicated

EPEAT Criteria Detail

Yes R 4.1.1.1 Compliance with provisions of European RoHS Directive upon its effective date

Yes O 4.1.2.1 Elimination of intentionally added cadmium

Yes R 4.1.3.1 Reporting on amount of mercury used in light sources (mg) 1,0,

Yes O 4.1.3.2 Low threshold for amount of mercury used in light sources

Yes O 4.1.3.3 Elimination of intentionally added mercury used in light sources

Yes O 4.1.4.1 Elimination of intentionally added lead in certain applications

Yes O 4.1.5.1 Elimination of intentionally added hexavalent chromium

Yes R 4.1.6.1 Elimination of intentionally added SCCP flame retardants and plasticizers in certain applications

- Yes 4.1.6.2 Large plastic parts free of certain flame retardants classified under European Council Directive 67/548/EEC
- Yes 4.1.7.1 Batteries free of lead, cadmium and mercury
- Yes 4.1.8.1 Large plastic parts free of PVC
- Yes 4.2.1.1 Declaration of postconsumer recycled plastic content (%): 4.4
- No 4.2.1.2 Minimum content of postconsumer recycled plastic
- No 4.2.1.3 Higher content of postconsumer recycled plastic
- Yes 4.2.2.1 Declaration of renewable/bio-based plastic materials content (%): 0
- No 4.2.2.2 Minimum content of renewable/bio-based plastic material
- Yes 4.2.3.1 Declaration of product weight (lbs): 6.36 Pounds
- Yes 4.3.1.1 Identification of materials with special handling needs
- Yes 4.3.1.2 Elimination of paints or coatings that are not compatible with recycling or reuse
- Yes 4.3.1.3 Easy disassembly of external enclosure
- Yes 4.3.1.4 Marking of plastic components
- Yes 4.3.1.5 Identification and removal of components containing hazardous materials
- Yes 4.3.1.6 Reduced number of plastic material types
- Yes 4.3.1.7 Molded/glued in metal eliminated or removable
- Yes 4.3.1.8 Minimum 65 percent reusable/recyclable
- Yes 4.3.1.9 Minimum 90 percent reusable/recyclable
- Yes 4.3.2.1 Manual separation of plastics
- Yes 4.3.2.2 Marking of plastics
- Yes 4.4.1.1 Availability of additional three year warranty or service agreement
- Yes 4.4.2.1 Upgradeable with common tools
- Yes 4.4.2.2 Modular design
- Yes 4.4.3.1 Availability of replacement parts
- Yes 4.5.1.1 ENERGY STAR[®]: 6.1-Computers;2318914
- No 4.5.1.2 Early adoption of new ENERGY STAR[®] specification:
- Yes 4.5.2.1 Renewable energy accessory available
- No 4.5.2.2 Renewable energy accessory standard
- Yes 4.8.1.1 Reduction/elimination of intentionally added toxics in packaging
- Yes 4.8.2.1 Separable packing materials
- Yes 4.8.2.2 Packaging 90% recyclable and plastics labeled
- Yes 4.8.3.1 Declaration of recycled content in packaging Corrugated containers <300 psi=70-70;Rigid plastic packaging=50-50;Plastic film, wraps and bags=50-50;Other plastic packaging=50-50;
- Yes 4.8.3.2 Minimum postconsumer content guidelines
- Yes 4.8.4.1 Provision of take-back program for packaging
- No 4.8.5.1 Documentation of reusable packaging
- Yes 4.6.1.1 Provision of product take-back service
- Yes 4.6.1.2 Auditing of recycling vendors
- Yes 4.6.2.1 Provision of rechargeable battery take-back service: RBRC Licensee
- Yes 4.7.1.1 Demonstration of corporate environmental policy consistent with ISO 14001
- Yes 4.7.2.1 Self-certified environmental management system for design and manufacturing organizations
- Yes 4.7.2.2 Third-party certified environmental management system for design and manufacturing organizations
- Yes 4.7.3.1 Corporate report consistent with Performance Track or GRI
- Yes 4.7.3.2 Corporate report based on GRI

EPEAT Criteria Summary

Criteria Category Summary	Optional Points
4.1 Reduction/elimination of environmentally sensitive materials	8/8
4.2 Materials selection	0/3
4.3 Design for end of life	5/5

4.4 Product longevity/life cycle extension	2/2
4.5 Energy conservation	1/2
4.6 End of life management	1/1
4.7 Corporate performance	2/2
4.8 Packaging	3/4
Total Optional Points:	22/27

This Product is also registered in:

- [Australia](#)
- [Belgium](#)
- [Brazil](#)
- [Canada](#)
- [China](#)
- [France](#)
- [Germany](#)
- [India](#)
- [Mexico](#)
- [New Zealand](#)
- [Poland](#)
- [Portugal](#)
- [Spain](#)
- [Sweden](#)
- [United Kingdom](#)

Attachment 6 – Addendum Acknowledgement Form

HP's completed copy of the latest State of West Virginia Addendum Acknowledgement Form is provided on the following pages.





Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

State of West Virginia
 Request for Quotation
 21 – Info Technology

Proc Folder: 481611

Doc Description: ADDENDUM_4: (IP19) Statewide Contract: Computer Equip. & Acc

Proc Type: Statewide MA (Open End)

Date Issued	Solicitation Closes	Solicitation No	Version
2018-09-21	2018-09-28 13:30:00	CRFQ 0212 SWC1900000001	5

BID RECEIVING LOCATION

BID CLERK
 DEPARTMENT OF ADMINISTRATION
 PURCHASING DIVISION
 2019 WASHINGTON ST E
 CHARLESTON WV 25305
 US

VENDOR

Vendor Name, Address and Telephone Number:

HP Inc.
 1501 Page Mill Road
 Palo Alto, CA 94304-1126
 Corporate Office: (650) 857-1501
 CRFQ Contact: Kristen Reed (859) 338-9286

FOR INFORMATION CONTACT THE BUYER

Mark A Atkins
 (304) 558-2307
 mark.a.atkins@wv.gov

Nicole A. Hadley
 Signature X Nicole Hadley, Contract Administrator FEIN # 94-1081436

DATE 09/24/2018

All offers subject to all terms and conditions contained in this solicitation

ADDITIONAL INFORMATION:

ADDENDUM_4: Is issued for the following:

1. To move the bid opening date from 09/26/2018 to 09/28/2018 at 1:30pm EDT.
2. To publish revised specifications (Specifications Revised 9-21-2018).

No other changes made.

The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Office of Technology (WVOT) to establish an open-end Statewide Contract for the purchase of Computers and Peripherals per the attached documents.

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Standard PC	4000.00000	EA	Please refer to HP's pricing in Exhibit_A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Comm Code	Manufacturer	Specification	Model #
43210000	HP Inc.	Please refer to HP's pricing in Exhibit_A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Extended Description :

3.1.2 Standard PC

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	Power PC	1000.00000	EA	Please refer to HP's pricing in Exhibit_A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Comm Code	Manufacturer	Specification	Model #
43210000	HP Inc.	Please refer to HP's pricing in Exhibit_A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Extended Description :

3.1.3 Power PC

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
3	Fixed Workstation	500.00000	EA	Please refer to HP's pricing in Exhibit_A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Comm Code	Manufacturer	Specification	Model #
43210000	HP Inc.	Please refer to HP's pricing in Exhibit_A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Extended Description :
3.1.4 Fixed Workstation

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
4	Standard Laptop	2000.00000	EA	Please refer to HP's pricing in Exhibit_A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Comm Code	Manufacturer	Specification	Model #
43210000	HP Inc.	Please refer to HP's pricing in Exhibit_A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Extended Description :
3.1.5 Standard Laptop

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
5	Power Laptop	1000.00000	EA	Please refer to HP's pricing in Exhibit_A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
8	24" Monitor	500.00000	EA	Please refer to HP's pricing in Exhibit_A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Comm Code	Manufacturer	Specification	Model #
43210000	HP Inc.	Please refer to HP's pricing in Exhibit_A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Extended Description :
3.1.8.1.2 24" Monitor

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
9	27" Monitor	500.00000	EA	Please refer to HP's pricing in Exhibit_A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Comm Code	Manufacturer	Specification	Model #
43210000	HP Inc.	Please refer to HP's pricing in Exhibit_A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Extended Description :
3.1.8.1.3 27" Monitor

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
10	Docking Station for Standard Laptop	100.00000	EA	Please refer to HP's pricing in Exhibit_A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
13	Optional: External DVD/RW Drive	100.00000	EA	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Comm Code	Manufacturer	Specification	Model #
43210000	HP Inc.	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Extended Description :

3.1.8.5 Optional External DVD/RW Drive

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
14	Accidental Damage Coverage	100.00000	EA	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Comm Code	Manufacturer	Specification	Model #
43210000	HP Inc.	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

Extended Description :

3.1.8.6 Accidental Damage Coverage

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
15	512GB SSD 2.5"	100.00000	EA	Please refer to HP's pricing in Exhibit _A Pricing Page - Revised 9-10-2018 (for Addendum 1)	

SOLICITATION NUMBER: CRFQ 0212 SWC1900000001
Addendum Number: 4

The purpose of this addendum is to modify the solicitation identified as CRFQ 0212 SWC1900000001 (“Solicitation”) to reflect the change(s) identified and described below.

Applicable Addendum Category:

- Modify bid opening date and time
- Modify specifications of product or service being sought Specifications 3.1.7.2 and 3.1.7.7 have been modified.
- Attachment of vendor questions and responses
- Attachment of pre-bid sign-in sheet
- Correction of error
- Attach Revised Specifications

Description of Modification to Solicitation:

- 1. To move the bid opening date from 09/26/2018 to 09/28/2018 at 1:30pm EDT.**
- 2. To publish revised specifications (Specifications Revised 9-21-2018).**

No other changes made.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

CRFQ 0212 SWC1900000001
REQUEST FOR QUOTATION
STATEWIDE CONTRACT – IP19
COMPUTERS AND PERIPHERALS
(Revised 9/21/2018)

SPECIFICATIONS

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Office of Technology (WVOT) to establish an open-end statewide contract for the purchase of computers and peripherals.

The purpose of this RFQ is to seek bids from interested original equipment manufacturers (OEM) capable of providing desktops, laptops, netbooks, tablet PCs (without integrated cellular service), monitors, and other peripheral equipment for those products.

The successful bidder must provide full support capability, as requested, including, but not limited to, configuration, support and maintenance.

The State's intent is to contract with a single vendor enabling the State to standardize its desktop and mobile equipment base for the life of the contract.

2. **DEFINITIONS:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in Section 2 of the General Terms and Conditions.

2.1 **"Agency"** is any entity seeking good/services under this Contract.

2.2 **"ARO"** means after receipt of order.

2.3 **"Business class machines"** means computers that offer more features for professional work, such as fingerprint readers, remote desktop control software, and encryption tools. The professional operating system version that comes on business PCs is also more suited for workers than the home version.

2.4 **"Contract"** is the binding agreement that is entered into between the State and the Vendor to provide the items requested in the solicitation

2.5 **"Contract Item"** or **"Contract Items"** means the list of items identified in Section 3.1 below and on the Pricing Pages.

2.6 **"FOB"** stands for Free on Board which indicates that the Vendor is responsible for delivery and shipping costs.

CRFQ 0212 SWC1900000001
REQUEST FOR QUOTATION
STATEWIDE CONTRACT – IP19
COMPUTERS AND PERIPHERALS
(Revised 9/21/2018)

- 2.7 **“Mandatory Requirements”** The terms “must”, “will”, “shall”, “minimum”, “maximum”, or “is/are required” identify a mandatory item or factor. Decisions regarding compliance with any mandatory requirements shall be at the sole discretion of the State. Failure on the part of the Vendor to meet any of the mandatory specifications shall result in the disqualification of the bid.
- 2.8 **“Manufacturer”** is the company who produces the equipment.
- 2.9 **“PCs”** are desktops, laptops, netbooks, and tablets.
- 2.10 **“Pricing Pages”** means the schedule of prices, estimated order quantity, and totals contained in wvOASIS or attached hereto as Exhibit A, and used to evaluate the solicitation responses.
- 2.11 **“Refurbished reused or recycled”** means old or used computer equipment that has been restored to like-new working condition and/or appearance or computer devices that have been sent back to the factory to fix a flaw.
- 2.12 **“Solicitation”** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.
- 2.13 **“TPM”** means Trusted Platform Module
- 2.14 **“Absolute DDS”** means Absolute Data and Device Security with Bios Enabled data and asset protection tool integrated deep within a computer, helps detect and enforce compliance and accountability for at-risk data on devices, and assists in recovery efforts.
- 2.15 **“HDD”** means Hard Disk Drive
- 2.16 **“SSD”** means Solid State Drive
- 2.17 **“OEM”** means Original Equipment Manufacturer
- 2.18 **“Vendor”** means any entity submitting a bid in response to this solicitation, the entity that has been selected as the lowest responsible vendor, or the entity that has been awarded the Contract as context requires.
- 2.19 **“OS”** means Operating System
- 2.20 **“MB”** means Megabyte

CRFQ 0212 SWC1900000001
REQUEST FOR QUOTATION
STATEWIDE CONTRACT – IP19
COMPUTERS AND PERIPHERALS
(Revised 9/21/2018)

- 2.21 “GB” means Gigabyte
- 2.22 “DVD/RW” means a disc drive that can read and record DVDs
- 2.23 “USB” means Universal Serial Bus
- 2.24 “PCI-E” means Peripheral Component Interconnect Express
- 2.25 “HD” means High Definition
- 2.26 “HDMI” means High Definition Multimedia Interface
- 2.27 “DVI” means Digital Visual Interface
- 2.28 “VGA” means Video Graphics Array
- 2.29 “LAN” means Local Area Network
- 2.30 “TB” means Terabyte
- 2.31 “SATA” means Serial AT Attachment
- 2.32 “FIPS-201” means Federal Information Processing Standard Publication 201

3. GENERAL REQUIREMENTS:

3.1 Contract Items and Mandatory Requirements: Vendor shall provide Agency with the Contract Items listed below on an open-end and continuing basis. Contract Items must meet or exceed the mandatory requirements as shown below.

3.1.1 All platforms in this solicitation must be offered with the same operating system.

3.1.2 Standard PC:

3.1.2.1 Operating System: Windows 10 Professional or equal business class operating system with graphical user interface capable of running applications in both 64 and 32-bit architecture.

CRFQ 0212 SWC1900000001
REQUEST FOR QUOTATION
STATEWIDE CONTRACT – IP19
COMPUTERS AND PERIPHERALS
(Revised 9/21/2018)

- 3.1.2.2 Processor: Latest generation process technology, minimum Intel Core i5 or equal with minimum 4 cores and 6MB cache
- 3.1.2.3 RAM: Minimum 8GB Single DIMM, expandable up to 16GB
- 3.1.2.4 Hard Drive: Minimum 500GB HDD
- 3.1.2.5 Keyboard: USB or Wireless
- 3.1.2.6 Mouse: USB or Wireless, 2-button with scroll
- 3.1.2.7 Optical Drive: Internal DVD/RW
- 3.1.2.8 USB Ports: Minimum 4 USB ports; at least 2 USB v3.0 or C
- 3.1.2.9 Expansion Slots: Minimum 2 slots available PCI-E
- 3.1.2.10 Display/Graphics: Integrated HD Graphics with Dual Monitor Support. HDMI or Display port may be substituted as long as adapters are included to support DVI and VGA.
- 3.1.2.11 Network Interface: Integrated Gigabit Ethernet (10/100/1000) Card, Wake on Lan
- 3.1.2.12 TPM Version 2.0
- 3.1.2.13 Warranty: Four year onsite: minimum onsite/next day, to cover a minimum of hardware, keyboards, monitors or other issues related to internal components. Parts and labor for repairs included at no additional charge.
- 3.1.2.14 Absolute DDS or equal - Complete 5 years. Five years begins at activation of license and lasts for five (5) calendar years from activation date.

CRFQ 0212 SWC1900000001
REQUEST FOR QUOTATION
STATEWIDE CONTRACT – IP19
COMPUTERS AND PERIPHERALS
(Revised 9/21/2018)

3.1.2.15 Energy Consumption: Unit must be ENERGY Star Certified

3.1.3 **POWER PC:**

3.1.3.1 Operating System: Windows 10 Professional or equal business class operating system with graphical user interface capable of running applications in both 64 and 32-bit architecture.

3.1.3.2 Processor: Latest generation processor technology, minimum Intel Core i7 Processor or equal, 4 cores and minimum 8MB cache.

3.1.3.3 RAM: Minimum 16GB, with free slots, expandable up to 32GB

3.1.3.4 Hard Drive: Minimum 256GB HDD

3.1.3.5 Keyboard: USB or Wireless

3.1.3.6 Mouse: USB or Wireless, 2-button with scroll

3.1.3.7 Optical Drive: Internal DVD/RW

3.1.3.8 USB Ports: Minimum 4 USB ports; at least 2 USB v3.0 or C

3.1.3.9 Expansion Slots: Minimum 2 slots available PCI-E

3.1.3.10 Display/Graphics: Integrated HD Graphics with Dual Monitor Support. HDMI or Display port may be substituted as long as adapters are included to support DVI and VGA.

3.1.3.11 Network Interface: Integrated Gigabit Ethernet (10/100/1000) Card, Wake on Lan

3.1.3.12 TPM Version 2.0

CRFQ 0212 SWC1900000001
REQUEST FOR QUOTATION
STATEWIDE CONTRACT – IP19
COMPUTERS AND PERIPHERALS
(Revised 9/21/2018)

3.1.3.13 Warranty: Four year onsite: minimum onsite/next day, to cover a minimum of hardware, keyboards, monitors or other issues related to internal components. Parts and labor for repairs included at no additional cost.

3.1.3.14 Absolute DDS or equal - Complete 5 years. Five years begins at activation of license and lasts for five (5) calendar years from activation date.

3.1.3.15 Energy Consumption: Unit must be ENERGY Star Certified

3.1.4 **FIXED WORKSTATION:**

3.1.4.1 Chassis: Full size tower

3.1.4.2 Operating System: Windows 10 Professional or equal business class operating system with graphical user interface capable of running applications in both 64 and 32-bit architecture.

3.1.4.3 Processor: Latest generation processor technology, minimum Intel Xeon or equal with minimum 8 cores and 13MB cache.

3.1.4.4 RAM: Minimum 32GB, with free slots, expandable up to 128GB

3.1.4.5 Hard Drive: Minimum 256GB SSD Primary Drive minimum and 1TB SATA HDD Secondary

3.1.4.6 Keyboard: USB or Wireless

3.1.4.7 Mouse: USB or Wireless, 2-button with scroll

3.1.4.8 Power Supply: Minimum of 600w or greater

3.1.4.9 Optical Drive: Internal DVD/RW

3.1.4.10 USB Ports: Minimum 4 USB ports; at least 2 USB v3.0 or C

CRFQ 0212 SWC1900000001
REQUEST FOR QUOTATION
STATEWIDE CONTRACT – IP19
COMPUTERS AND PERIPHERALS
(Revised 9/21/2018)

3.1.4.11 Expansion Slots: 4 slots available PCI-E

3.1.4.12 Video: Installed 2GB (non-shared memory), discreet, DVI-D and/or Display Port Dual Link Monitor capable, support for DirectX 11, with minimum color depth 24bit.

3.1.4.13 Network Interface: Integrated Gigabit Ethernet (10/100/1000) Card, Wake on Lan

3.1.4.14 TPM Version 2.0

3.1.4.15 Warranty: Four year onsite: minimum onsite/next day, to cover a minimum of hardware, keyboards, monitors or other issues related to internal components. Parts and labor for repairs included at no additional cost.

3.1.4.16 Data and Device Security: Absolute DDS or equal – Complete 5 years. Five years begins at activation of license and lasts for five (5) calendar years from activation date.

3.1.4.17 Energy Consumption: Unit must be ENERGY Star Certified

3.1.5 STANDARD LAPTOP:

3.1.5.1 Operating System: Windows 10 Professional or equal business class operating system with graphical user interface capable of running applications in both 64 and 32-bit architecture.

3.1.5.2 Processor: Latest generation processor technology, minimum Intel Core i5 Processor or equal with a minimum of 4 cores and 6MB cache.

3.1.5.3 RAM: Minimum 8GB Single DIMM, expandable up to 16GB

3.1.5.4 Hard Drive: Minimum 500GB HDD, upgrade option to SSD

CRFQ 0212 SWC190000001
REQUEST FOR QUOTATION
STATEWIDE CONTRACT – IP19
COMPUTERS AND PERIPHERALS
(Revised 9/21/2018)

- 3.1.5.5** Camera: Integrated Webcam
- 3.1.5.6** USB Ports: Minimum 3 USB ports; with a minimum of 1 USB v3.0 and 1 USBC (charging)
- 3.1.5.7** Display/Graphics: Integrated HD Graphics, 15" display or greater
- 3.1.5.8** Network Interface: Integrated Gigabit Ethernet (10/100/1000) Card, Wake on Lan
- 3.1.5.9** Wireless Adapter: Supports 802.11ac (2x2) Wi-Fi and Bluetooth 4.2
- 3.1.5.10** Smart Card Reader: Integrated FIPS-201 compliant Smart Card Reader
- 3.1.5.11** Power: A/C Adapter
- 3.1.5.12** TPM Version 2.0
- 3.1.5.13** Warranty: Four year onsite: minimum onsite/next day, to cover a minimum of hardware, keyboards, monitors or other issues related to internal components. Parts and labor for repairs included at no additional cost.
- 3.1.5.14** Data and Device Security: Absolute DDS or equal – Complete 5 years. Five years begins at activation of license and lasts for five (5) calendar years from activation date.
- 3.1.5.15** Energy Consumption: Unit must be ENERGY Star Certified
- 3.1.5.16** Optional Optical Drive: Internal DVD/RW

CRFQ 0212 SWC1900000001
REQUEST FOR QUOTATION
STATEWIDE CONTRACT – IP19
COMPUTERS AND PERIPHERALS
(Revised 9/21/2018)

3.1.6 POWER LAPTOP:

- 3.1.6.1** Operating System: Windows 10 Professional or equal business class operating system with graphical user interface capable of running applications in both 64 and 32-bit architecture.
- 3.1.6.2** Processor: Latest generation processor technology, minimum Intel Core i7 Processor or equal with a minimum of 4 cores and 8MB cache.
- 3.1.6.3** RAM: Minimum 16GB Single DIMM, expandable up to 32GB
- 3.1.6.4** Hard Drive: Minimum 256GB SSD
- 3.1.6.5** Camera: Integrated Webcam
- 3.1.6.6** USB Ports: Minimum 3 USB ports; minimum of 1 USB v3.0 and 1 USBC (charging)
- 3.1.6.7** Display/Graphics: Integrated HD Graphics, 17” display or greater
- 3.1.6.8** Network Interface: Integrated Gigabit Ethernet (10/100/1000) Card, Wake on Lan
- 3.1.6.9** Wireless Adapter: Supports 802.11ac (2x2) Wi-Fi and Bluetooth 4.2
- 3.1.6.10** Smart Card Reader: Integrated FIPS-201 compliant Smart Card Reader
- 3.1.6.11** Power: A/C Adapter
- 3.1.6.12** TPM Version 2.0
- 3.1.6.13** Warranty: Four year onsite: minimum onsite/next day, to cover a minimum of hardware, keyboards, monitors or other issues related to internal components. Parts and labor for repairs included at no additional cost.

CRFQ 0212 SWC1900000001
REQUEST FOR QUOTATION
STATEWIDE CONTRACT – IP19
COMPUTERS AND PERIPHERALS
(Revised 9/21/2018)

3.1.6.14 Data and Device Security: Absolute DDS or equal – Complete 5 years. Five years begins at activation of license and lasts for five (5) calendar years from activation date.

3.1.6.15 Energy Consumption: Unit must be ENERGY Star Certified

3.1.6.16 Optional Optical Drive: Internal DVD/RW

3.1.7 **TABLET PC:**

3.1.7.1 Operating System: Windows 10 Professional or equal business class operating system with graphical user interface capable of running applications in both 64 and 32-bit architecture.

3.1.7.2 Processor: Latest generation processor technology, minimum Intel Core i7 Processor or equal with minimum 2 cores and minimum 4MB cache.

3.1.7.3 RAM: Minimum 8GB

3.1.7.4 Hard Drive: Minimum 256GB SSD, upgrade option to 512B SSD

3.1.7.5 Keyboard: Backlit

3.1.7.6 Mouse: Glide or Trackpad

3.1.7.7 Camera: Integrated Webcam

3.1.7.8 USB Ports: Minimum 1 USB v3.0 and 1 USBC (charging)

3.1.7.9 Display/Graphics: Integrated HD Graphics, 13” display or greater

3.1.7.10 Wireless Adapter: Supports 802.11ac (2x2) Wi-Fi and Bluetooth 4.2

CRFQ 0212 SWC1900000001
REQUEST FOR QUOTATION
STATEWIDE CONTRACT – IP19
COMPUTERS AND PERIPHERALS
(Revised 9/21/2018)

3.1.7.11 Smart Card Reader: Integrated FIPS-201 compliant Smart Card Reader

3.1.7.12 Power: A/C Adapter

3.1.7.13 TPM Version 2.0

3.1.7.14 Warranty: Four year onsite: minimum onsite/next day, to cover a minimum of hardware, keyboards, monitors or other issues related to internal components. Parts and labor for repairs included.

3.1.7.15 Data and Device Security: Absolute DDS or equal – Complete 5 years. Five years begins at activation of license and lasts for five (5) calendar years from activation date.

3.1.7.16 Energy Consumption: Unit must be ENERGY Star Certified

3.1.8 **OPTIONAL COMPONENTS AND SERVICES**

3.1.8.1 **MONITORS:**

3.1.8.1.1 Flat Panel Monitor 20" or greater, Aspect Ratio of 16:9 or greater, Minimum Resolution 1600x900

3.1.8.1.2 Flat Panel Monitor 24", Aspect Ratio of 16:9 or greater, Minimum Resolution 1920x1080

3.1.8.1.3 Flat Panel Monitor 27", Aspect Ratio of 16:9 or greater, Minimum Resolution 1920x1080

3.1.8.2 Docking Station for Standard Laptop: Optional OEM USB-C Powered Docking Station compatible with Standard Laptop. Must support dual monitors, HDMI or Display port may be substituted as long as adapters are included to support DVI and VGA. Docking stations from 3rd party manufacturers are not acceptable.

CRFQ 0212 SWC1900000001
REQUEST FOR QUOTATION
STATEWIDE CONTRACT – IP19
COMPUTERS AND PERIPHERALS
(Revised 9/21/2018)

3.1.8.3 Docking Station for Power Laptop: Optional OEM USB-C Powered Docking Station compatible with Power Laptop. Must support dual monitors, HDMI or Display port may be substituted as long as adapters are included to support DVI and VGA. Docking stations from 3rd party manufacturers are not acceptable.

3.1.8.4 Docking Station for Tablet: Optional OEM USB-C Powered Docking Station compatible with Tablet. Must support dual monitors, HDMI or Display port may be substituted as long as adapters are included to support DVI and VGA. Docking stations from 3rd party manufacturers are not acceptable.

3.1.8.5 Optional DVD/RW Drive: If DVD/RW drive is not an internal component to the Standard Laptop and Power Laptop, the Vendor should provide pricing for an optional external DVD/RW drive.

3.1.8.6 Optional Accidental Damage Coverage for all mobile equipment to cover everything the standard four-year warranty does not cover.

3.1.8.7 Optional 512GB SSD 2.5”

3.1.9 MISCELLANEOUS MANDATORY REQUIREMENTS

3.1.9.1 Technical Requirements:

3.1.9.1.1 All computers provided under this contract must be business-class machines, as specified in Section 2 of these specifications

3.1.9.1.2 All computing equipment offered in the Vendor’s response must be OEM products. Vendors must provide detailed specification sheets for all proposed products upon request. It is preferred that specification sheets be submitted with the bid. Vendors who fail to provide the required specification sheets within the allotted timeframe will be disqualified.

3.1.9.1.3 All new equipment must be delivered to the State with **new** components only, not refurbished, used or recycled components. If providing replacement parts, the WVOT, while preferring new parts, will accept “like new” refurbished parts with the same warranty offered for new parts. Shipping cost for returns must be paid by vendor.

CRFQ 0212 SWC190000001
REQUEST FOR QUOTATION
STATEWIDE CONTRACT – IP19
COMPUTERS AND PERIPHERALS
(Revised 9/21/2018)

- 3.1.9.1.4** All hardware provided under this contract must be a minimum of Energy Star 5.0 compliant.
- 3.1.9.1.5** All Desktops and Monitors must meet minimum Electronic Product Environmental Assessment Tool (EPEAT) Silver certification. The vendor must provide documentation proving level of certification with specification sheets upon request. The Vendor must ensure equipment meets the latest EPEAT registration requirements before it is delivered. It is preferred certification documentation be provided with the bid.
- 3.1.9.1.6** Vendor must stock spare parts for ALL proposed equipment, for the duration of the warranty period.
- 3.1.9.1.7** Each model provided under this contract must have consistent hardware configurations, meaning that all machines of the same make or model must have the same components.
- 3.1.9.1.8** Vendor must inform the State in writing, sixty (60) days prior to replacement, of any platform revisions it intends to make. Written notification may be made by e-mail and sent to OTPCContract@wv.gov.
- 3.1.9.1.9** Vendor must provide at no additional charge the State with two (2) free of charge units of all initial and subsequent replacement PC, laptop, and tablet contract models. The State will use this time to test the equipment and images. It is the State's right to accept or reject any proposed model replacements.
- 3.1.9.1.10** Vendor must guarantee that any replacement units meet, or exceed, the current model's specifications. Vendor must guarantee any proposed replacement units are of equivalent pricing (equal to, or less than) to initially bid units.
- 3.1.9.1.11** Current models must be available for purchase by the State, until the proposed replacement units have been approved by the State and a Change Order has been fully executed.

CRFQ 0212 SWC190000001
REQUEST FOR QUOTATION
STATEWIDE CONTRACT – IP19
COMPUTERS AND PERIPHERALS
(Revised 9/21/2018)

3.1.9.1.12 If the computing equipment experiences “repeated failure” in the first year of ownership, the Vendor must replace the computing unit with a new unit of the same make and model or a model equal to or better than what is currently provided under the contract.

3.1.9.1.12.1 The State defines “repeated failure” to be, at a minimum, the following: three instances of parts failure with no more than two instances on the same part within one year after the machine is installed.

3.1.9.1.13 The State must have the ability to remove the hard drive before returning any equipment to the Vendor.

3.1.9.2 Shipping, Ordering, Billing:

3.1.9.2.1 Vendor must provide Next Business Day (NBD) delivery of replacement parts for all equipment.

3.1.9.2.2 Vendor must provide immediate replacement equipment for any new machines which do not function properly out of the box, at no cost to the Agency, within five (5) business days

3.1.9.3 Support and Contacts:

3.1.9.3.1 Vendor must identify by name and location the proposed primary account representative and immediate supervisor who shall be responsible for the performance of the contract. Such notification may be included in the bid response but must be provided within no less than five (5) business days from the date of contract award. Vendor must immediately notify the Office of Technology and the WV Purchasing Division if/when these contacts change.

3.1.9.3.2 The successful vendor must provide a customer support telephone number Monday-Friday 8:00 AM to 5:00 PM EST to resolve billing and shipping issues. Billing issues shall be resolved within five (5) business days.

3.1.9.3.3 Vendor must provide direct, via telephone, second level technical access to support all equipment offered.

CRFQ 0212 SWC190000001
REQUEST FOR QUOTATION
STATEWIDE CONTRACT – IP19
COMPUTERS AND PERIPHERALS
(Revised 9/21/2018)

- 3.1.9.3.4 Vendor must provide a parts and support website for access by State technical staff.
- 3.1.9.3.5 Vendor must provide the State of West Virginia Office of Technology and the Purchasing Division with a detailed, quarterly report in excel format indicating the State Agency, model, serial number(s), cost, and delivery location for all purchases made under the contract. The report shall also include a listing of all service calls associated with this agreement, including the location and nature of service required. These reports must be sent to OTPurchasingRequest@wv.gov
- 3.1.9.3.6 The Vendor must agree to establish Quarterly Reviews and/or mutually agreed upon calls to discuss contract issues, questions, concerns, and performance.

4. CONTRACT AWARD:

4.1 Contract Award: The Contract is intended to provide Agencies with a purchase price on all Contract Items. The Contract shall be awarded to the Vendor that provides the Contract Items meeting the required specifications for the lowest overall total cost as shown in the Pricing Pages and wvOASIS.

Renewal options for years 2, 3, and 4 will be initiated by the Agency, agreed to by the Vendor and processed by the West Virginia Purchasing Division as Change Orders for subsequent years.

4.2 Pricing Pages: Vendor should complete the Pricing Pages by filling in the price per requested unit. Vendor should complete the Pricing Pages in their entirety as failure to do so may result in Vendor's bids being disqualified.

4.2.1 The Pricing Pages contain a list of the Contract Items and estimated purchase volume. The estimated purchase volume for each item represents the approximate annual volume of anticipated purchases only. No future use of the Contract or any individual item is guaranteed or implied.

CRFQ 0212 SWC1900000001
REQUEST FOR QUOTATION
STATEWIDE CONTRACT – IP19
COMPUTERS AND PERIPHERALS
(Revised 9/21/2018)

- 4.2.2** Vendor should electronically enter the information into the Pricing Pages through wvOASIS, if available, or as an electronic document. In most cases, the Vendor can request an electronic copy of the Pricing Pages for bid purposes if unable to access the one provided in wvOasis by sending an email request to the following address: Mark.A.Atkins@wv.gov
- 4.2.3** Vendor should provide with their bid a copy of any Software Terms and Conditions or licenses that the State of West Virginia or the Agency may have to agree or accept as a part of this solicitation. Vendor will be required to provide before a Purchase Order is issued.
- 4.2.4** Vendor should include with their bid a copy of any and all Maintenance Terms and Conditions or Licenses that the State of West Virginia or the Agency may be required to agree or accept as a part of this solicitation. Vendor will be required to provide before a Purchase Order is issued.

5 ORDERING AND PAYMENT:

5.1 Ordering: Vendor shall accept orders through wvOASIS, regular mail, facsimile, e-mail, or any other written form of communication. Vendor may, but is not required to, accept on-line orders through a secure internet ordering portal/website. If Vendor has the ability to accept on-line orders, it should include in its response a brief description of how Agencies may utilize the on-line ordering system. Vendor shall ensure that its on-line ordering system is properly secured prior to processing Agency orders on-line.

5.2 Payment: Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia.

6 DELIVERY AND RETURN:

6.1 Delivery Time: Vendor shall deliver standard orders within sixteen (16) working days after orders are received. Vendor shall deliver emergency orders within five (5) working days after orders are received. Vendor shall ship all orders in accordance with the above schedule and shall not hold orders until a minimum delivery quantity is met.

CRFQ 0212 SWC190000001
REQUEST FOR QUOTATION
STATEWIDE CONTRACT – IP19
COMPUTERS AND PERIPHERALS
(Revised 9/21/2018)

6.2 Late Delivery: The Agency placing the order under this Contract must be notified in writing if orders will be delayed for any reason. Any delay in delivery that could cause harm to an Agency will be grounds for cancellation of the delayed order, and/or obtaining the items ordered from a third party.

6.2.1 Any Agency seeking to obtain items from a third party under this provision must first obtain approval of the Purchasing Division.

6.3 Delivery Payment/Risk of Loss: Standard order delivery shall be FOB destination to the Agency's location. Vendor shall include the cost of standard order delivery charges in its bid pricing/discount and is not permitted to charge the Agency separately for such delivery. The Agency will pay delivery charges on all emergency orders provided that Vendor invoices those delivery costs as a separate charge with the original freight bill attached to the invoice.

6.4 Return of Unacceptable Items: If the Agency deems the Contract Items to be unacceptable, the Contract Items shall be returned to Vendor at Vendor's expense and with no restocking charge. Vendor shall either make arrangements for the return within five (5) days of being notified that items are unacceptable, or permit the Agency to arrange for the return and reimburse Agency for delivery expenses. If the original packaging cannot be utilized for the return, Vendor will supply the Agency with appropriate return packaging upon request. All returns of unacceptable items shall be FOB the Agency's location. The returned product shall either be replaced, or the Agency shall receive a full credit or refund for the purchase price, at the Agency's discretion.**Return Due to Agency Error:** Items ordered in error by the Agency will be returned for credit within thirty (30) days of receipt, FOB Vendor's location. Vendor shall not charge a restocking fee if returned products are in a resalable condition. Items shall be deemed to be in a resalable condition if they are unused and in the original packaging. Any restocking fee for items not in a resalable condition shall be the lower of the Vendor's customary restocking fee or 5% of the total invoiced value of the returned items.

7 VENDOR DEFAULT:

7.1 The following shall be considered a vendor default under this Contract.

7.1.1 Failure to provide Contract Items in accordance with the requirements contained herein.

7.1.2 Failure to comply with other specifications and requirements contained herein.

CRFQ 0212 SWC1900000001
REQUEST FOR QUOTATION
STATEWIDE CONTRACT – IP19
COMPUTERS AND PERIPHERALS
(Revised 9/21/2018)

7.1.3 Failure to comply with any laws, rules, and ordinances applicable to the Contract Services provided under this Contract.

7.1.4 Failure to remedy deficient performance upon request.

7.2 The following remedies shall be available to Agency upon default.

7.2.1 Immediate cancellation of the Contract.

7.2.2 Immediate cancellation of one or more release orders issued under this Contract.

7.2.3 Any other remedies available in law or equity.

8 MISCELLANEOUS:

8.1 No Substitutions: Vendor shall supply only Contract Items submitted in response to the Solicitation unless a contract modification is approved in accordance with the provisions contained in this Contract.

8.2 Vendor Supply: Vendor must carry sufficient inventory of the Contract Items being offered to fulfill its obligations under this Contract. By signing its bid, Vendor certifies that it can supply the Contract Items contained in its bid response.

8.3 Reports: Vendor shall provide quarterly reports and annual summaries to the Agency showing the Agency's items purchased, quantities of items purchased, and total dollar value of the items purchased. Vendor shall also provide reports, upon request, showing the items purchased during the term of this Contract, the quantity purchased for each of those items, and the total value of purchases for each of those items. Failure to supply such reports may be grounds for cancellation of this Contract.

8.4 Contract Manager: During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract manager and his or her contact information below.

Contract Manager: Kristen Reed
Telephone Number: 859 338 9286
Fax Number: _____
Email Address: kristen.reed@hp.com

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: CRFQ 0212 SWC1900000001

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:

(Check the box next to each addendum received)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6 |
| <input checked="" type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7 |
| <input checked="" type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8 |
| <input checked="" type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9 |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

HP Inc.

Nicole S. Hadley
Nicole Hadley, Contract Administrator

Authorized Signature

09/24/2018

Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

Attachment 7 – HP Certificates of Insurance (2)

Per Section 8, Insurance of the General Terms and Conditions, please refer to HP's Certificate of Liability Insurance and HP's Professional/Malpractice/Errors and Omission Certificate of Insurance on the following pages.



IL 10 (12/06) OLD REPUBLIC INSURANCE COMPANY

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

NOTICE OF CANCELLATION TO CERTIFICATE HOLDERS

This endorsement modifies the notice of cancellation of insurance provided hereunder by adding the following:

- A.** In the event this policy is cancelled for any permissible reason, other than for nonpayment of premium, we shall endeavor to provide advance written notice of cancellation to certificate holders set out in the schedule on file with the Company, after notifying the first Named Insured of such cancellation. Notice of cancellation to certificate holders may be made by any commercially reasonable means, including mail, electronic mail, facsimile transmission or courier service.
- B.** This advance written notification of a cancellation of coverage is intended as a courtesy only. Our failure to provide such advance written notification will not extend the policy cancellation date, nor negate cancellation of the policy.

All other terms and conditions of this policy remain unchanged.

IL 10 (12/06) OLD REPUBLIC INSURANCE COMPANY

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

NOTICE OF CANCELLATION TO CERTIFICATE HOLDERS

This endorsement modifies the notice of cancellation of insurance provided hereunder by adding the following:

- A.** In the event this policy is cancelled for any permissible reason, other than for nonpayment of premium, we shall endeavor to provide advance written notice of cancellation to certificate holders set out in the schedule on file with the Company, after notifying the first Named Insured of such cancellation. Notice of cancellation to certificate holders may be made by any commercially reasonable means, including mail, electronic mail, facsimile transmission or courier service.
- B.** This advance written notification of a cancellation of coverage is intended as a courtesy only. Our failure to provide such advance written notification will not extend the policy cancellation date, nor negate cancellation of the policy.

All other terms and conditions of this policy remain unchanged.

IL 10 (12/06) OLD REPUBLIC INSURANCE COMPANY

WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY INSURANCE POLICY

NOTICE OF CANCELTION TO CERTIFICATE HOLDERS

This endorsement modifies the notice of cancelation of insurance provided hereunder by adding the following:

- A.** In the event this policy is canceled for any permissible reason, other than for nonpayment of premium, we shall endeavor to provide advance written notice of cancelation to certificate holders set out in the schedule on file with the Company, after notifying the Insured first named in item 1 of the Information Page of such cancelation. Notice of cancelation to certificate holders may be made by any commercially reasonable means, including mail, electronic mail, facsimile transmission or courier service.
- B.** This advance written notification of a cancelation of coverage is intended as a courtesy only. Our failure to provide such advance written notification will not extend the policy cancelation date, nor negate cancelation of the policy.

All other terms and conditions of this policy remain unchanged.



CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
09/20/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Aon Risk Services Southwest, Inc. Houston TX Office 5555 San Felipe Suite 1500 Houston TX 77056 USA	CONTACT NAME: PHONE (A/C. No. Ext): (866) 283-7122 FAX (A/C. No.): (800) 363-0105		
	E-MAIL ADDRESS:		
INSURED HP Inc. 1501 Page Mill Road Palo Alto CA 94304 USA	INSURER(S) AFFORDING COVERAGE		NAIC #
	INSURER A: Illinois Union Insurance Company		27960
	INSURER B:		
	INSURER C:		
	INSURER D:		
	INSURER E:		
INSURER F:			

Holder Identifier :

COVERAGES **CERTIFICATE NUMBER:** 570073135792 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. **Limits shown are as requested**

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:						EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION						EACH OCCURRENCE AGGREGATE
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						<input type="checkbox"/> Y / <input type="checkbox"/> N N/A PER STATUTE OTH-ER
A	E&O-Technology			EONG25558856003 SIR applies per policy terms & conditions	12/01/2017	11/01/2018	Aggregate Limit \$1,000,000 Each Claim \$1,000,000

Certificate No : 570073135792

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER State of West Virginia 2019 Washington Street East P.O. Box 50130 Charleston WV 25305-0130 USA	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE <i>Aon Risk Services Southwest, Inc.</i>
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Attachment 8 – HP Customer Terms

As required by Specifications subsections 4.2.3 and 4.2.4, HP's Customer Terms are included on the following pages.





HP CUSTOMER TERMS

1. **Parties.** These terms represent the agreement (“**Agreement**”) that governs the purchase of products and services from HP Inc. (“**HP**”) by the State of West Virginia (“**Customer**,” “**State**,” or “**West Virginia**”).
2. **Orders.** “**Order**” means the accepted order including any supporting material which the parties identify as incorporated either by attachment or reference (“**Supporting Material**”). Supporting Material may include (as examples) product lists, hardware or software specifications, standard or negotiated service descriptions, data sheets and their supplements, and statements of work (“**SOW**”), published warranties and service level agreements, and may be available to Customer in hard copy or by accessing a designated HP website.
3. **Scope and Order Placement.** These terms may be used by Customer either for a single Order or as a framework for multiple Orders. In addition, these terms may be used on a global basis by the parties’ “**Affiliates**,” meaning any entity controlled by, controlling, or under common control with a party. The parties can confirm their agreement to these terms either by signature where indicated at the end or by referencing these terms on Orders. Affiliates participate under these terms by placing orders which specify product or service delivery in the same country as the HP Affiliate accepting the Order, referencing these terms, and specifying any additional terms or amendments to reflect local law or business practices.
4. **Order Arrangements.** Customer may place orders with HP through our website, customer-specific portal, or by letter, fax or e-mail. Where appropriate, orders must specify a delivery date. If Customer extends the delivery date of an existing Order beyond ninety (90) days, then it will be considered a new order. Customer may cancel a hardware Order at no charge up to five (5) business days prior to shipment date.
5. **Prices and Taxes.** Prices will be as quoted in writing by HP or, in the absence of a written quote, as set out on our website, customer-specific portal, or HP published list price at the time an order is submitted to HP. Prices are exclusive of taxes, duties, and fees (including installation, shipping, and handling) unless otherwise quoted. If a withholding tax is required by law, please contact the HP order representative to discuss appropriate procedures.
6. **Invoices and Payment.** State agrees to pay all invoiced amounts within sixty (60) days of HP’s invoice date. HP may suspend or cancel performance of open Orders or services for any state agency that has failed to make payments when due.
7. **Products.**
 - (a) **Title.** Risk of loss or damage and title for hardware products will pass upon delivery to Customer or its designee. Where permitted by law, HP retains a security interest in products sold until full payment is received.
 - (b) **Delivery.** HP will use all commercially reasonable efforts to deliver products in a timely manner. HP may elect to deliver software and related product/license information by electronic transmission or via download.
 - (c) **Installation.** If HP is providing installation with the product purchase, HP’s site guidelines (available upon request) will describe Customer requirements. HP will conduct its standard installation and test procedures to confirm completion.
 - (d) **Product Performance.** All HP-branded hardware products are covered by HP’s limited warranty statements that are provided with the products or otherwise made available. Hardware warranties begin on the date of delivery or if applicable, upon completion of HP installation, or (where Customer delays HP installation) at the latest 30 days from the date of delivery. Non-HP branded products receive warranty coverage as provided by the relevant third party supplier.
 - (e) **Product Warranty Claims.** When we receive a valid warranty claim for an HP hardware or software product, HP will either repair the relevant defect or replace the product. If HP is unable to complete the repair or replace the product within a reasonable time, Customer will be entitled to a full refund upon the prompt return of the product to HP (if hardware) or upon written confirmation by Customer that the relevant software product has been destroyed or permanently disabled. HP will pay for shipment of repaired or replaced products to Customer and Customer will be responsible for return shipment of the product to HP.
8. **Software.**
 - (a) **License Grant.** HP grants Customer a non-exclusive license to use the version or release of the HP-branded software listed in the Order. Permitted use is for internal purposes only (and not for further commercialization), and is subject to any specific software licensing information that is in the software product or its Supporting Material. For non-HP branded software, the third party’s license terms will govern its use.
 - (b) **Updates.** Customer may order new software versions, releases or maintenance updates (“**Updates**”), if available, separately or through an HP software support agreement. Additional licenses or fees may apply for



these Updates or for the use of the software in an upgraded environment. Updates are subject to the license terms in effect at the time that HP makes them available to Customer.

- (c) License Restrictions. HP may monitor use/license restrictions remotely and, if HP makes a license management program available, Customer agrees to install and use it within a reasonable period of time. Customer may make a copy or adaptation of a licensed software product only for archival purposes or when it is an essential step in the authorized use of the software. Customer may use this archival copy without paying an additional license only when the primary system is inoperable. Customer may not copy licensed software onto or otherwise use or make it available on any public external distributed network. Licenses that allow use over Customer's intranet require restricted access by authorized users only. Customer will also not modify, reverse engineer, disassemble, decrypt, decompile or make derivative works of any software licensed to Customer under this Agreement unless permitted by statute, in which case Customer will provide HP with reasonably detailed information about those activities.
- (d) License Term and Termination. Unless otherwise specified, any license granted is perpetual, provided however that if Customer fails to comply with the terms of this Agreement, HP may terminate the license upon written notice. Immediately upon termination, or in the case of a limited-term license, upon expiration, Customer will either destroy all copies of the software or return them to HP, except that Customer may retain one copy for archival purposes only.
- (e) License Transfer. Customer may not sublicense, assign, transfer, rent or lease the software or software license except as permitted by HP. HP-branded software licenses are generally transferable subject to HP's prior written authorization and payment to HP of any applicable fees. Upon such transfer, Customer's rights shall terminate and Customer shall transfer all copies of the software to the transferee. Transferee must agree in writing to be bound by the applicable software license terms. Customer may transfer firmware only upon transfer of associated hardware.
- (f) License Compliance. HP may audit Customer compliance with the software license terms. Upon reasonable notice, HP may conduct an audit during normal business hours (with the auditor's costs being at HP's expense). If an audit reveals underpayments then Customer will pay to HP such underpayments. If underpayments discovered exceed five (5) percent of the contract price, Customer will reimburse HP for the auditor costs.
- (g) Software Performance. HP warrants that its branded software products will conform materially to their specifications and be free of malware at the time of delivery. HP warranties for software products will begin on the date of delivery and unless otherwise specified in Supporting Material, will last for ninety (90) days. HP does not warrant that the operation of software products will be uninterrupted or error-free or that software products will operate in hardware and software combinations other than as authorized by HP in Supporting Material.
- (h) US Federal Government Use. If software is licensed to Customer for use in the performance of a US Government prime contract or subcontract, Customer agrees that consistent with FAR 12.211 and 12.212, commercial computer software, documentation and technical data for commercial items are licensed under HP's standard commercial license.

9. **Services.**

- (a) Professional Services. HP will deliver any ordered IT consulting, training or other services as described in the applicable Supporting Material.
- (b) Professional Services Acceptance. The acceptance process (if any) will be described in the applicable Supporting Material, will apply only to the deliverables specified, and shall not apply to other products or services to be provided by HP.
- (c) Services Performance. Services are performed using generally recognized commercial practices and standards. Customer agrees to provide prompt notice of any such service concerns and HP will re-perform any service that fails to meet this standard.
- (d) Services with Deliverables. If Supporting Material for services defines specific deliverables, HP warrants those deliverables will conform materially to their written specifications for 30 days following delivery. If Customer notifies HP of such a non-conformity during the 30 day period, HP will promptly remedy the impacted deliverables or refund to Customer the fees paid for those deliverables and Customer will return those deliverables to HP.
- (e) Dependencies. HP's ability to deliver services will depend on Customer's reasonable and timely cooperation and the accuracy and completeness of any information from Customer needed to deliver the services.
- (f) Expenses. HP will charge separately for reasonable out-of-pocket expenses, such as travel expenses incurred in providing professional services.

10. **Support Services.** HP's support services will be described in the applicable Supporting Material, which will cover the description of HP's offering, eligibility requirements, service limitations and Customer responsibilities, as well as the Customer systems supported. Support services are further described in Exhibit A – Supplemental Data Sheet.

11. **Eligibility.** HP's service, support and warranty commitments do not cover claims resulting from:
(a) improper use, site preparation, or site or environmental conditions or other non-compliance with applicable



Supporting Material;

- (b) Modifications or improper system maintenance or calibration not performed by HP or authorized by HP;
- (c) failure or functional limitations of any non-HP software or product impacting systems receiving HP support or service;
- (d) malware (e.g. virus, worm, etc.) not introduced by HP; or
- (e) abuse, negligence, accident, fire or water damage, electrical disturbances, transportation by Customer, or other causes beyond HP's control.

12. **Remedies.** This Agreement states all remedies for warranty claims. To the extent permitted by law, HP disclaims all other warranties.
13. **Intellectual Property Rights.** No transfer of ownership of any intellectual property will occur under this Agreement. Customer grants HP a non-exclusive, worldwide, royalty-free right and license to any intellectual property that is necessary for HP and its designees to perform the ordered services. If deliverables are created by HP specifically for Customer and identified as such in Supporting Material, HP hereby grants Customer a worldwide, non-exclusive, fully paid, royalty-free license to reproduce and use copies of the deliverables internally.
14. **Intellectual Property Rights Infringement.** HP will defend and/or settle any claims against Customer that allege that an HP-branded product or service as supplied under this Agreement infringes the intellectual property rights of a third party. HP will rely on Customer's prompt notification of the claim and cooperation with our defense. HP may modify the product or service so as to be non-infringing and materially equivalent, or we may procure a license. If these options are not available, we will refund to Customer the amount paid for the affected product in the first year or the depreciated value thereafter or, for support services, the balance of any pre-paid amount or, for professional services, the amount paid. HP is not responsible for claims resulting from any unauthorized use of the products or services. This section shall also apply to deliverables identified as such in the relevant Support Material except that HP is not responsible for claims resulting from deliverables content or design provided by Customer.
15. **Personal Information.** Each party shall comply with their respective obligations under applicable data protection legislation. HP does not intend to have access to personally identifiable information ("PII") of Customer in providing services. To the extent HP has access to Customer PII stored on a system or device of Customer, such access will likely be incidental and Customer will remain the data controller of Customer PII at all times. HP will use any PII to which it has access strictly for purposes of delivering the services ordered.
16. **Limitation of Liability.** HP's liability to Customer under this Agreement is limited to the greater of \$1,000,000 or the amount payable by Customer to HP for the relevant Order (per occurrence). Neither Customer nor HP will be liable for lost revenues or profits, downtime costs, loss or damage to data or indirect, special or consequential costs or damages. This provision does not limit either party's liability for: unauthorized use of intellectual property, death or bodily injury caused by their negligence; acts of fraud; willful repudiation of the Agreement; nor any liability which may not be excluded or limited by applicable law.
17. **Termination.** Either party may terminate this Agreement on written notice if the other fails to meet any material obligation and fails to remedy the breach within a reasonable period after being notified in writing of the details. If either party becomes insolvent, unable to pay debts when due, files for or is subject to bankruptcy or receivership or asset assignment, the other party may terminate this Agreement and cancel any unfulfilled obligations.
18. **General.**
 - (a) Entire Agreement. This Agreement represents our entire understanding with respect to its subject matter and supersedes any previous communication or agreements that may exist.
 - (b) Amendments. Modifications to the Agreement will be made only through a written amendment signed by both parties.
 - (c) Governing Law. The Agreement will be governed by the laws of the country of HP or the HP Affiliate accepting the Order and the courts of that locale will have jurisdiction, however, HP or its Affiliate may, bring suit for payment in the country where the Customer Affiliate that placed the Order is located. Customer and HP agree that the United Nations Convention on Contracts for the International Sale of Goods will not apply. Claims arising or raised in the United States will be governed by the laws of the state of West Virginia, excluding rules as to choice and conflict of law.
 - (d) Disputes. If Customer is dissatisfied with any products or services purchased under these terms and disagrees with HP's proposed resolution, we both agree to promptly escalate the issue to a Vice President (or equivalent executive) in our respective organizations for an amicable resolution without prejudice to the right to later seek a legal remedy.



- (e) Force Majeure. Neither party will be liable for performance delays nor for non-performance due to causes beyond its reasonable control, except for payment obligations.
- (f) Global Trade Compliance. Products and services provided under these terms are for Customer's internal use and not for further commercialization. If Customer exports, imports or otherwise transfers products and/or deliverables provided under these terms, Customer will be responsible for complying with applicable laws and regulations and for obtaining any required export or import authorizations. HP may suspend its performance under this Agreement to the extent required by laws applicable to either party.
- (g) Antitrust. The State and HP recognize that, in actual economic practice, overcharges resulting from antitrust violations are usually borne by the State. Therefore, HP assigns to the State all state and federal antitrust claims and causes of actions that HP has or acquires relating to the good and services purchased under this Agreement, to the extent the assignment is necessary for the State to overcome the West Virginia bar on indirect purchaser actions under federal antitrust laws.
- (h) Survival. Any terms in the Agreement which by their nature extend beyond termination or expiration of the Agreement will remain in effect until fulfilled and will apply to both parties' respective successors and permitted assigns.

19. Conflict. In the event of a conflict between the terms of this HP Agreement and the terms of West Virginia's Agreement Addendum (WV-96) that apply to Solicitation CRFQ 0212 SWC1900000001, to which this HP Agreement is attached, the terms of West Virginia's Agreement Addendum, WV-96 (revised 5/2016) shall control.

The parties confirm their agreement to these terms either by referencing them in the relevant Order or by executing below:

HP INC.

Customer: STATE OF WEST VIRGINIA

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____



EXHIBIT A – SUPPLEMENTAL DATA SHEET

This Supplemental Data Sheet provides additional general requirements and limitations that apply to HP's support offerings, which are set forth in detail in offering-specific datasheets, with the exception of those support offerings delivered by HP Software.

1. SERVICE ELIGIBILITY

- (a) Hardware Support-General Eligibility. Hardware products must be in good operating condition, as reasonably determined by HP, to be eligible for placement under support. You (“**you**” or “**your**”) must also maintain eligible products at the latest HP-specified configuration and revision levels.
- (b) Return to Support. If you allow support to lapse, HP may charge you additional fees to resume support or require you to perform certain hardware or software upgrades.
- (c) Use of Proprietary Service Tools. HP may require you to use certain hardware and/or software system and network diagnostic and maintenance programs (“**Proprietary Service Tools**”), as well as certain diagnostic tools that may be included as part of the your system. Proprietary Service Tools are and remain the sole and exclusive property of HP, and are provided “as is.” Proprietary Service Tools may reside on your systems or sites. You may only use the Proprietary Service Tools during the applicable Support coverage period and only as allowed by HP and you may not sell, transfer, assign, pledge, or in any way encumber or convey the Proprietary Service Tools. Upon termination of Support, you will return the Proprietary Service Tools or allow HP to remove these Proprietary Service Tools. You will also be required to:
 - (i) Allow HP to keep the Proprietary Service Tools resident on your systems or sites, and assist HP in running them;
 - (ii) Install Proprietary Service Tools, including installation of any required updates and patches;
 - (iii) Use the electronic data transfer capability to inform HP of events identified by the software;
 - (iv) If required, purchase HP-specified remote connection hardware for systems with remote diagnosis service; and
 - (v) Provide remote connectivity through an approved communications line.

2. SUPPORT LIMITATIONS

- (a) Local Availability of Support. Some offerings, features, and coverage (and related products) may not be available in all countries or areas. In addition, delivery of support outside of the applicable HP coverage areas may be subject to travel charges, longer response times, reduced restoration or repair commitments, and reduced coverage hours.
- (b) Version Support. Unless otherwise agreed by HP in writing, and for those offerings not delivered by HP Software, HP only provides support for the current version and the immediately preceding version of HP branded software, and provided that HP branded software is used with hardware or software included in HP-specified configurations at the specified version level. “**Versio**n” means a release of software that contains new features, enhancements, and/or maintenance updates, or for certain software, a collection of revisions packaged into a single entity and, as such, made available to our customers.
- (c) Relocation and Impact on Support. Relocation of any products under support is your responsibility and is subject to local availability and fee changes. Reasonable advance notice to HP may be required to begin support after relocation. For products, any relocation is also subject to the license terms for such products.
- (d) Multi-vendor Support. HP provides support for certain non-HP branded products. The relevant data sheet will specify availability and coverage levels and the support will be provided accordingly, whether or not the non-HP branded products are under warranty. HP may discontinue support of non-HP branded products if the manufacturer or licensor ceases to provide support for them.
- (e) Modifications. You will allow HP, at HP's request, and at no additional charge, to modify products to improve operation, supportability, and reliability, or to meet legal requirements.

3. CUSTOMER RESPONSIBILITIES

- (a) Site and Product Access. You will provide HP access to the products covered under support; and if applicable, adequate working space and facilities within a reasonable distance of the products; access to and use of information, customer resources, and facilities as reasonably determined necessary by HP to service the products; and other access requirements described in the relevant data sheet. If you fail to provide such access, resulting in HP's inability to provide support, HP shall be entitled to charge you for the support call at HP's published service rates. You are responsible for removing any products ineligible for support, as advised by HP, to allow HP to perform support. If delivery of support is made more difficult because of ineligible products, HP will charge you for the extra work at HP's published service rates.
- (b) Licenses. You may purchase available product support for HP branded products only if you can provide evidence that you have rightfully acquired an appropriate HP license for the products, and you may not alter or modify the products unless authorized by HP at any time.



- (c) Software Support Documentation and Right to Copy. You may only copy documentation updates if you purchased the right to copy them for the associated products. Copies must include appropriate HP trademark and copyright notices.
- (d) Loaner Units. HP maintains title and you shall have risk of loss or damage for loaner units if provided at HP's discretion as part of hardware support or warranty services and such units will be returned to HP without lien or encumbrance at the end of the loaner period.
- (e) Hardware Support. Compatible Cables and Connectors. You will connect hardware products covered under support with cables and connectors (including fiber optics if applicable) that are compatible with the system, according to the manufacturer's operating manual.
- (f) Data Backup. To reconstruct your lost or altered files, data, or programs, you must maintain a separate backup system or procedure that is not dependent on the products under support.
- (g) Temporary Workarounds. You will implement temporary procedures or workarounds provided by HP while HP works on a permanent solution.
- (h) Hazardous Environment. You will notify HP if you use products in an environment that poses a potential health or safety hazard to HP employees or subcontractors. HP may require you to maintain such products under HP supervision and may postpone service until you remedy such hazards.
- (i) Authorized Representative. You will have a representative present when HP provides support at your site.
- (j) Product List. You will create, maintain and update a list of all products under support including: the location of the products, serial numbers, the HP-designated system identifiers, and coverage levels.
- (k) Solution Center Designated Callers. You will identify a reasonable number of callers, as determined by HP and Customer ("**Designated Callers**"), who may access HP's customer Support call centers ("**Solution Centers**") or online help tools.
- (l) Solution Center Caller Qualifications. Designated Callers must be generally knowledgeable and demonstrate technical aptitude in system administration, system management, and, if applicable, network administration and management and diagnostic testing. HP may review and discuss with you any Designated Caller's experience to determine initial eligibility. If issues arise during a call to the Solution Center that, in HP's reasonable opinion, may be a result of a Designated Caller's lack of general experience and training, you may be required to replace that Designated Caller. All Designated Callers must have the proper system identifier as provided to you when Support is initiated. Solution Centers may provide support in English or local languages, or both.

4. GENERAL PROVISIONS

- (a) Cancellation. You may cancel support orders or delete products from support upon thirty (30) days written notice, unless otherwise agreed in writing. HP may discontinue support for products and specific support services no longer included in HP's support offering upon sixty (60) days written notice, unless otherwise agreed in writing. If you cancel prepaid support, HP will refund you a pro-rata amount for the unused prepaid support subject to any restrictions or early termination fees as may be set forth in writing.
- (b) Pricing. Except for prepaid support or if otherwise agreed in writing, HP may change support prices upon sixty (60) days' written notice.
- (c) Additional Services. Additional services performed by HP at your request, and that are not included in your purchased support, will be chargeable at the applicable published service rates for the country where the service is performed.
- (d) Replacement Parts. Parts provided under hardware support may be whole unit replacements, or be new or functionally equivalent to new in performance and reliability and warranted as new. Replaced parts become the property of HP, unless HP agrees otherwise and you pay any applicable charges.

Attachment 9 – HP Inc. Certificate of Authorization

Per Section 32, Licensing of the General Terms and Conditions, please refer to HP's Certificate of Authorization, issued by the West Virginia Secretary of State, on the following page.



State of West Virginia



Certificate

I, Mac Warner, Secretary of State of the State of West Virginia, hereby certify that

HP INC.

a corporation formed under the laws of Delaware filed an application to be registered as a foreign corporation authorizing it to transact business in West Virginia. The application was found to conform to law and a "Certificate of Authority" was issued by the West Virginia Secretary of State on May 15, 1998.

I further certify that the corporation has not been revoked by the State of West Virginia nor has a Certificate of Withdrawal been issued to the corporation by the West Virginia Secretary of State.

Accordingly, I hereby issue this Certificate of Authorization

CERTIFICATE OF AUTHORIZATION

Validation ID:4WV49_SC52W



*Given under my hand and the
Great Seal of the State of
West Virginia on this day of
September 10, 2018*

Mac Warner

Secretary of State