



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 2

List View

General Information | Contact | Default Values | Discount | Document Information

Procurement Folder: 404016

SO Doc Code: CRFQ

Procurement Type: Central Master Agreement

SO Dept: 0608

Vendor ID: 

SO Doc ID: COR1800000016

Legal Name: Nitro Mechanical Services

Published Date: 3/15/18

Alias/DBA:

Close Date: 3/22/18



Total Bid: \$378,450.00

Close Time: 13:30

Response Date: 

Status: Closed

Response Time:

Solicitation Description:  

Total of Header Attachments: 2

[Apply Default Values to Commodity Lines](#)

[View Procurement Folder](#)



Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

State of West Virginia
Solicitation Response

Proc Folder : 404016

Solicitation Description : ADDENDUM 2 SECURITY CAMERAS, DVRS, NVRS, AND EQUIPMENT

Proc Type : Central Master Agreement

Date issued	Solicitation Closes	Solicitation Response	Version
	2018-03-22 13:30:00	SR 0608 ESR03221800000004280	1

VENDOR

000000114774

Nitro Mechanical Services

Solicitation Number: CRFQ 0608 COR1800000016

Total Bid : \$378,450.00

Response Date: 2018-03-22

Response Time: 11:00:56

Comments:

FOR INFORMATION CONTACT THE BUYER

Crystal Rink
 (304) 558-2402
 crystal.g.rink@wv.gov

Signature on File

FEIN #

DATE

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

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	TruVision 360 Indoor Camera, TVF-3103, or equal	50.00000	EA	\$614.000000	\$30,700.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description : TruVision 360 Indoor Camera, TVF-3103, or equal

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	TruVision 360 Outdoor Camera, TVF-3104, or equal	50.00000	EA	\$614.000000	\$30,700.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description : TruVision 360 Outdoor Camera, TVF-3104, or equal

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	TruVision 360 Outdoor Bullet Cam, TVB-5501 or equal	50.00000	EA	\$377.000000	\$18,850.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description : TruVision 360 Outdoor Bullet Cam, TVB-5501 or equal

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	TruVision Wedge IR Camera, TVF-3102, or equal	50.00000	EA	\$178.000000	\$8,900.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description : TruVision Wedge IR Camera, TVF-3102, or equal

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
5	TruVision 360 Dome Camera, TVF-3101, or equal	50.00000	EA	\$336.000000	\$16,800.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description : TruVision 360 Dome Camera, TVF-3101, or equal

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
6	TruVision Wedge IR Camera, TVW-3101, or equal	50.00000	EA	\$165.000000	\$8,250.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description : TruVision Wedge IR Camera, TVW-3101, or equal

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
7	TruVision Network Video Recorder, TVN-7001-96T, or equal	10.00000	EA	\$9,795.000000	\$97,950.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description : TruVision Network Video Recorder, TVN-7001-96T, or equal

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
8	TruVision NVR-2IP, TVN2132P-32, or equal	50.00000	EA	\$2,815.000000	\$140,750.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description : TruVision NVR-2IP, TVN2132P-32, or equal

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
9	TruVision 360 Degree Dome Round Back Box (mount), or equal	50.00000	EA	\$22.000000	\$1,100.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :	TruVision 360 Degree Dome Round Back Box (mount), or equal
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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
10	TruVision 360 Cup Base (mount), or equal	50.00000	EA	\$22.000000	\$1,100.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :	TruVision 360 Cup Base (mount), or equal
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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
11	TruVision 360 Degree Dome Rnd Angel Back Box (mount) or equa	50.00000	EA	\$22.000000	\$1,100.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :	TruVision 360 Degree Dome Rnd Angel Back Box (mount) or equa
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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
12	TruVision Bullet Camera, TVB-4404, or equal	50.00000	EA	\$85.000000	\$4,250.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :	TruVision Bullet Camera, TVB-4404, or equal
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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
13	TruVision Dome Camera, TVD-4404, or equal	50.00000	EA	\$65.000000	\$3,250.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :	TruVision Dome Camera, TVD-4404, or equal
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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
14	TruVision TVR-4516HD-12 (16 Channel), or equal	10.00000	EA	\$850.000000	\$8,500.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :	TruVision TVR-4516HD-12 (16 Channel), or equal
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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
15	TruVision TVR-4508HD-8T (8 Channel), or equal	10.00000	EA	\$625.000000	\$6,250.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :	TruVision TVR-4508HD-8T (8 Channel), or equal
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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
16	IP Camera License	620.00000	EA	\$0.000000	\$0.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :	IP Camera License
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Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

State of West Virginia
 Request for Quotation
 04 – Audio/Video

Proc Folder: 404016

Doc Description: ADDENDUM 2 SECURITY CAMERAS, DVRS, NVRS, AND EQUIPMENT

Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2018-03-15	2018-03-22 13:30:00	CRFQ 0608 COR1800000016	3

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:

Nitro Electric Company
 4300 1st Avenue
 Nitro, WV 25143
 304-204-1500

FOR INFORMATION CONTACT THE BUYER

Crystal Rink
 (304) 558-2402
 crystal.g.rink@wv.gov

Signature X

FEIN # 20-8844160

DATE March 22, 2018

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

ADDITIONAL INFORMATION:

THE STATE OF WEST VIRGINIA PURCHASING DIVISION FOR THE AGENCY, WEST VIRGINIA DIVISION OF CORRECTIONS, IS SOLICITING BIDS TO ESTABLISH AN OPEN-END CONTRACT FOR SECURITY CAMERAS, DVRS, NVRS, AND EQUIPMENT PER THE ATTACHED DOCUMENTATION.

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	TruVision 360 Indoor Camera, TVF-3103, or equal	50.00000	EA	614.00	30,700.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :

TruVision 360 Indoor Camera, TVF-3103, or equal

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	TruVision 360 Outdoor Camera, TVF-3104, or equal	50.00000	EA	614.00	30,700.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :

TruVision 360 Outdoor Camera, TVF-3104, or equal

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	TruVision 360 Outdoor Bullet Cam, TVB-5501 or equal	50.00000	EA	377.00	18,850.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :

TruVision 360 Outdoor Bullet Cam, TVB-5501 or equal

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	TruVision Wedge IR Camera, TVF-3102, or equal	50.00000	EA	178.00	8,900.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :

TruVision Wedge IR Camera, TVF-3102, or equal

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	TruVision 360 Dome Camera, TVF-3101, or equal	50.00000	EA	336.00	16,800.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :

TruVision 360 Dome Camera, TVF-3101, or equal

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
6	TruVision Wedge IR Camera, TVW-3101, or equal	50.00000	EA	165.00	8,250.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :

TruVision Wedge IR Camera, TVW-3101, or equal

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
7	TruVision Network Video Recorder, TVN-7001-96T, or equal	10.00000	EA	9,795.00	97,950.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :

TruVision Network Video Recorder, TVN-7001-96T, or equal

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	TruVision NVR-2IP, TVN2132P-32, or equal	50.00000	EA	2,815.00	140,750.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :

TruVision NVR-2IP, TVN2132P-32, or equal

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	TruVision 360 Degree Dome Round Back Box (mount), or equal	50.00000	EA	22.00	1,100.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :

TruVision 360 Degree Dome Round Back Box (mount), or equal

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	TruVision 360 Cup Base (mount), or equal	50.00000	EA	22.00	1,100.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :

TruVision 360 Cup Base (mount), or equal

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
11	TruVision 360 Degree Dome Rnd Angel Back Box (mount) or equa	50.00000	EA	22.00	1,100.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :
TruVision 360 Degree Dome Rnd Angel Back Box (mount) or equa

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
12	TruVision Bullet Camera, TVB-4404, or equal	50.00000	EA	85.00	4,250.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :
TruVision Bullet Camera, TVB-4404, or equal

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	TruVision Dome Camera, TVD-4404, or equal	50.00000	EA	65.00	3,250.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :
TruVision Dome Camera, TVD-4404, or equal

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	TruVision TVR-4516HD-12 (16 Channel), or equal	10.00000	EA	850.00	8,500.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :
TruVision TVR-4516HD-12 (16 Channel), or equal

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	TruVision TVR-4508HD-8T (8 Channel), or equal	10.00000	EA	625.00	6,250.00

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :
TruVision TVR-4508HD-8T (8 Channel), or equal

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
16	IP Camera License	620.00000	EA	N/A	N/A

Comm Code	Manufacturer	Specification	Model #
46171610			

Extended Description :
IP Camera License

SCHEDULE OF EVENTS

<u>Line</u>	<u>Event</u>	<u>Event Date</u>
1	QUESTION DEADLINE 10AM EST	2018-02-28

COR1800000016	Document Phase Final	Document Description ADDENDUM 2 SECURITY CAMERAS, DVRS, NVRS, AND EQUIPMENT	Page 9 of 9
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ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

SOLICITATION NUMBER: CRFQ COR1800000016

Addendum Number: 2

The purpose of this addendum is to modify the solicitation identified as (“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
- Attachment of vendor questions and responses
- Attachment of pre-bid sign-in sheet
- Correction of error
- Other

Description of Modification to Solicitation:

1. To extend bid opening date to March 22, 2018 at 1:30 PM EST
2. To provide revised Exhibit A Pricing page. Vendors are to submit Exhibit A Revised 03/15/18 pricing page with bid submissions.

No other changes at this time

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.

ATTACHMENT A

Revised Exhibit A 03/15/2018	Security Cameras and Equipment
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CRFQ COR1800000016

<u>Item</u>	<u>Description</u>	<u>Unit of Measure</u>	<u>Unit Price</u>	<u>Estimated Quantity</u>	<u>Total Cost</u>
3.1.1	TruVision 360 Indoor Camera, TVF-3103, or equal	Each	\$ 614.00	50	\$ 30,700.00
3.1.2	TruVision 360 Outdoor Camera, TVF-3104, or equal	Each	\$ 614.00	50	\$ 30,700.00
3.1.3	TruVision 360 Outdoor Bullet Cam, TVB-5501, or equal	Each	\$ 377.00	50	\$ 18,850.00
3.1.4	TruVision Wedge IR Camera, TVF-3102, or equal	Each	\$ 178.00	50	\$ 8,900.00
3.1.5	TruVision 360 Dome Camera, TVF-3101, or equal	Each	\$ 336.00	50	\$ 16,800.00
3.1.6	TruVision Wedge IR Camera, TVW-3101, or equal	Each	\$ 165.00	50	\$ 8,250.00
3.1.7	TruVision Network Video Recorder, TVN-7001-96T, or equal	Each	\$ 9,795.00	10	\$ 97,950.00
3.1.8	TruVision NVR-2IP, TVN2132P-32, or equal	Each	\$ 2,815.00	50	\$ 140,750.00
3.1.9	TruVision 360 Degree Dome Round Back Box (mount), or equal	Each	\$ 22.00	50	\$ 1,100.00
3.1.10	TruVision 360 Cup Base (mount), or equal	Each	\$ 22.00	50	\$ 1,100.00
3.1.11	TruVision 360 Degree Dome Round Angel Back Box (mount), or equal	Each	\$ 22.00	50	\$ 1,100.00
3.1.12	TruVision Bullet Camera, TVB-4404, or equal	Each	\$ 85.00	50	\$ 4,250.00
3.1.13	TruVision Dome Camera, TVD-4404, or equal	Each	\$ 65.00	50	\$ 3,250.00
3.1.14	TruVision TVR-4516HD-12 (16 Channel), or equal	Each	\$ 850.00	10	\$ 8,500.00
3.1.14	TruVision TVR-4508HD-8T (8 Channel), or equal	Each	\$ 625.00	10	\$ 6,250.00
	IP Camera License	Each	not required	620	\$ 0.00
Total Bid Amount:					\$ 378,450.00

Actual Quantities ordered may be more or less than noted on bid form Exhibit A

Item 3.1.11 is quoted same as Item# 3.1.9

Vendor Information

Name/Title	Chris White / Technology Director (Nitro Electric Company)
Phone	304-204-1520
Fax	304-204-1350
Email	cwhite@nitro-electric.com

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: COR1800000016

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 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 type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8 |
| <input 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 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.

Nitro Electric Company

Company



Authorized Signature

March 22, 2018

Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.
Revised 6/8/2012

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.

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.

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.

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: February 28, 2018 at 10:00 AM EST

Submit Questions to: Crystal Rink
2019 Washington Street, East
Charleston, WV 25305
Fax: (304) 558-4115 (Vendors should not use this fax number for bid submission)
Email: Crystal.G.Rink@wv.gov

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.

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:
BUYER: Crystal Rink
SOLICITATION NO.: CRFQ COR1800000016
BID OPENING DATE: March 15, 2018
BID OPENING TIME: 1:30 PM EST
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 or 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

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: March 15, 2018 at 1:30 PM EST

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

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.

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.

10. ALTERNATES: 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.

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.

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.

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.

14. UNIT PRICE: Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.

15. PREFERENCE: Vendor Preference may only be granted upon written request and only in accordance with the West Virginia Code § 5A-3-37 and the West Virginia Code of State Rules. A Vendor Preference Certificate form has been attached hereto to allow Vendor to apply for the preference. Vendor's failure to submit the Vendor Preference Certificate form with its bid will result in denial of Vendor Preference. Vendor Preference does not apply to construction projects.

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.

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.

18. ELECTRONIC FILE ACCESS RESTRICTIONS: Vendor must ensure that its submission in wvOASIS can be accessed and viewed by the Purchasing Division staff immediately upon bid opening. The Purchasing Division will consider any file that cannot be immediately accessed and 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 to make a file viewable 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.

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.”

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.”

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.

22. INTERESTED PARTY DISCLOSURE: W. Va. Code § 6D-1-2 requires that for contracts with an actual or estimated value of at least \$100,000, the vendor must submit to the Purchasing Division a disclosure of interested parties to the contract, prior to contract award. That disclosure must occur on the form prescribed and approved by the WV Ethics Commission. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. “Interested parties” means: (1) A business entity performing work or service pursuant to, or in furtherance of, the applicable contract, including specifically sub-contractors; (2) the person(s) who have an ownership interest equal to or greater than 25% in the business entity performing work or service pursuant to, or in furtherance of, the applicable contract; and (3) the person or business entity, if any, that served as a compensated broker or intermediary to actively facilitate the applicable contract or negotiated the terms of the applicable contract with the state agency: Provided, That subdivision (2) shall be inapplicable if a business entity is a publicly traded company: Provided, however, That subdivision (3) shall not include persons or business entities performing legal services related to the negotiation or drafting of the applicable contract.

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.

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.
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.

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 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 Agency and then submitted 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 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.

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.

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.

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.

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 a 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.

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. On construction contracts, the performance bond must be 100% of the Contract value.

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 not 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 entitled Licensing, of the General Terms and Conditions, 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.

8. INSURANCE: The apparent successful Vendor shall furnish proof of the insurance identified by a checkmark below prior to Contract award. Subsequent to contract award, and prior to the insurance expiration date, 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 mandated herein, including but not limited to, policy cancelation, policy reduction, or change in insurers. The insurance coverages identified below must be maintained throughout the life of this contract. 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 or more. PLEASE MAKE INSURANCE CERTIFICATE HOLDER TO READ AS:

WV DOC 1409 GREENBRIER ST, STE 300, CHARLESTON, WV 25311

Automobile Liability Insurance in at least an amount of: _____

Professional/Malpractice/Errors and Omission Insurance in at least an amount of: _____

Commercial Crime and Third Party Fidelity Insurance in an amount of: _____

Cyber Liability Insurance in an amount of: _____

Builders Risk Insurance in an amount equal to 100% of the amount of the Contract.

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.

10. [Reserved]

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 _____

Liquidated Damages Contained in the Specifications

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.

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.

14. PAYMENT: 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.

15. PURCHASING CARD ACCEPTANCE: The State of West Virginia currently utilizes a Purchasing Card program, administered under contract by a banking institution, to process payment for goods and services. The Vendor must accept the State of West Virginia's Purchasing Card for payment of all orders under this Contract unless the box below is checked.

Vendor is not required to accept the State of West Virginia's Purchasing Card as payment for all goods and services.

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.

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.

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.

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.

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

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.

22. COMPLIANCE WITH LAWS: 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.

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.

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.

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.

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.

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. Notwithstanding the foregoing, Purchasing Division approval may or may not be required on certain agency delegated or exempt purchases.

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.

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.

30. BANKRUPTCY: In the event the Vendor files for bankruptcy protection, the State of West Virginia may deem this Contract null and void, and terminate this Contract without notice.

31. 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>.

32. 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.

33. 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. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. 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.

34. 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.

35. 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.

36. 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.

37. 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.

38. PURCHASING AFFIDAVIT: In accordance with West Virginia Code § 5-22-1(i), the contracting public entity shall not award a contract for a construction project 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. Accordingly, prior to contract award, 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.

39. 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.

40. 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.

41. 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.

42. 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.

43. 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.

44. 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.

45. INTERESTED PARTY SUPPLEMENTAL DISCLOSURE: W. Va. Code § 6D-1-2 requires that for contracts with an actual or estimated value of at least \$100,000, 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. "Interested parties" means: (1) A business entity performing work or service pursuant to, or in furtherance of, the applicable contract, including specifically sub-contractors; (2) the person(s) who have an ownership interest equal to or greater than 25% in the business entity performing work or service pursuant to, or in furtherance of, the applicable contract; and (3) the person or business entity, if any, that served as a compensated broker or intermediary to actively facilitate the applicable contract or negotiated the terms of the applicable contract with the state agency: Provided, That subdivision (2) shall be inapplicable if a business entity is a publicly traded company: Provided, however, That subdivision (3) shall not include persons or business entities performing legal services related to the negotiation or drafting of the applicable contract. The Agency shall submit a copy of the disclosure to the Ethics Commission within 15 days after receiving the supplemental disclosure of interested parties.

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

Bruce Ward Vice President
(Name, Title)
Bruce Ward, Vice President
4300 1st Avenue, Nitro, WV 25143
(Printed Name and Title)
304-204-1500 / 304-204-1350
(Address)
bward@nitro-electric.com
(Phone Number) / (Fax Number)
bward@nitro-electric.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.

Nitro Electric Company
(Company)

Bruce Ward
(Authorized Signature) (Representative Name, Title)

Bruce Ward, Vice President
(Printed Name and Title of Authorized Representative)

March 15, 2018
(Date)

304-204-1500 / 304-204-1350
(Phone Number) (Fax Number)

**REQUEST FOR QUOTATION
CRFQ COR1800000016
Security Cameras and Equipment**

SPECIFICATIONS

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of West Virginia Division of Corrections to establish an open-end contract for Security Cameras and Equipment.

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 **“Contract Item” or “Contract Items”** means the list of items identified in Section 3.1 below and on the Pricing Pages.

 - 2.2 **“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.

 - 2.3 **“Solicitation”** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.

 - 2.4 **“CMOS”** means complementary-symmetry metal-oxide-semiconductor.

 - 2.5 **“Hz”** means hertz.

 - 2.6 **“MHz”** means megahertz.

 - 2.7 **“IR”** means infrared.

 - 2.8 **“ICR”** means infrared cut filter.

 - 2.9 **“fps”** means frames per second.

 - 2.10 **“m”** means meters.

 - 2.11 **“mm”** means millimeter.

 - 2.12 **“MJPEG”** means motion joint photographic experts group.

 - 2.13 **“kbps”** means kilobits per second.

 - 2.14 **“Mbps”** means megabits per second.

 - 2.15 **“DWDR”** means digital wide dynamic range.

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- 2.16 “NR”** means noise reduction.
- 2.17 “3D-NR”** means three-dimensional noise reduction.
- 2.18 “2D-NR”** means two-dimensional noise reduction.
- 2.19 “VDC”** means volts’ direct current.
- 2.20 “NAS”** means network attached storage.
- 2.21 “PoE”** means power over Ethernet.
- 2.22 “SD”** means Secure Digital.
- 2.23 “SDHC”** means Secure Digital High Capacity.
- 2.24 “FCC”** means Federal Communications Commission.
- 2.25 “CE”** means Conformite Europeenne (French), which means European conformity. CE marking is a self-declaration where a manufacturer proves compliance with EU (European) health, safety and environmental protection legislation and confirms a product’s compliance with relevant requirements.
- 2.26 “UL”** means Underwriters Laboratories.
- 2.27 “WEEE”** means waste electrical and electronic equipment.
- 2.28 “RoHS”** means Restriction of Hazardous Substances.
- 2.29 “REACH”** means Registration, Evaluation, Authorization of Chemicals.
- 2.30 “F”** means Fahrenheit.
- 2.31 “C”** mean Celsius.
- 2.32 “db”** means decibels.
- 2.33 “RTSP”** means Real Time Streaming Protocol.
- 2.34 “SATA”** means Serial Advanced Technology Attachment.

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2.35 “eSATA” means External Serial Advanced Technology Attachment.

2.36 “mA” means milliampere.

2.37 “Ma” means mach number.

2.38 “Ch” means channel.

2.39 “RAID” means redundant array of independent disks.

2.40 “TB” means terabyte

2.41 “HDD” means hard disk drive.

2.42 “LED” means light emitting diode.

2.43 “HD” means high definition.

2.44 “VAC” means volts AC.

2.45 “VDC” means volts DC.

2.46 “PTZ” means pan-tilt-zoom.

2.47 “TVI” means transport video interface.

2.48 “AWC” means automatic white balance control.

2.49 “BLC” means black light compensation.

2.50 “AGC” means automatic gain control.

2.51 “LSC” means line scan camera.

2.52 “GB” means gigabyte.

2.53 “B/W” means black/white.

2.54 “RCA” means RCA connector.

2.55 “af” means autofocus.

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2.56 "ft." means foot.

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 TruVision 360 Indoor Dome Camera TVF-3103, or equal

3.1.1.1 Indoor Dome Camera must have a minimum megapixel of 6.

3.1.1.2 Indoor Dome Camera must have a minimum 1/1.8-inch Progressive Scan CMOS.

3.1.1.3 Indoor Dome Camera lens must show 360-degree field of view and be a fish eye lens.

3.1.1.4 Indoor Dome Camera must have a minimum illumination of 0.05 lux at f1.2, AGC ON 0.3 lux at f2.8 AGC ON, 0 lux with infrared(IR).

3.1.1.5 Indoor Dome Camera must be a true day/night camera with a mechanical infrared cut filter (ICR).

3.1.1.6 Indoor Dome Camera shutter speed must be a minimum at 50Hz: 1/25s – 1/100,000s and at 60Hz: 1/30s – 1/100,000s

3.1.1.7 Indoor Dome Camera must have a minimum image resolution of 3072 x 2048. Indoor Dome Camera high frame mode must support at minimum at 50Hz: 1 x fisheye [3072 x 2048, 25 frames per second(fps)] or [2048 x 2048, 25 frames per second(fps)] or 4 x Pan-tilt-zoom (PTZ) [1024 x 768, 25 frames per second(fps)] and must support at 60Hz: 1 x fisheye [3072 x 2048, 25 frames per second(fps)] or (2048 x 2048, 30 frames per second(fps)] or 4 x pan-tilt-zoom(PTZ) [1024 x 768, 30 frames per second(fps)].

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- 3.1.1.8** Indoor Dome Camera multi-channel mode must support at minimum at 50Hz: 1 x fisheye [1280 x 1280, 12.5 frames per second(fps)] and 1 x panoramic [2048 x 1536, 12.5 frames per second(fps)] and 3 x pan-tilt-zoom(PTZ) [1024 x 768, 12.5 frames per second(fps)] and must support at 60Hz: 1 x fisheye [1280 x 1280, 15 frames per second(fps)] and 1 x panoramic [2048 x 1536, 15 frames per second(fps)] and 3 x pan-tilt-zoom(PTZ) [1024 x 768, 15 frames per second(fps)].
- 3.1.1.9** Indoor Dome Camera infrared(IR) range must be a minimum of 10 meters (m)
- 3.1.1.10** Indoor Dome Camera Video Compression must be at minimum H.264/Motion Joint Photographic Experts Group(MJPEG) Multiple streams: surrounding, panoramic, 4 x pan-tilt-zoom(PTZ).
- 3.1.1.11** Indoor Dome Camera bit rate must be a minimum of 128 kilobits per second (kbps) – 16 megabits per second(Mbps).
- 3.1.1.12** Indoor Dome Camera wide dynamic range category must be at minimum Digital Wide Dynamic Range(DWDR).
- 3.1.1.13** Indoor Dome Camera must at minimum have three-dimensional noise reduction (3D-NR).
- 3.1.1.14** Indoor Dome Camera image settings must have at minimum saturation, brightness, contrast, and sharpness adjustable through client software or web browser.
- 3.1.1.15** Indoor Dome Camera must have network storage NAS.
- 3.1.1.16** Indoor Dome Camera must have alarm trigger motion detection.

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- 3.1.1.17** Indoor Dome Camera must have tampering alarm.
- 3.1.1.18** Indoor Dome Camera must have storage exception.
- 3.1.1.19** Indoor Dome Camera must have security user authentication.
- 3.1.1.20** Indoor Dome Camera must have reset button.
- 3.1.1.21** Indoor Dome Camera must have watermark.
- 3.1.1.22** Indoor Dome Camera must have multicast.
- 3.1.1.23** Indoor Dome Camera Communication Interface must be at minimum 1 RJ45 10M/100M Ethernet interface, DC power interface, RS485 interface.
- 3.1.1.24** Indoor Dome Camera power source must be Power over Ethernet (PoE) (802.3 af)/12 Volts Direct Current (VDC) plus/minus 10%.
- 3.1.1.25** Indoor Dome Camera must have a minimum operating temperature of -22 degrees Fahrenheit and operate up to at least 140-degree Fahrenheit.
- 3.1.1.26** Indoor Dome Camera Audio must be bi-directional and have built-in speakers and mic.
- 3.1.1.27** Indoor Dome Camera storage must at minimum have a built-in SD/SDHC card slot (card not included).
- 3.1.1.28** Indoor Dome Camera must at minimum meet the following regulatory compliance: CE (when a manufacturer puts the CE

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marking on a product it implies that it complies with all the Essential Health and Safety requirements from all the directives that applies to its product).

3.1.1.29 Indoor Dome Camera must meet the following regulatory compliance: UL (Underwriters Laboratories).

3.1.1.30 Indoor Dome Camera must meet the following regulatory compliance: WEEE (Waste Electrical and Electronic Equipment).

3.1.1.31 Indoor Dome Camera must meet the following regulatory compliance: RoHS (Restriction of Hazardous Substances).

3.1.1.32 Indoor Dome Camera must meet the following regulatory compliance: REACH (Registration, Evaluation, Authorization and Restriction of Chemicals).

3.1.1.33 Indoor Dome Camera must have at minimum a 3-year warranty with a minimum 1-year advanced replacement.

3.1.2 TruVision 360 Outdoor Dome Camera TVF-3104, or equal

3.1.2.1 Outdoor Dome Camera must have a minimum megapixel of 6.

3.1.2.2 Outdoor Dome Camera must have a minimum 1/1.8-inch Progressive Scan CMOS.

3.1.2.3 Outdoor Dome Camera lens must show 360-degree field of view and be a fish eye lens.

3.1.2.4 Outdoor Dome Camera must have a minimum illumination of 0.05 lux at f1.2, AGC ON 0.3 lux at f2.8 AGC ON, 0 lux with infrared(IR).

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- 3.1.2.5** Outdoor Dome Camera must be a true day/night camera with a mechanical infrared cut filter (ICR).
- 3.1.2.6** Outdoor Dome Camera shutter speed must be a minimum at 50Hz: 1/25s – 1/100,000s and at 60Hz: 1/30s – 1/100,000s.
- 3.1.2.7** Outdoor Dome Camera must have a minimum image resolution of 3072 x 2048.
- 3.1.2.8** Outdoor Dome Camera high frame mode must support at minimum at 50Hz: 1 x fisheye [3072 x 2048, 25 frames per second(fps)] or [2048 x 2048, 25 frames per second(fps)] or 4 x Pan-tilt-zoom (PTZ) [1024 x 768, 25 frames per second(fps)] and must support at 60Hz: 1 x fisheye [3072 x 2048, 25 frames per second(fps)] or (2048 x 2048, 30 frames per second(fps)] or 4 x pan-tilt-zoom(PTZ) [1024 x 768, 30 frames per second(fps)].
- 3.1.2.9** Outdoor Dome Camera multi-channel mode must support at minimum at 50Hz: 1 x fisheye [1280 x 1280, 12.5 frames per second(fps)] and 1 x panoramic [2048 x 1536, 12.5 frames per second(fps)] and 3 x pan-tilt-zoom(PTZ) [1024 x 768, 12.5 frames per second(fps)] and must support at 60Hz: 1 x fisheye [1280 x 1280, 15 frames per second(fps)] and 1 x panoramic [2048 x 1536, 15 frames per second(fps)] and 3 x pan-tilt-zoom(PTZ) [1024 x 768, 15 frames per second(fps)].
- 3.1.2.10** Outdoor Dome Camera infrared(IR) range must be a minimum of 10 meters (m).
- 3.1.2.11** Outdoor Dome Camera Video Compression must be at minimum H.264/Motion Joint Photographic Experts Group(MJPEG) Multiple streams: surrounding, panoramic, 4 x pan-tilt-zoom(PTZ).

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3.1.2.12 Outdoor Dome Camera bit rate must be a minimum of 128 kilobits per second (kbps) – 16 megabits per second(Mbps).

3.1.2.13 Outdoor Dome Camera wide dynamic range category must be at minimum Digital Wide Dynamic Range(DWDR).

3.1.2.14 Outdoor Dome Camera must at minimum have three-dimensional noise reduction (3D-NR).

3.1.2.15 Outdoor Dome Camera image settings must have at minimum saturation, brightness, contrast, and sharpness adjustable through client software or web browser.

3.1.2.16 Outdoor Dome Camera must have network storage NAS.

3.1.2.17 Outdoor Dome Camera must have alarm trigger motion detection.

3.1.2.18 Outdoor Dome Camera must have tampering alarm.

3.1.2.19 Outdoor Dome Camera must have storage exception.

3.1.2.20 Outdoor Dome Camera must have security user authentication.

3.1.2.21 Outdoor Dome Camera must have reset button.

3.1.2.22 Outdoor Dome Camera must have watermark.

3.1.2.23 Outdoor Dome Camera must have multicast.

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- 3.1.2.24** Outdoor Dome Camera Communication Interface must be at minimum 1 RJ45 10M/100M Ethernet interface, DC power interface, RS485 interface.
- 3.1.2.25** Outdoor Dome Camera power source must be Power over Ethernet (PoE) (802.3 af)/12 Volts Direct Current plus/minus 10%.
- 3.1.2.26** Indoor Dome Camera must have a minimum operating temperature of -22 degrees Fahrenheit and operate up to at least 140-degree Fahrenheit.
- 3.1.2.27** Indoor Dome Camera Audio must be bi-directional and have built-in speakers and mic.
- 3.1.2.28** Outdoor Dome Camera storage must at minimum have a built-in SD/SDHC card slot (card not included).
- 3.1.2.29** Outdoor Dome Camera must at minimum meet the following regulatory compliance: FCC (Federal Dome Camera must at minimum meet the following regulatory compliance: CE (when a manufacturer puts the CE marking on a product it implies that it complies with all the essential health and safety requirements from all the directives that applies to its product).
- 3.1.2.30** Outdoor Dome Camera must meet the following regulatory compliance: UL (Underwriters Laboratories).
- 3.1.2.31** Outdoor Dome Camera must meet the following regulatory compliance: WEEE (Waste Electrical and Electronic Equipment).
- 3.1.2.32** Outdoor Dome Camera must meet the following regulatory compliance: RoHS (Restriction of Hazardous Substances).

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3.1.2.33 Outdoor Dome Camera must meet the following regulatory compliance: REACH (Registration, Evaluation, Authorization and Restriction of Chemicals).

3.1.2.34 Outdoor Dome Camera must have environmental rating of IP66.

3.1.2.35 Outdoor Dome Camera must have minimum impact rating of K10.

3.1.2.36 Outdoor Dome Camera must have at minimum a 3-year warranty with a minimum of 1-year advanced replacement.

3.1.3 TruVision Outdoor Bullet Cam, TVC-M5225E-3M-P, or Equal

3.1.3.1 Outdoor Bullet Cam must provide 1/2.5" Progressive Scan CMOS sensor.

3.1.3.2 Outdoor Bullet Cam must have at minimum IP compression/standard H.264/MPEG4/MJPEG.

3.1.3.3 Outdoor Bullet Cam must have maximum resolution(@FPS) 2560x1920 (6.25/7.5 fps).

3.1.3.4 Outdoor Bullet Cam must have maximum real-time resolution of at minimum 1920x1080.

3.1.3.5 Outdoor Bullet Cam must support PoE (IEEE 802.3af) power supply.

3.1.3.6 Outdoor Bullet Cam must provide infrared LED.

3.1.3.7 Outdoor Bullet Cam must provide IR cut filter.

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- 3.1.3.8 Outdoor Bullet Cam must provide 3.5-9mm at F1.6 motorized lens with zoom function.**
- 3.1.3.9 Outdoor Bullet Cam must provide 2D noise reduction function.**
- 3.1.3.10 Outdoor Bullet Cam must provide dual streams.**
- 3.1.3.11 Outdoor Bullet Cam must provide a frame rate of 30 frames per second at 60Hz (25 frames per second at 50Hz) at the resolution of 1920x1080.**
- 3.1.3.12 Outdoor Bullet Cam must have a maximum IR range of at least 25 meters.**
- 3.1.3.13 Outdoor Bullet Cam must have at minimum an IP rating of IP66.**
- 3.1.3.14 Outdoor Bullet Cam must have motion detection.**
- 3.1.3.15 Outdoor Bullet Cam must have privacy masking.**
- 3.1.3.16 Outdoor Bullet Cam must be able to operate at minimum in the following temperature range: -30 degrees Celsius to 60 degrees Celsius (-22 degrees Fahrenheit through 140 degrees Fahrenheit).**
- 3.1.3.17 Outdoor Bullet Cam must have at minimum a 3-year warranty with a minimum 1-year advanced replacement.**
- 3.1.4 TruVision Wedge IR Camera, TVW-3102, or equal.**
 - 3.1.4.1 Wedge IR camera must have at minimum 1/3" progressive scan CMOS sensor.**

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- 3.1.4.2** Wedge IR Camera must have at minimum 1.3MPx.
- 3.1.4.3** Wedge IR Camera must be a true D/N camera.
- 3.1.4.4** Wedge IR Camera's IP Compression/Standard must be at minimum H.264 (Main Profile)/MJPEG.
- 3.1.4.5** Wedge IR Camera must have at minimum of 2048x1536 at 20fps (60Hz) and 2048x1536 at 20fps (50Hz).
- 3.1.4.6** Wedge IR Camera must have at minimum real-time resolution of 1920 x 1080 at 30fps (60Hz) and 1920 x 1080 at 25fps (50Hz).
- 3.1.4.7** Wedge IR Camera must have at minimum a video bit rate of Mainstream: 128 kilobits per second (kbps) to 12 megabits per second (Mbps); and sub-stream: 128 kbps to 8 Mbps.
- 3.1.4.8** Wedge IR Camera must have at minimum Digital Wide Dynamic Range [72 decibels(db)].
- 3.1.4.9** Wedge IR Camera must have 3D digital noise reduction.
- 3.1.4.10** Wedge IR Camera must have at minimum an IR range of 33 feet (10m) with on/off setting.
- 3.1.4.11** Wedge IR Camera must have fixed focus.
- 3.1.4.12** Wedge IR Camera's Ethernet port must be RJ45 10/100Mbps auto-negotiate.
- 3.1.4.13** Wedge IR Camera must have a micro SD/SDXC slot (card not included).
- 3.1.4.14** Wedge IR Camera must have a minimum local storage capacity of 128 gigabyte (GB).

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3.1.4.15 Wedge IR Camera must have at minimum a 3-year warranty with a minimum of 1-year advanced replacement.

3.1.5 TruVision 360 Dome Camera, TVF-3101, or equal

3.1.5.1 360 Dome Camera must be a minimum 3 MPx indoor camera.

3.1.5.2 360 Dome Camera must be 1/3" Progressive Scan complementary-symmetry metal-oxide-semiconductor(CMOS).

3.1.5.3 360 Dome Camera lens must at minimum be 1.19mm at f2.0.

3.1.5.4 360 Dome Camera illumination at minimum must be 0.1 lux at f1.2, AGC ON and 0.28 at f2.0 AGC ON, 0 lux with IR.

3.1.5.5 360 Dome Camera must be ICR, True D/N.

3.1.5.6 360 Dome Camera shutter speed must be at minimum at 50Hz: 1/25s~1/100,000s; and at 60 Hz: 1/30s~1/100,000s.

3.1.5.7 360 Dome Camera's must have a minimum of 2048x1536 maximum resolution.

3.1.5.8 360 Dome Camera's image high-frame mode must support the following at minimum: 50Hz: 1 x fisheye (2048x1536, 25fps) or (1536x1536, 25fps) or 4xPTZ (800X600, 25fps); at 60Hz: 1 x fisheye (2048x1536, 25fps) or (1536x1536, 30fps) or 4 x PTZ (800x600, 30fps).

3.1.5.9 360 Dome Camera's multi-channel mode must support at minimum: 50Hz: 1 x fisheye (1536x1536, 20fps) and 1 x panoramic (1600x1200, 20fps) and 3 x PTZ (800x600, 20fps); and at 60Hz: 1 x fisheye (1536x1536, 20fps) and 1 x panoramic (1600x1200, 20fps) and 3 x PTZ (800x600, 20fps).

3.1.5.10 360 Dome Camera's IR Range must be at minimum 10m (33 ft.) with Configurable IR on/off.

3.1.5.11 360 Dome Camera's video compression must be at minimum H.264 / MJPEG multiple streams; surrounding, Panoramic, 4 x PTZ.

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- 3.1.5.12** 360 Dome Camera's Bit Rate must be at minimum 128Kbps~16Mbps.
 - 3.1.5.13** 360 Dome Camera's wide dynamic range must be at minimum 120 decibel (db) Wide Dynamic Range (WDR).
 - 3.1.5.14** 360 Dome Camera must have at minimum the following features: Network storage NAS, alarm trigger motion detector, tampering alarm, and storage exception.
 - 3.1.5.15** 360 Dome Camera must have at minimum the following features: security user authentication, reset button, watermark, multicast.
 - 3.1.5.16** 360 Dome Camera must have at minimum the following interface: Communication Interface 1 RJ45 M / 100 M Ethernet interface, DC power interface, and RS485 interface.
 - 3.1.5.17** 360 Dome Camera's power source must be PoE(802.3 af) / 12VDC plus/minus 10%.
 - 3.1.5.18** 360 Dome Camera must have a built-in SD/SDHC card slot (card not included).
 - 3.1.5.19** 360 Dome Camera must have the following regulatory compliances at minimum: FCC, CE, UL, WEEE, RoHS, REACH.
 - 3.1.5.20** 360 Dome Camera must have at minimum a 3-year warranty with a minimum of 1-year advanced replacement.
- 3.1.6 TruVision Wedge IR Camera, TVW-3101, or equal**
- 3.1.6.1** Wedge IR Camera must have at minimum a sensor size of 1/3-inch Progressive Scan CMOS.
 - 3.1.6.2** Wedge IR Camera must have at minimum a SD/MPx of 1.3MPx/3MPx.
 - 3.1.6.3** Wedge IR Camera must have at minimum an IP Compression/Standard of H.264/MJPEG.

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- 3.1.6.4** Wedge IR Camera's resolution must be at minimum 1280 x 960 (25fps/30fps) / 2048 x 1536 (12.5fps/15fps).
- 3.1.6.5** Wedge IR Camera's maximum real-time resolution must be at minimum 1280 x 960 / 1920 x 1080.
- 3.1.6.6** Wedge IR Camera must have a S/N Ratio at minimum of 50 decibels(dB).
- 3.1.6.7** Wedge IR Camera must have at minimum a shutter speed of 1/3s ~ 1/100,000s.
- 3.1.6.8** Wedge IR Camera must have the following certifications: UL, CE, FCC, C-tick, REACH, RoHS, HALT, WEEE.
- 3.1.6.9** Wedge IR Camera must have Digital Wide Dynamic Range (DWDR).
- 3.1.6.10** Wedge IR Camera's wide dynamic range must be at minimum 72 decibels (dB).
- 3.1.6.11** Wedge IR Camera must have a minimum digital noise reduction of 3D.
- 3.1.6.12** Wedge IR Camera must have IR cut filter with auto switch and the IR Cut Filter must be motorized.
- 3.1.6.13** Wedge IR Camera must have a minimum IR range of 82 feet (25 m).
- 3.1.6.14** Wedge IR Camera housing must have at minimum a rating of IP66.
- 3.1.6.15** Wedge IR Camera must have a voltage input of 12VDC.
- 3.1.6.16** Wedge IR Camera must have PoE (802.3af).
- 3.1.6.17** Wedge IR Camera must have a minimum bit rate of 128 Kbps ~ 8 Mbps / 16Mbps.
- 3.1.6.18** Wedge IR Camera must have at minimum a 3-year warranty with a minimum of 1-year advanced replacement.

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- 3.1.7 TruVision Network Video Recorder (NVR) 70, TVN-7001R-96T, or equal**
- 3.1.7.1** Network Video Recorder must have at minimum bandwidth of 400Mbps.
 - 3.1.7.2** Network Video Recorder must have at minimum bandwidth per channel of 8Mbps.
 - 3.1.7.3** Network Video Recorder must have at minimum IP camera input of 128 channels.
 - 3.1.7.4** Network Video Recorder must support at minimum the following standards: H.264, Real Time Streaming Protocol (RTSP) custom protocols.
 - 3.1.7.5** Network Video Recorder must have at minimum an audio input (IP) support for cameras with audio out – up to 128 channels.
 - 3.1.7.6** Network Video Recorder must have at minimum a USB interface of the following: 1 x USB 2.0 (front), 2 x USB 3.0 (back).
 - 3.1.7.7** Network Video Recorder must have at minimum an alarm interface to support the following: 16 inputs and 8 relay outputs.
 - 3.1.7.8** Network Video Recorder must have at minimum 16 Serial Advanced Technology Attachment (SATA) interfaces.
 - 3.1.7.9** Network Video Recorder must have at minimum a maximum onboard storage capacity of 96 Terabyte (TB) non-RAID / 64 Terabyte (TB) RAID.
 - 3.1.7.10** Network Video Recorder must have at minimum the following recording modes: time lapse high, time lapse low, event, alarm, and manual.
 - 3.1.7.11** Network Video Recorder must have at minimum dual stream recording of up to 16 channels.
 - 3.1.7.12** Network Video Recorder must have auto-archiving capability.

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- 3.1.7.13** Network Video Recorder's network interface must be at minimum 2 x 10/100/1000 Mbps auto-negotiate Ethernet.
 - 3.1.7.14** Network Video Recorder must have a minimum playback resolution up to 6 MPx (depending on monitor resolution).
 - 3.1.7.15** Network Video Recorder must have a minimum redundant power supply of the following: 2 x 100 ~ 240 VAC, 6.3A, 50 ~ 60 Hz.
 - 3.1.7.16** Network Video Recorder must be able to support the following browsers: Windows: Internet Explorer 8/9/10/11, Firefox; Mac: Safari.
 - 3.1.7.17** Network Video Recorder must have at minimum a 3-year warranty with a minimum of 1-year advanced replacement.
- 3.1.8 TruVision NVR-21P (Network Video Recorder), TVN2132P-32, or equal.**
- 3.1.8.1** Network Video Recorder must have at minimum 32 channel video/audio input.
 - 3.1.8.2** Network Video Recorder's bandwidth must be a minimum of 200Mbps.
 - 3.1.8.3** Network Video Recorder must have the following specifications at minimum:
 - 3.1.8.4** Recording Resolution:
5MP/3MP/1080P/UXGA/720P/VGA/4CIF/DCIF/2CIF/CIF/QCIF
 - 3.1.8.5** HDMI output: 1-channel, resolution: 1920x1080P/60Hz, 1600x1200/60Hz, 1280x1024/60Hz, 1280x720/60Hz, 1024x768/60Hz.
 - 3.1.8.6** VGA Output: 1-channel, resolution: 1920x1080P/60Hz, 1600x1200/60Hz, 1280x1024/60Hz, 1280x720/60Hz, 1024x768/60Hz.
 - 3.1.8.7** Synchronous Playback: 32-channel.

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3.1.8.8 Hard Disk RAID: 0,1,5,10.

3.1.8.9 Hard Disk SATA: (8) SATA interfaces.

3.1.8.10 Hard Disk eSATA: (1) eSATA interface.

3.1.8.11 Hard Disk Capacity: 6TB capacity for each HDD.

3.1.8.12 External interface Network Interface: (2) RJ-45 10/100/1000 Mbps self-adaptive Ethernet interfaces.

3.1.8.13 USB interface: (3) USB 2.0.

3.1.8.14 External Interface: Alarm In – 16 and Alarm Out – 4.

3.1.8.15 Power Supply: 100~240VAC, 6.3A, 50~60Hz.

3.1.8.16 Rack Mount: must be included with video network recorder.

3.1.9 TruVision 360 Degree Dome Round Back Box (Mount), or Equal

3.1.9.1 Back Box must have conduit ports

3.1.9.2 Back Box must be gang box compatible.

3.1.9.3 Back Box must be metal.

3.1.9.4 Back Box must be indoor/outdoor.

3.1.10 TruVision 360 Degree Dome Cup Base (Mount), or Equal

3.1.10.1 Cup Base must be able to be pendant mounted or wall mounted.

3.1.11 TruVision 360 Degree Dome Round Angled Back Box (Mount), or Equal

3.1.11.1 Angled Back Box must have conduit ports.

3.1.11.2 Angled Back Box must be gang box compatible.

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3.1.11.3 Angled Back Box must be metal.

3.1.11.4 Angled Back Box must be indoor/outdoor.

3.1.12 TruVision TVB-4404 Bullet Camera, or Equal

3.1.12.1 Must capture and transmit video over an analog connection.

3.1.12.2 Must include at minimum, but not be limited to, the following.

3.1.12.3 Must provide at minimum 1 channel of TVI video output.

3.1.12.4 Must provide minimum 1 channel of 960H composite video output.

3.1.12.5 Must include a sensor of 1/3" CMOS image sensor.

3.1.12.6 Must have effective pixels (H X V) in or over 1920 x 1080 at minimum.

3.1.12.7 Must have varifocal 2.8~12mm lens.

3.1.12.8 Must have IR cut filter.

3.1.12.9 Must conform to IP66.

3.1.12.10 Must have up to 40m IR illumination range.

3.1.12.11 Must support 120 decibels Wide Dynamic Range on TVI image.

3.1.12.12 Must have built-in on screen display control button and over coax cable control function.

3.1.12.13 Must be user configured via the internal menu.

3.1.12.14 Must have an integrated menu to configure the following information at minimum:

- Scene
- Indoor

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- Outdoor
- Indoor 1
- Low-Light
- Lens
- Manual
- Exposure
- Backlight
- White Balance
- Day & Night
- NR
- Special
- Adjust
- Reset
- Adjust with sharpness, monitor, LSC,
- camera reset

3.1.12.15 Bullet Camera must have the following additional specifications at minimum:

- Video output 1*HD-TVI output and 1*960H composite dual output.
- Minimum illumination: 0.01 Lux at (F1.2, AGC ON), 0.014 Lux at (F1.4, AGC ON), 0 Lux with IR on.
- Power supply: 12 VDC / 24 VAC
- Current: 420 Ma at 24 VAC
- Power Consumption: 12 VDC: 5 W, 24 VAC: 6 W
- Operating temperature range: -30 to +60 degrees Celsius (-22 to +140-degree Fahrenheit), or better.
- Must have IP66 rating

3.1.12.16 Bullet Camera must have these internationally recognized compliance standards:

- FCC
- CE

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- UL
- WEEE
- RoHS
- REACH

3.1.12.17 Configuration options must include at a minimum:

- Scene
 - Indoor
 - Outdoor
 - Indoor1
 - Low-light
 - Lens: Manual
 - Exposure: Shutter and AGC
 - SENS-UP
 - Brightness
 - D-WDR
 - Defog
 - Backlight: BLC and HSBLC
 - White Balance
 - ATW
 - AWC-SET
 - Indoor
 - Outdoor
 - Manual
 - Day & Night:
 - Color
 - B/W
 - Ext
 - NR
 - 2D NR
 - 3D NR
- Special:
 - CAM TITLE
 - D-EFFECT
 - Motion
 - Privacy
 - Defect
 - Version

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3.1.12.18 Camera must have at minimum a 3-year warranty with a minimum of 1-year advanced replacement.

3.1.13 TruVision TVD-4404 Dome Camera, or Equal, must include at a minimum, but not limited to the following:

3.1.13.1 Dome Camera must capture and transmit video over an analog connection.

3.1.13.2 Must provide a minimum of 1 channel of TVI video output.

3.1.13.3 Must provide a minimum of 1 channel of 960H composite video output.

3.1.13.4 Must include a sensor of 1/3" CMOS image sensor.

3.1.13.5 Must have effective pixels (H x V) in or over 1920 x 1080.

3.1.13.6 Must support TVI output (H x V) in 1920 x 1080.

3.1.13.7 Must have varifocal 2.8~12mm lens.

3.1.13.8 Must have IR Cut Filter.

3.1.13.9 Must conform to IP66.

3.1.13.10 Must conform to IK10.

3.1.13.11 Must have a minimum of up to 40m IR illumination range.

3.1.13.12 Must support a minimum of 120 decibels Wide Dynamic Range on TVI video image.

3.1.13.13 Must have built-in On Screen Display control button and over coax cable control function.

3.1.13.14 Must be user configured via the internal menu.

3.1.13.15 Must have an integrated menu to configure the following information:

- Scene
- Lens

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- Exposure
- Backlight
- White Balance
- Day & Night
- NR
- Special
- Adjust
- Reset

3.1.13.16 Configurable options must, at minimum, include:

- Scene
- Indoor
- Outdoor
- IndoorI
- Low-light
- Lens: Manual
- Exposure
- Shutter
- AGC
- SENS-UP
- Brightness
- D-WDR
- Defog
- Backlight: BLC and HSBLC
- White Balance:
 - ATW
 - AWC-SET
 - Indoor
 - Outdoor
 - Manual
 - Day & Night
 - Color
 - B/W
- Ext
- NR
- 2D NR
- 3D NR
- Special:
 - CAM TITLE
 - D-EFFECT

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Motion
Privacy
Defect
Version

- Adjust: Sharpness, Monitor, LSC
- Reset
- Camera Reset
- LSC

3.1.13.17 Dome Camera must have at minimum the following specifications:

- Video output: 1*HD-TVI output and 1*960H composite dual output.
- Minimum illumination: 0.01 Lux at (F1.2 AGC ON), 0.014 Lux at (F1.4 AGC ON), 0 Lux with IR on.
- Power Supply: 12 VDC / 24 VAC
- Current: 375 mA at 12 VDC, 270 mA at 24 VAC
- Power Consumption: 12 VDC: 4.5 W, 24 VAC: 6.5 W
- Operating Temperature range: -30 to +60 degrees Celsius (-22 to + 140-degree Fahrenheit), or better.
- Must conform to IP66.
- Must conform to IK10.

3.1.13.18 Dome Camera must conform at minimum to these internationally recognized compliance standards:

- FCC
- CE
- UL
- WEEE
- RoHS
- REACH

3.1.13.19 Dome Camera must have at minimum a 3-year warranty with a minimum of 1-year advanced replacement.

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3.1.14 TruVision DVR 45HD (digital video recorder), or Equal, must have at a minimum:

- 3.1.14.1** The video recorder shall be an integrated security system, capable of real time recording multiple cameras, and storing their digitized and compressed images on internal hard drives for fast search and retrieval either locally at the unit, or from a remote workstation using a Graphical User Interface (GUI).
- 3.1.14.2** Conventional multiplexer and VCR with local display monitors for live and playback viewing while the system continues to record new images.
- 3.1.14.3** The video recorder shall be able to record any combination of standard analog cameras and HD-TVI cameras from the BNC connectors on the rear of the recorder.
- 3.1.14.4** The video recorder shall use the HD-TVI standard to record 720p, 1080p, 3MPX, or 5MPX TVI high definition cameras.
- 3.1.14.5** The video recorder shall be able to trade off all the analog channels for IP channels.
- 3.1.14.6** Additionally, the system shall provide automated alarm handling.
- 3.1.14.7** Upon receipt of an alarm, the system shall be able to automatically change display and record speed, provide relay output operation, and provide data transfer to a host.
- 3.1.14.8** During investigations, it shall be possible to search and retrieve stored video data by date, time, camera, and alarm.
- 3.1.14.9** The system shall be upgraded through flash programming upgrades of software, using either a USB drive or TCP/IP.
- 3.1.14.10** The recorder shall be able to record and play back IP cameras up to the full number of analog channels.
- 3.1.14.11** The recorder shall be able to record and playback standard analog, HD-TVI, or IP cameras or any combination thereof.

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- 3.1.14.12** The recorder shall support 5MPX, 3MPX, 1080p, and 720p resolution HD-TVI coax cameras.
- 3.1.14.13** The recorder shall function as a standalone unit.
- 3.1.14.14** It shall not require the use of a personal computer, special monitors, or other peripheral devices for either programming or operation.
- 3.1.14.15** Live and recorded playback of video images shall display on a VGA or HDMI monitor.
- 3.1.14.16** The video recorder shall be capable of displaying on-screen text and menus in more than one language.
- 3.1.14.17** The video recorder shall have robust buttons integrated into the front panel of the unit, used for menu navigation, setup, and control of the unit, with no need for an external control device.
- 3.1.14.18** The video recorder shall have robust buttons integrated into the front panel of the unit for each camera, display, sequence, live, playback, archive, pause, alarm, and a multifunction navigation.
- 3.1.14.19** An alarm indication light shall visualize an alarm, additionally the causing criterion shall be shown by alarm indication lights for the following at minimum:
- HDD
 - Network
 - Technical Alarm
 - Event Alarm
- 3.1.14.20** The video recorder shall support one-button quick archive, auto detecting the storage media inserted and the maximum storage capacity.
- 3.1.14.21** The video recorder shall have two USB ports at the front panel supporting a mouse and/or memory sticks for archiving video and audio files for evidence.

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3.1.14.22 Shall also have a USB port at the back panel.

3.1.14.23 The video recorder shall provide external keyboard support. All DVR and PTZ control functions shall be supported.

3.1.14.24 The video recorder shall use on-screen menu system of icons and pop-up selections.

3.1.14.25 The video recorder shall use a battery to back up memory that stores the time, date, and all internal programming functions.

3.1.14.26 The video recorder shall have log view screens to show the entire system status at a glance.

3.1.14.27 The video recorder shall support auto install to do the following:

- Automatically detect loss of video sync, with on-screen indicators. If video loss is detected during recording, the recorder will warn by on-screen, send message to remote, buzzer will sound, and a relay will be switched.

3.1.14.28 The video recorder shall prevent unauthorized tampering using a minimum 16 users and passwords, with settings including:

- Local user privileges.
- Local play privileges.
- Remote play privileges.
- Remote view privileges.

3.1.14.29 The video recorder shall be one and half unit of rack space in height (1.5U) and capable of being rack mounted with rack mount hardware, or equal, designed to support the unit.

3.1.14.30 The video recorder shall support Digital Zoom in a user defined area.

3.1.14.31 A Windows Media Player filter shall be available to allow the playback of evidence video using default Windows Player.

3.1.14.32 The video recorder shall support an Internet Explorer based web browser. The supported features shall be at a minimum:

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- Camera live view with up to a minimum of 16 cameras simultaneously.
- Capability to switch between main stream and sub stream per individual camera and all cameras at once.
- PTZ functionality with preset call up.
- Playback of recorded video.
- Archiving of recorded video.
- Comprehensive remote configuration.

3.1.14.33 The recorder shall support user programmable stored video frame rates that can be programmed on a per-camera basis.

3.1.14.34 All cameras shall be programmable to record videos in one of the following operating modes:

- Constant
- Time Lapse
- Manual
- Motion
- Event
- Alarm

3.1.14.35 At a minimum, the recorder shall support the following stored video frame rates per camera:

- Real-time (30 fps NTSC / 25 fps PAL)
- 22 fps
- 20 fps
- 18 fps
- 16 fps
- 15 fps
- 12 fps
- 8 fps
- 6fps
- 4 fps
- 2 fps
- 1 fps
- ½ fps
- ¼ fps

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- 1/8 fps
- 1/16 fps

3.1.14.36 The video recorder shall support an alarm mode that is user programmable.

3.1.14.37 At a minimum, the video recorder shall support the following alarm mode stored video frame rates:

- Real-time (30 fps NTSC / 25 fps PAL)
- 22 fps
- 20 fps
- 18 fps
- 16 fps
- 15 fps
- 12 fps
- 8 fps
- 6 fps
- 4 fps
- 2 fps
- 1 fps
- ½ fps
- ¼ fps
- 1/8 fps
- 1/16 fps

3.1.14.38 The video recorder shall allow the user to select whether the hard drive recording should automatically overwrite data (starting with the oldest data first) or if the user must confirm overwriting before recording will continue when the hard drive is full.

3.1.14.39 The video recorder shall have image quality settings that are adjustable on a per-camera basis by the end user, including the following at a minimum:

- 5MPX (HD-TVI only)
- 3MPX
- 1080p
- 720p
- 960H

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- VGA
- 4CIF
- DCIF
- 2 CIF
- CIF
- QCIF

3.1.14.40 Streaming Bandwidth's must be a minimum of:

- 16384 (IP only)
- 8192
- 6144
- 4096
- 3072
- 2048
- 1792
- 1536
- 1280
- 1024
- 896
- 768
- 640
- 512
- 448
- 384
- 320
- 256
- 224
- 192
- 160
- 128
- 96
- 80
- 64
- 48
- 32
- By User

3.1.14.41 The maximum combined incoming/outgoing bandwidth shall be:

- 8 ch: 200 Mbps

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- 16 ch: 260 Mbps

- 3.1.14.42** The video recorder shall support at minimum of 5 to 30 seconds of pre-event recording maintained in a buffer and shall append this buffer to the beginning of all recorded events. The recorder shall continue to record at the event rate until the programmed event duration (from 5 seconds to 10 minutes) expires.
- 3.1.14.43** The video recorder shall allow the user to manually or automatically customize the record rates per camera for events and activity detection.
- 3.1.14.44** The user shall be able to play back images smoothly at normal or fast speeds and in forward modes, without distortion.
- 3.1.14.45** The unit shall provide full media search capabilities for archiving, restoring, and playback operations.
- 3.1.14.46** Search capabilities shall include filters for start/stop times, start/stop dates, alarm and event occurrences, inserted text, and camera number.
- 3.1.14.47** The video recorder shall use H.264 or H.265 (IP only) technology to compress and store pictures prior to recording.
- 3.1.14.48** The video recorder shall allow the installer to set up a sub stream for streaming live Video and Audio over the network without affecting the record rate, quality, and resolution of recorded video.
- 3.1.14.49** The video recorder shall allow the installer to set up a V-stream that allows the Web browser or remote client to view several channels (up to 16 minimum) in one stream, thereby saving network bandwidth.
- 3.1.14.50** The video recorder shall be a triplex type unit, allowing simultaneous recording, playback, and live Multiview viewing at the unit, with no need for additional hardware.
- 3.1.14.51** The video recorder shall provide the following displays at minimum in live mode: full screen, sequencing, 4-way, 6-way, 8-way, 9-way, or 16-way.

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3.1.14.52 The video recorder shall provide the following triplex displays in playback mode: full screen, 2-way, 4-way, 9-way, or 16-way and switching between cameras.

3.1.14.53 The video recorder shall allow the user to rearrange cameras in any Multiview display in live mode.

3.1.14.54 The video recorder shall incorporate the following display options:

- Camera tilting with a minimum of up to 16 alphanumeric characters.

3.1.14.55 The video recorder must have title display enable/disable, per channel.

3.1.14.56 The video recorder must have time/date formatting.

3.1.14.57 The video recorder must display time/date enable/disable, per channel.

3.1.14.58 The video recorder shall provide image update rates for live and record modes of up to 30 unique pictures per second for NTSC or up to 25 unique pictures per second for PAL, per channel.

3.1.14.59 The video recorder shall have four monitor outputs as follows:

- One analog Multiview monitor with a minimum of Composite video, BNC connector, NTSC/EIA or PAL/CCIR compatible, and shall display events/alarms.

3.1.14.60 The video recorder must have two digital HDMI Multiview monitor outputs with a minimum of:

- The video recorder must have HDMI outputs shall display live, playback, and programming functions HDMI 1 mirrors the content of the VGA port. HDMI 2 is an independent output.

3.1.14.60.1 The video recorder must have one analog VGA Multiview monitor output with a minimum of:

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- One VGA connector.
- Shall display live, playback, and programming functions.

3.1.14.61 The video recorder shall support the following video motion detection, with on-screen indications when motion is occurring.

3.1.14.62 Activity detection, which shall be treated as an alarm.

3.1.14.63 The video recorder shall support an on-screen setup scale to determine the optimum sensitivity setting for each camera input.

3.1.14.64 The video recorder shall have at minimum 396 zones per camera, arranged in a 22x18 grid.

3.1.14.65 The video recorder shall have at minimum 5 levels of sensitivity.

3.1.14.66 The recorder shall have at minimum 255 levels for size discrimination.

3.1.14.67 The video recorder shall support video masking.

3.1.14.68 The video recorder user can define at minimum four different areas (rectangles).

3.1.14.69 The video recorder shall have at minimum four mask areas per camera.

3.1.14.70 The video recorder shall support the following video tampering.

3.1.14.71 The video recorder shall have at minimum three levels of sensitivity.

3.1.14.72 The video recorder shall support at minimum up to 16 alarm inputs (for 8 or 16 ch. Recorder), programmable as normally open or normally closed from with the menus.

3.1.14.73 The video recorder shall support at minimum four form-C relays as alarm outputs, each programmable as normally open or

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normally closed from within the menus, and rated for 0.5 A continuous, 1.0A momentary.

- 3.1.14.74** The video recorder shall have a fully programmable additional audible device to alert the user to alarms, motion detection, and video loss occurrences or operation failure.
- 3.1.14.75** The video recorder shall support alarm latching with minimum two settings, which shall be programmable from the menus as follows: Manual acknowledge – when an alarm is activated, the recorder shall be manually acknowledged to reset the COS back to normal condition; Timed Out-The Alarm shall automatically reset after a user-defined elapsed time.
- 3.1.14.76** The video recorder shall have automatic full screen associated alarm display that shall change as incoming alarms continue to arrive.
- 3.1.14.77** The video recorder shall provide status relays that shall link to alarms, motion detection, and video loss.
- 3.1.14.78** The video recorder shall have an alarm history display capable of showing at minimum the last 100 alarms received by the system.
- 3.1.14.79** The video recorder shall be supplied with push-in wire terminal connections to facilitate easy connection of alarms and other input/output signals.
- 3.1.14.80** The video recorder shall support notification on alarm to user accounts.
- 3.1.14.81** The video recorder shall allow the user to program notification in response to any of the following conditions:
- Hard disk full.
 - Hard disk error.
 - Input/recording resolution mismatch.
 - Illegal access.
 - IP address conflict.
 - Network disconnected.
 - Abnormal video signal.

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- Abnormal record.

3.1.14.82 The video recorder shall support RS-232 communications and control to facilitate technical support purposes.

3.1.14.83 The video recorder shall support LAN/WAN Ethernet access.

3.1.14.84 The video recorder has two physical network connections.

3.1.14.85 The video recorder shall support Ethernet bandwidths of 10, 100 Mb or 1 Gb on 8 and 16 channel models.

3.1.14.86 The video recorder shall support simultaneous Ethernet access by not less than 16 workstations connected to LAN/WAN.

3.1.14.87 The video recorder shall support in real time viewing graphically the incoming and outgoing network traffic from the OSD.

3.1.14.88 The video recorder shall be provided with a Graphical User Interface(GUI) software for remote playback and viewing that shall support the Windows 7, Windows 8, and Windows 10 operating systems and full searching capabilities. It shall be possible to remotely set up the recorder unit using the remote viewing software.

3.1.14.89 The video recorder shall not stop recording during any Ethernet access, nor shall it be possible to remotely issue a command via Ethernet to stop the recording.

3.1.14.90 The video recorder shall allow the user to disable all Ethernet access from the menus by limiting the total net bandwidth which functions as the throttle.

3.1.14.91 The video recorder shall allow the user full programming of Ethernet parameters, including the following:

- Ethernet (enable/disable).
- Host name.
- DHCP (enable/disable).
- DDNS.
- IP address (IPv4, IPv6).
- Default gateway.

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- Subnet mask.
- Name server.
- HTTP port.
- HTTPS.
- Main port.
- UPnP.

3.1.14.92 Video Recorder must have at minimum 1 GB video memory and live/playback display memory of at minimum 128 MB and record memory must be at minimum 72 MB.

3.1.14.93 Video sampling rate for recorder must be at minimum 27 MHz.

3.1.14.94 Available colors must be to specification YUV 4:2:2, providing up to a minimum of 65K colors.

3.1.14.95 Video recorder must have at minimum 256 grayscale levels.

3.1.14.96 Video recorder must have at minimum a horizontal resolution of 960 pixels.

3.1.14.97 Vertical resolution for video recorder must be at minimum the following:

- 480 active lines NTSC/EIA.
- 576 active lines PAL/CCIR.

3.1.14.98 Video recorder inputs for camera (analog/HD-TVI) must have at minimum the following:

- There shall be 8 or 16 camera inputs.
- Inputs shall use BNC connectors.
- Inputs shall be HD-TVI, NTSC/EIA or PAL/CCIR compatible.

3.1.14.99 Video recorder must have at minimum four audio inputs, two bidirectional audio line outputs.

3.1.14.100 The audio inputs/outputs must use RCA connectors.

3.1.14.101 Video recorder inputs must have automatic gain control.

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3.1.14.102 The video recorder must have at minimum four monitor outputs as follows:

- One Analog Multiview monitor
- Composite video.

- BNC connector.
- NTSC/ELA or PAL/CCIR compatible.
- Shall display events.
- Two digital HDMI Multiview monitor outputs.
- HDMI connector.
- Shall display live, playback, and programming functions at a minimum.

3.1.14.102.1 One analog VGA Multiview monitor output.

3.1.14.102.2 One VGA connector.

3.1.14.102.3 Shall display live, playback, and programming functions.

3.1.14.103 Video recorder must have a RS-232 serial data port to support remote communications for technical support purposes.

3.1.14.104 The video recorder must have a minimum three USB ports for:

- USB memory key archiving devices.
- USB HDD or CD/DVD archiving devices.
- Mouse control functions.

3.1.14.105 The video recorder must have a removable strip for input/output connector to support the following functionality:

- Alarm inputs.
- Relay outputs.

3.1.14.106 The video recorder must have an IR-remote that will emulate the front panel keys.

3.1.14.107 The video recorder must provide mouse control support for:

- All menu settings and navigation functions.

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- Control functions: Live, playback, PTZ, and archive.

- 3.1.14.108** The video recorder shall support archiving of recorded images through a USB memory stick or external memory device.
- 3.1.14.109** The video recorder must support archiving of recorded video and audio data through an optional external USB connected CD/DVD burner.
- 3.1.14.110** The video recorder shall have an option to select the type of archiving device connected when interfaced to the devices specified or approved equals.
- 3.1.14.111** The video recorder shall support selective archiving.
- 3.1.14.112** The video recorder shall have an on-screen progress indicator when selective archiving or restoration operations are accessing the archive device.
- 3.1.14.113** The video recorder shall have an Automatic Delete Mode(ADM) that may be enabled or disabled, preventing any video that is older than a user-defined period from being viewed or archived, when the unit is used in jurisdictions that mandate a finite storage time.
- 3.1.14.114** The video recorder shall record video on a hard drive. No videotape or videotape recorders shall be required.
- 3.1.14.115** The video recorder shall support both internal and external hard drive configurations.
- 3.1.14.116** The video recorder internal storage configurations must be at minimum: 2 TB.
- 3.1.14.117** The utilized hard drives shall support the latest SATA technology including SMART reporting.
- 3.1.14.118** The video recorder shall, at minimum, support RAID configuration, RAID level 0,1,5 and 10 shall be supported.
- 3.1.14.119** The utilized hard drives shall be specially developed for the Digital Video Archiving Industry.

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3.1.14.120 The video recorder shall integrate the Intrusion Integration alarm receiver software module.

3.1.14.121 The video recorder shall be able to receive SIA or XSIA events from alarm panels.

3.1.14.122 The video recorder must be able to receive events from a minimum of three alarm panels and a minimum of 32 alarm zones per panel.

3.1.14.123 The video recorder must display the events in the alarm center via the web page and will register the events in the log file.

3.1.14.124 The video recorder shall have at minimum the following electrical properties:

- Input voltage: AC 100-240V.
- Power (without hard drives): 8ch:45W / 16ch:65W.

3.1.14.125 Video recorder must have at minimum the following operating temperature range: -10 to +55 degrees Celsius (14~131 degrees Fahrenheit).

3.1.14.126 Video recorder must meet at minimum the following internationally recognized compliance ratings:

- FCC
- CE
- UL

3.1.14.127 Video recorder must have at minimum a three-year warranty with 1-year advanced replacement warrant.

3.1.15 Warranty

3.1.15.1 All items on the contract must be covered under a minimum one-year manufacturer's warranty that covers the replacement of any defective product.

4. CONTRACT AWARD:

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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 the Pricing Pages.

4.2 Pricing Pages: Vendor should complete the Exhibit A Pricing Page by providing the unit price and multiply by the estimated quantities. Unit prices shall include any shipping and handling fees. Vendor should complete the Pricing Pages in their entirety as failure to do so may result in Vendor's bids being disqualified.

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

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 by sending an email request to the following: Crystal.G.Rink@wv.gov

5. ORDERING & 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. All contracted items must be available to be shipped to all West Virginia Division of Corrections (WVDOC) facilities at the agreed contracted price (bid prices are to include shipping fees).

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 fourteen (14) working days after orders are received. Vendor shall deliver emergency orders within five (5) working day(s) after orders are received. Vendor shall ship all

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orders in accordance with the above schedule and shall not hold orders until a minimum delivery quantity is met.

- 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. 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 F.O.B. 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 F.O.B. 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.
- 6.5 Return Due to Agency Error:** Items ordered in error by the Agency will be returned for credit within 30 days of receipt, F.O.B. 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.

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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.

7.1.1 Failure to comply with other specifications and requirements contained herein.

7.1.2 Failure to comply with any laws, rules, and ordinances applicable to the Contract Services provided under this Contract.

7.1.3 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.

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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: Chris White
Telephone Number: 304-204-1500 Ext. 1520
Fax Number: 304-204-1350
Email Address: cwhite@nitro-electric.com

West Virginia Ethics Commission



Disclosure of Interested Parties to Contracts

Pursuant to *W. Va. Code* § 6D-1-2, a state agency may not enter into a contract, or a series of related contracts, that has/have an actual or estimated value of \$100,000 or more until the business entity submits to the contracting state agency a Disclosure of Interested Parties to the applicable contract. In addition, the business entity awarded a contract is obligated to submit a supplemental Disclosure of Interested Parties reflecting any new or differing interested parties to the contract within 30 days following the completion or termination of the applicable contract.

For purposes of complying with these requirements, the following definitions apply:

"Business entity" means any entity recognized by law through which business is conducted, including a sole proprietorship, partnership or corporation.

"Interested party" or *"Interested parties"* means:

- (1) A business entity performing work or service pursuant to, or in furtherance of, the applicable contract, including specifically sub-contractors;
- (2) the person(s) who have an ownership interest equal to or greater than 25% in the business entity performing work or service pursuant to, or in furtherance of, the applicable contract. (This subdivision does not apply to a publicly traded company); and
- (3) the person or business entity, if any, that served as a compensated broker or intermediary to actively facilitate the applicable contract or negotiated the terms of the applicable contract with the state agency. (This subdivision does not apply to persons or business entities performing legal services related to the negotiation or drafting of the applicable contract.)

"State agency" means a board, commission, office, department or other agency in the executive, judicial or legislative branch of state government, including publicly funded institutions of higher education; Provided, that for purposes of *W. Va. Code* § 6D-1-2, the West Virginia Investment Management Board shall not be deemed a state agency nor subject to the requirements of that provision.

The contracting business entity must complete this form and submit it to the contracting state agency prior to contract award and to complete another form within 30 days of contract completion or termination.

This form was created by the State of West Virginia Ethics Commission, 210 Brooks Street, Suite 300, Charleston, WV 25301-1804. Telephone: (304)558-0664; fax: (304)558-2169; e-mail: ethics@wv.gov; website: www.ethics.wv.gov.

West Virginia Ethics Commission
Disclosure of Interested Parties to Contracts

(Required by W. Va. Code § 6D-1-2)

Contracting Business Entity: Nitro Electric Company Address: 4300 1st Avenue
Nitro, WV 25143

Authorized Agent: Unknown Address: N/A

Contract Number: Unknown/Not Currently Awarded Contract Description: Security Cameras

Governmental agency awarding contract: West Virginia Division of Corrections

Check here if this is a Supplemental Disclosure

List the Names of Interested Parties to the contract which are known or reasonably anticipated by the contracting business entity for each category below (attach additional pages if necessary):

1. Subcontractors or other entities performing work or service under the Contract

Check here if none, otherwise list entity/individual names below.

2. Any person or entity who owns 25% or more of contracting entity (not applicable to publicly traded entities)

Check here if none, otherwise list entity/individual names below.

3. Any person or entity that facilitated, or negotiated the terms of, the applicable contract (excluding legal services related to the negotiation or drafting of the applicable contract)

Check here if none, otherwise list entity/individual names below.

Signature: Bruce Ward

Date Signed: March 15, 2018

Notary Verification

State of West Virginia, County of Putnam

I, Bruce Ward, the authorized agent of the contracting business entity listed above, being duly sworn, acknowledge that the Disclosure herein is being made under oath and under the penalty of perjury.

Taken, sworn to and subscribed before me this 15th day of March, 2018.

Jennifer L. Kelly
Notary Public's Signature

To be completed by State Agency:

Date Received by State Agency: _____

Date submitted to Ethics Commission: _____

Governmental agency submitting Disclosure: _____

OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Jennifer L Kelly
11 Lynn Ln
Scott Depot, WV 25560
My Commission Expires May 5, 2024
Revised October 2017

State of West Virginia
VENDOR PREFERENCE CERTIFICATE

Certification and application is hereby made for Preference in accordance with *West Virginia Code*, §5A-3-37. (Does not apply to construction contracts). *West Virginia Code*, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the *West Virginia Code*. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Vendor Preference, if applicable.

1. **Application is made for 2.5% vendor preference for the reason checked:**
Bidder is an individual resident vendor and has resided continuously in West Virginia, or bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia, for four (4) years immediately preceding the date of this certification; or,
 Bidder is a resident vendor partnership, association, or corporation with at least eighty percent of ownership interest of bidder held by another entity that meets the applicable four year residency requirement; or,
 Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,
2. **Application is made for 2.5% vendor preference for the reason checked:**
Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
3. **Application is made for 2.5% vendor preference for the reason checked:**
Bidder is a nonresident vendor that employs a minimum of one hundred state residents, or a nonresident vendor which has an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia and employs a minimum of one hundred state residents, and for purposes of producing or distributing the commodities or completing the project which is the subject of the bidder's bid and continuously over the entire term of the project, on average at least seventy-five percent of the bidder's employees or the bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years and the vendor's bid; or,
4. **Application is made for 5% vendor preference for the reason checked:**
Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,
5. **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**
Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or,
6. **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**
Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.
7. **Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with *West Virginia Code* §5A-3-59 and *West Virginia Code of State Rules*.**
Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) rescind the contract or purchase order; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: Bruce Ward / Nitro Electric Company

Signed: 

Date: March 15, 2018

Title: Vice President

*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.

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: Nitro Electric Company

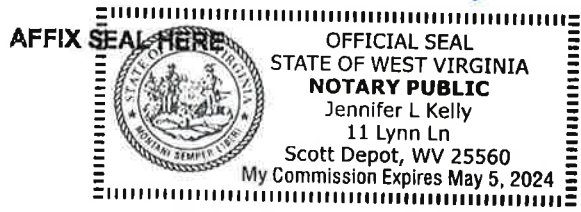
Authorized Signature: *Bruce Wang* Date: March 15, 2018

State of West Virginia

County of Putnam, to-wit:

Taken, subscribed, and sworn to before me this 15th day of March, 2018.

My Commission expires May 5, 2024



NOTARY PUBLIC *Jennifer L. Kelly*
Purchasing Affidavit (Revised 01/19/2018)

CONTRACTOR LICENSE

Authorized by the

West Virginia Contractor Licensing Board

Number: WV042601

Classification:

ELECTRICAL
HEATING, VENTILATING & COOLING
PIPING
LOW VOLTAGE SYSTEMS
SPRINKLER AND FIRE PROTECTION


NITRO ELECTRIC COMPANY INC
DBA NITRO MECHANICAL SERVICES
4300 1ST AVE #2
NITRO, WV 25143-1001

Date Issued

JUNE 13, 2017

Expiration Date

JUNE 13, 2018


Authorized Company Signature


Chair, West Virginia Contractor
Licensing Board

This license, or a copy thereof, must be posted in a conspicuous place at every construction site where work is being performed. This license number must appear in all advertisements, on all bid submissions and on all fully executed and binding contracts. This license cannot be assigned or transferred by licensee. Issued under provisions of West Virginia Code, Chapter 21, Article 11.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
12/21/2017

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 Willis of Pennsylvania, Inc. c/o 26 Century Blvd P.O. Box 305191 Nashville, TN 372305191 USA	CONTACT NAME: PHONE (A/C, No, Ext): 1-877-945-7378 FAX (A/C, No): 1-888-467-2378 E-MAIL ADDRESS: certificates@willis.com	
	INSURER(S) AFFORDING COVERAGE INSURER A: Arch Insurance Company NAIC # 11150 INSURER B: XL Specialty Insurance Company 37885 INSURER C: Western World Insurance Company 13196 INSURER D: INSURER E: INSURER F:	INSURED Nitro Electric Company, Inc. 4300 1st Ave Nitro, WV 25143 USA

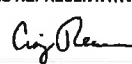
COVERAGES CERTIFICATE NUMBER: W4762947 REVISION NUMBER:

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.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC <input type="checkbox"/> OTHER:			ZAGLB9222201	01/01/2018	01/01/2019	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 1,000,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS ONLY			ZACAT9243301	01/01/2018	01/01/2019	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 10,000			US00077260LI18A	01/01/2018	01/01/2019	EACH OCCURRENCE \$ 10,000,000 AGGREGATE \$ 10,000,000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A	ZANCI9402601	01/01/2018	01/01/2019	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
C	Auto Buffer Occurrence Basis			GLX1000037-00	01/01/2018	01/01/2019	Each Occurrence: \$2,000,000 Aggregate: \$2,000,000 Products-Comp: \$2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER **CANCELLATION**

Evidence of Insurance	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 

Department of Corrections

March 22, 2018



NITRO CONSTRUCTION SERVICES

Material Submittal:

- 3.1.1 TruVision 360 Indoor Camera, TVF-3103 equal

- 3.1.2 TruVision 360 Outdoor Camera, TVF-3104 equal

- 3.1.3 TruVision 360 Outdoor Bullet Cam, TVB-5501 equal

- 3.1.4 TruVision Wedge IR Camera, TVF-3102 equal

- 3.1.5 TruVision 360 Dome Camera, TVF-3101 equal

- 3.1.6 TruVision Wedge IR Camera, TVW-3101 equal

- 3.1.7 TruVision Network Video Recorder, TVN-7001-96T equal

- 3.1.8 TruVision NVR-2IP, TVN2132P-32 equal

- 3.1.9 TruVision 360 Degree Dome Round Back Box (mount) equal

- 3.1.10 TruVision 360 Cup Base (mount) equal

- 3.1.11 TruVision 360 Degree Dome Round Angel Back Box (mount) equal

- 3.1.12 TruVision Bullet Camera, TVB-4404 equal

- 3.1.13 TruVision Dome Camera, TVD-4404 equal

- 3.1.14 TruVision TVR-4516HD-12 (16 Channel), or equal

- 3.1.14 TruVision TVR-4508HD-8T (8 Channel), or equal



Item 3.1.1

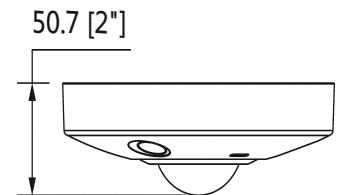
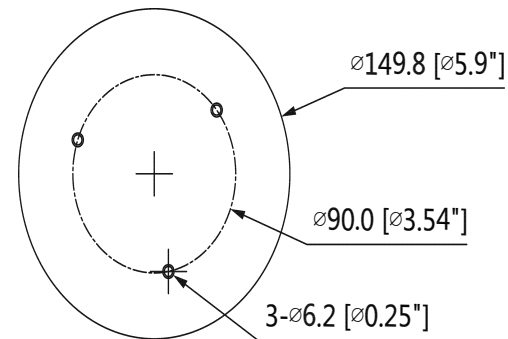
TruVision 360 Indoor Camera,
TVF-3103, or Equal

6MP 360 Degree Hemispheric Camera

- 1/1.8" 6 Megapixel progressive scan STARVIS™ CMOS
- H.265 & H.264 triple-stream encoding
- Maximum 25/30fps at 6MP (3072x2048)
- Multiple De-wrap Mode
- DWDR, Day/Night (ICR), 3DNR, AWB, AGC, BLC
- Smart Detection
- Maximum length of IR LEDs: 10m
- Intelligent Function
- IP67, IK10, PoE



Dimensions(mm)



Popular Mounting Solutions



INSX100
Mount Adapter



INSX105
Mount Adapter



INSX110
Mount Adapter



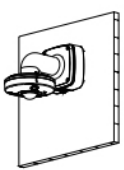
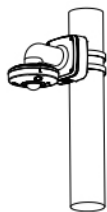
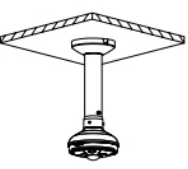
INSX302
Wall Mount



INSX300
Ceiling Mount



INSX152
Pole Mount

Wall Mount	Pole Mount
INSX302 + INSX100	INSX100 + INSX302 + INSX152
	
Ceiling Mount	
INSX105 + INSX110 + INSX300	
	

INSD06IRHEM

Product Specifications



Camera				
Image Sensor	1/1.8" 6MP progressive scan CMOS			
Effective Pixels	3072(H)x2048(V)			
RAM/ROM	1024MB/128MB			
Scanning System	Progressive			
Electronic Shutter Speed	Auto/Manual, 1/3~1/100000s			
Minimum Illumination	0.002Lux/F2.0(Color,1/3s,30IRE); 0.02Lux/F2.0(Color,1/30s,30IRE) 0Lux/F2.0(IR on)			
S/N Ratio	More than 50dB			
IR Distance	Distance up to 10m(33ft)			
IR LEDs	3			
Camera Features				
Day/Night	Auto(ICR) / Color / B/W			
Backlight Compensation	BLC / HLC / DWDR			
White Balance	Auto/Natural/Street Lamp/Outdoor/Manual			
Gain Control	Auto/Manual			
Noise Reduction	3D DNR			
Digital Zoom	16x			
Privacy Masking	4 Areas			
Lens				
Lens Type	Fixed			
Mount Type	Board-in			
Focal Length	1.7mm			
Max. Aperture	F2.0			
Viewing Angle	H: 180°, V:180°			
Optical Zoom	N/A			
Focus Control	Fixed			
Pan/Tilt/Rotation	Pan:0° ~360° ;Tilt:0° ~90° ;Rotation:0° ~360°			
DORI Distance	Detect	Observe	Recognize	Identify
	28m(92ft)	11m(36ft)	6m(19ft)	3m(9ft)
Video				
Compression	H.265/H.264			
Resolution	6M(3072x2048)/ 4M(2048x2048)/ 3M(2048x1536)/ UXGA(1600x1200)/ 1.3M(1280x960)/ D1(704x576/704x480)/ CIF(352x288/352x240)			
Frame Rate	Main Stream: 6M(1~25/30fps)			
	Sub Stream: D1(1 ~ 25/30fps)			
	Third Stream: 1.3M(1 ~ 25/30fps)			
Bit Rate	H.265: 3Kbps~ 9984Kbps; H.264: 8Kbps~ 16384Kbps			
Audio				
Compression	G.711a/G.711Mu/AAC/ G.726			

INSDO6IRHEM

Product Specifications



Network	
Ethernet	RJ-45 (100/1000Base-T)
Protocol	HTTP;HTTPS;TCP;ARP;RTSP;RTP;UDP;SMTP;FTP;DHCP;DNS;DDNS;PPPOE;IPv4/v6;QoS;UPnP;NTP;Bonjour;802.1x;Multicast;ICMP;IGMP;SNMP
Compatibility	ONVIF, PSIA, CGI
Maximum User Access	10/20 Users
Smart Phone	iOS, Android
Interface	
Video Interface	N/A
Audio Interface	1/1 channel In/Out, 1 Built-in Mic
RS485	N/A
Alarm	2 channel In: 5mA 5VDC 2 channel Out: 1A 30VDC / 0.5A 50VAC
General	
Power Supply	DC12V, PoE (802.3af)(Class 0)
Power Consumption	<12W
Working Environment	-30° C ~ +60° C (-22° F ~ +140° F) / Less than 95% RH
Ingress Protection	IP67
Vandal Protection	IK10
Dimensions	Φ149.8mm×50.7mm(Φ5.9"×2")

Item 3.1.2

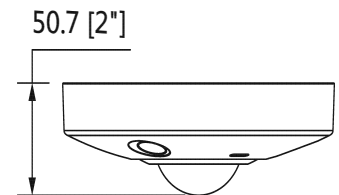
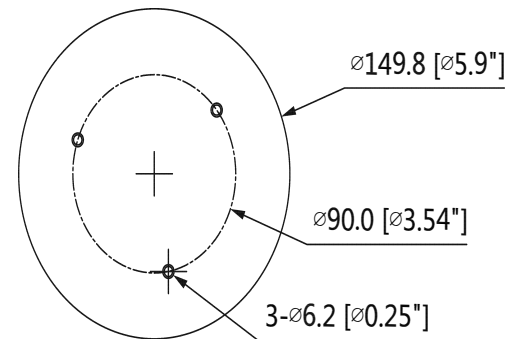
TruVision 360 Indoor Camera,
TVF-3104, or Equal

6MP 360 Degree Hemispheric Camera

- 1/1.8" 6 Megapixel progressive scan STARVIS™ CMOS
- H.265 & H.264 triple-stream encoding
- Maximum 25/30fps at 6MP (3072x2048)
- Multiple De-wrap Mode
- DWDR, Day/Night (ICR), 3DNR, AWB, AGC, BLC
- Smart Detection
- Maximum length of IR LEDs: 10m
- Intelligent Function
- IP67, IK10, PoE



Dimensions(mm)



Popular Mounting Solutions



INSX100
Mount Adapter



INSX105
Mount Adapter



INSX110
Mount Adapter



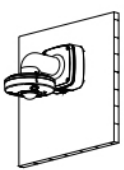
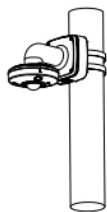
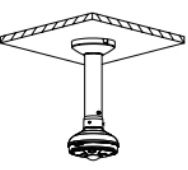
INSX302
Wall Mount



INSX300
Ceiling Mount



INSX152
Pole Mount

Wall Mount	Pole Mount
INSX302 + INSX100	INSX100 + INSX302 + INSX152
	
Ceiling Mount	
INSX105 + INSX110 + INSX300	
	

INSD06IRHEM

Product Specifications



Camera				
Image Sensor	1/1.8" 6MP progressive scan CMOS			
Effective Pixels	3072(H)x2048(V)			
RAM/ROM	1024MB/128MB			
Scanning System	Progressive			
Electronic Shutter Speed	Auto/Manual, 1/3~1/100000s			
Minimum Illumination	0.002Lux/F2.0(Color,1/3s,30IRE); 0.02Lux/F2.0(Color,1/30s,30IRE) 0Lux/F2.0(IR on)			
S/N Ratio	More than 50dB			
IR Distance	Distance up to 10m(33ft)			
IR LEDs	3			
Camera Features				
Day/Night	Auto(ICR) / Color / B/W			
Backlight Compensation	BLC / HLC / DWDR			
White Balance	Auto/Natural/Street Lamp/Outdoor/Manual			
Gain Control	Auto/Manual			
Noise Reduction	3D DNR			
Digital Zoom	16x			
Privacy Masking	4 Areas			
Lens				
Lens Type	Fixed			
Mount Type	Board-in			
Focal Length	1.7mm			
Max. Aperture	F2.0			
Viewing Angle	H: 180°, V:180°			
Optical Zoom	N/A			
Focus Control	Fixed			
Pan/Tilt/Rotation	Pan:0° ~360° ;Tilt:0° ~90° ;Rotation:0° ~360°			
DORI Distance	Detect	Observe	Recognize	Identify
	28m(92ft)	11m(36ft)	6m(19ft)	3m(9ft)
Video				
Compression	H.265/H.264			
Resolution	6M(3072x2048)/ 4M(2048x2048)/ 3M(2048x1536)/ UXGA(1600x1200)/ 1.3M(1280x960)/ D1(704x576/704x480)/ CIF(352x288/352x240)			
Frame Rate	Main Stream: 6M(1~25/30fps)			
	Sub Stream: D1(1 ~ 25/30fps)			
	Third Stream: 1.3M(1 ~ 25/30fps)			
Bit Rate	H.265: 3Kbps~ 9984Kbps; H.264: 8Kbps~ 16384Kbps			
Audio				
Compression	G.711a/G.711Mu/AAC/ G.726			

INSDO6IRHEM

Product Specifications



Network	
Ethernet	RJ-45 (100/1000Base-T)
Protocol	HTTP;HTTPS;TCP;ARP;RTSP;RTP;UDP;SMTP;FTP;DHCP;DNS;DDNS;PPPOE;IPv4/v6;QoS;UPnP;NTP;Bonjour;802.1x;Multicast;ICMP;IGMP;SNMP
Compatibility	ONVIF, PSIA, CGI
Maximum User Access	10/20 Users
Smart Phone	iOS, Android
Interface	
Video Interface	N/A
Audio Interface	1/1 channel In/Out, 1 Built-in Mic
RS485	N/A
Alarm	2 channel In: 5mA 5VDC 2 channel Out: 1A 30VDC / 0.5A 50VAC
General	
Power Supply	DC12V, PoE (802.3af)(Class 0)
Power Consumption	<12W
Working Environment	-30° C ~ +60° C (-22° F ~ +140° F) / Less than 95% RH
Ingress Protection	IP67
Vandal Protection	IK10
Dimensions	Φ149.8mm×50.7mm(Φ5.9"×2")

Item 3.1.3

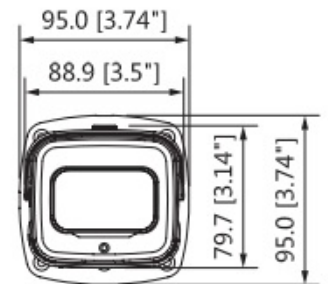
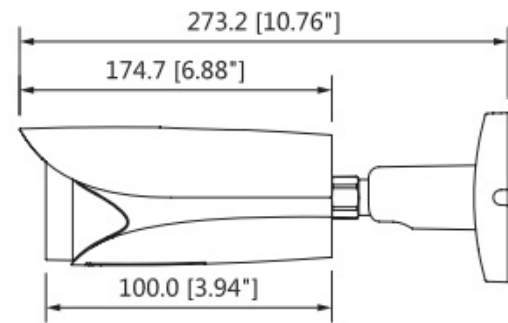
TruVision 360 Outdoor Bullet Cam,
TVB-5501 or equal

6MP WDR IR Bullet Network Camera

- 1/2.9" 6Megapixel progressive scan STARVIS™ CMOS
- H.265&H.264 triple-stream encoding
- 20fps@6M(3072×2048),25/30fps@4M(2688×1520)
- Day/Night(ICR), 3DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, STORM VMS
- 2.7mm ~13.5mm motorized lens
- Maximum length of IR LEDs: 50m
- IP67, IK10, PoE
- Micro SD card memory



Dimensions(mm)



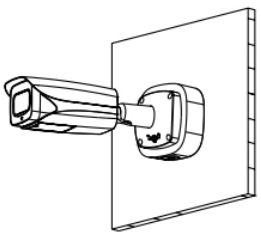
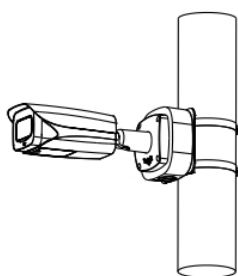
Popular Mounting Solutions



INSX121



INSX152

Junction Mount	Pole Mount
INSX121	INSX121 + INSX152
	

INSBO6IRA

Product Specifications



Camera					
Image Sensor	1/2.9" 6Megapixel progressive scan CMOS				
Effective Pixels	3072(H)x2048(V)				
RAM/ROM	512MB/32MB				
Scanning System	Progressive				
Electronic Shutter Speed	Auto/Manual, 1/3~1/100000s				
Minimum Illumination	0.03Lux/F1.4 (Color,1/3s,30IRE); 0.3Lux/F1.4 (Color,1/30s,30IRE); 0Lux/F1.4(IR on)				
S/N Ratio	More than 50dB				
IR Distance	Distance up to 50m (164ft)				
IR On/Off Control	Auto/ Manual				
IR LEDs	4				
Camera Features					
Day/Night	Auto(ICR) / Color / B/W				
Blacklight Compensation	BLC / HLC / WDR				
White Balance	Auto/Natural/Street Lamp/Outdoor/Manual				
Gain Control	Auto/Manual				
Noise Reduction	3D DNR				
Smart IR	Support				
Digital Zoom	16x				
Privacy Masking	4 Areas				
Lens					
Lens Type	Motorized/ Auto Iris(DC)				
Mount Type	Board-in				
Focal Length	2.7mm~13.5mm				
Max. Aperture	F1.4				
Viewing Angle	H:91°~27° , V:58°~18°				
Focus Control	Motorized				
Pan/Tilt/Rotation	Pan:0°~360°; Tilt:0°~90°; Rotation:0°~360°				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	79m(259ft)	32m(105ft)	16m(52ft)	8m(41ft)
	T	256(840ft)	102m(334ft)	51m(167ft)	25m(84ft)
Video					
Compression	H.265+/H.265/H.264+/H.264				
Resolution	6M(3072x2048)/5M(3072x1728)/ 5M(2592x1944)/ 4M(2688x1520)/ 3M(2048x1536)/ 3M(2304x1296)/ 1080P(1920x1080)/1.3M(1280x960)/ 720P(1280x720)/ D1(704x576/704x480)/ VGA(640x480)/ CIF(352x288/352x240)				
Frame Rate	Main Stream: 6M(1~20fps)/4M(1~25/30fps)				
	Sub Stream: D1 (1 ~ 25/30fps)				
	Third Stream: 720P(1~25/30fps)				
Bit Rate	H.264: 24K ~ 10240Kbps H.265: 14K ~ 9984Kbps				
Audio					
Compression	G.711a/ G.711Mu/ AAC/ G.726				

INSBO6IRA

Product Specifications



Intelligent	
IVS	Tripwire, Intrusion, Object Abandoned/Missing
Adv. Intelligent Functions	Face Detection
Network	
Ethernet	RJ-45 (10/100Base-T)
Protocol	HTTP;HTTPS;TCP;ARP;RTSP;RTP;UDP;SMTP;FTP; DHCP;DNS;DDNS;PPPOE;IPv4/v6;QoS;UPnP;NTP; Bonjour;802.1x;Multicast;IGMP;SNMP
Compatibility	ONVIF, PSIA, CGI
Maximum User Access	10 Users/20 Users
Smart Phone	iOS, Android
Interface	
Video Interface	N/A
Audio Interface	1/1 channel In/Out
RS485	N/A
Alarm	2 channel In: 5mA 5VDC 1 channel Out: 300mA 12VDC
General	
Power Supply	DC12V, PoE (802.3af)(Class 0)
Power Consumption	<12.95W
Working Environment	30° C ~ +60° C (-22° F ~ +140° F) / Less than 95% RH
Ingress Protection	IP67
Vandal Protection	IK10
Dimensions	273.2mm×95.0mm×95.0mm (10.76"×3.74"×3.74")

Item 3.1.4

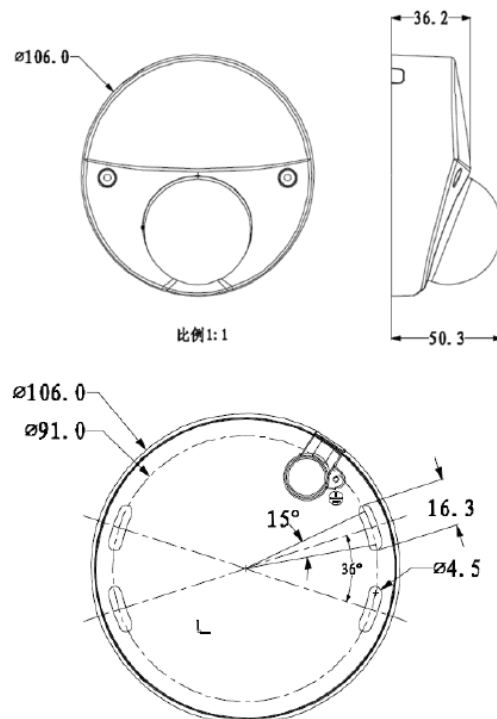
TruVision Wedge IR Camera,
TVF-3102, or equal



4MP WDR IR mini Dome Network Camera w/ fixed lens.

- 1/3" 4 megapixel progressive scan CMOS
- H.265+&H.264+ triple-stream encoding
- 25/30fps@4M(2688×1520)
- Smart Detection supported
- WDR (120dB), Day/Night (ICR), 3DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, STORM VMS
- 2.8mm fixed lens
- Maximum length of IR LEDs: 20m
- Micro SD memory IP67, IK10, PoE

Dimensions (mm)



Popular Mounting Solutions






Junction Box
INSX139



Wall
INSX204



Pole
INSX152

Junction Mount	Pole Mount
INSX139	INSX204 + INSX152
	
Wall Mount	
INSX204	
	

INSWDO4IRWF

Product Specifications



Camera					
Image Sensor	1/3" 4Megapixel progressive scan CMOS				
Effective Pixels	2688(H)x1520(V)				
RAM/ROM	512MB/32MB				
Scanning System	Progressive				
Electronic Shutter Speed	Auto/Manual, 1/3(4)~1/100000s				
Minimum Illumination	0.08Lux/F2.0(Color,1/3s,30IRE); 0.3Lux/2.0(Color,1/30s,30IRE); 0Lux/F2.0(IR on)				
S/N Ratio	More than 50dB				
IR Distance	Distance up to 20m (66ft)				
IR LEDs	10				
Camera Features					
Day/Night	Auto(ICR) / Color / B/W				
Backlight Compensation	BLC / HLC / WDR(120dB)				
White Balance	Auto/Natural/Street Lamp/Outdoor/Manual				
Gain Control	Auto/Manual				
Noise Reduction	3D DNR				
Digital Zoom	16x				
Privacy Masking	4 Areas				
Lens					
Lens Type	Fixed				
Mount Type	Board-in				
Focal Length	2.8mm				
Max. Aperture	F2.0				
Viewing Angle	H: 104° (87°, 55°), V: 57° (48°, 31°)				
Optical Zoom	N/A				
Focus Control	Fixed				
Pan/Tilt/Rotation	Pan:0°~360°; Tilt:0°~90°; Rotation:0°~360°				
DORI	Lens	Detect	Observe	Recognize	Identify
Distance	2.8 mm	63m(207ft)	25m(82ft)	13m(43ft)	6m(20ft)
Video					
Compression	H.265+/H.265/H.264+/H.264				
Resolution	4M(2688x1520)/3M(2304x1296)/ 1080P(1920x1080)/1.3M(1280x960)/ 720P(1280x720)/D1(704x576/704x480)/ VGA(640x480)/CIF(352x288/352x240)				
Frame Rate	Main Stream: 4M(1~25/30fps)				
	Sub Stream: D1(1~25/30fps)				
	Third Stream: 720P(1~25/30fps)				
Bit Rate	H.264: 24K ~ 10240Kbps; H.265: 14K ~ 9984Kbps				
Audio					
Compression	G.711a/ G.711Mu/ AAC/ G.726				

INSWDO4IRWF

Product Specifications



Intelligence	
IVS	Tripwire, Intrusion, Object Abandoned/Missing
Adv. Intelligent Functions	Face Detection
Network	
Ethernet	RJ-45 (10/100Base-T)
Protocol	HTTP;HTTPS;TCP;ARP;RTSP;RTP;UDP;SMTP;FTP; DHCP;DNS;DDNS;PPPOE;IPv4/v6;QoS;UPnP;NTP; Bonjour;802.1x;Multicast;ICMP;IGMP;SNMP
Compatibility	ONVIF, PSIA, CGI
Maximum User Access	10 Users /20 Users
Smart Phone	iOS, Android
Interface	
Video Interface	N/A
Audio Interface	Built-in Mic
RS485	N/A
Alarm	N/A
General	
Power Supply	DC12V, PoE (802.3af)(Class 0)
Power Consumption	<4.5W
Working Environment	-30° C ~ +60° C (-22° F ~ +140° F) / Less than 95% RH
Ingress Protection	IP67
Vandal Protection	IK10
Dimensions	Φ106mm×50.3mm (4.17"×1.98")

Item 3.1.5

TruVision 360 Dome Camera,
TVF-3101, or equal



STORM[™]

by Inaxsys

INSDO5HEM

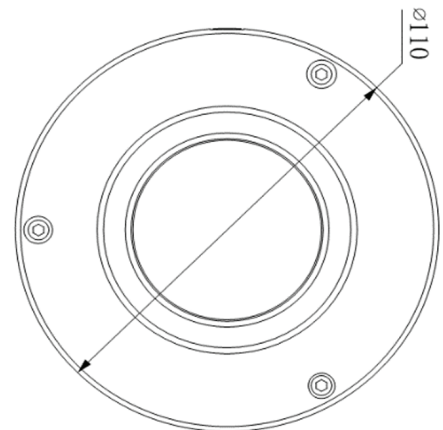
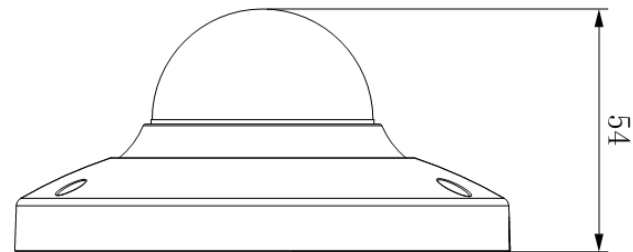
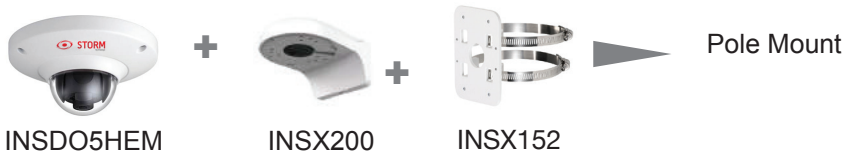
5MP 360° Hemispheric Mini-Dome IP Camera

- 1/3" 5 Megapixel progressive scan CMOS
- H.264 & MJPEG dual-stream encoding
- Max 12fps@5M (2560×1920), 25/30fps@UXGA
- Day/Night (Electronic), 3DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, CMS (DSS/PSS) & DMSS
- 1.42mm fixed lens
- Micro SD memory, IK10, PoE
- Built-in microphone for audio recording



Dimensions (mm)

Popular Mounting Solutions



Junction Box Options



INSDO5HEM

5MP 360° Hemispheric IP Mini-Dome Camera



STORM
by Inaxsys

Camera INSDO5HEM		
Image Sensor	1/3" 5 Megapixel progressive scan CMOS	
Effective Pixels	2592(H)x1944(V)	
Electronic Shutter Speed	Auto/Manual 1/3(4)~1/100000s	
Min. Illumination	0.01lux/F2.6(color), 0.001Lux@F2.6(B/W)	
S/N Ratio	More than 50dB	
Camera Features		
Day/Night	Auto (Electronic)/Color/B/W	
Backlight Compensation	BLC/HLC/DWDR	
White Balance / Gain Control	Auto/Manual on Both	
Noise Reduction	3D	
Privacy Masking	Up to 4 areas	
Lens		
Focal Length / Aperture	1.42mm / F2.6	
Angle of View	H:185°	
Lens Type / Focus	Fixed lens / Manual focus	
Video		
Compression	H.264/ MJPEG	
Resolution	5M (2560'1920)/3M (2048x1520)/UXGA (1600x1200)/1.3M (1280x960)/720P (1280x720)/D1 (704x576/704x480)/CIF (352x288/352x240)	
Frame Rates	Main Stream	5M (1~12fps)/ UXGA (1 ~ 25/30fps)
	Sub Stream	D1/CIF (1 ~ 25/30fps)
	Bit Rate	H.264: 20K ~ 8192Kbps
Audio		
Compression	G.711a/G.711u/PCM	
Interface	1/1 channel In/Out (Built in Mic)	
Network		
Ethernet	RJ-45 (10/100Base-T)	
Protocol	IPv4/IPv6, HTTP, HTTPS, SSL, TCP/IP, UDP, UPnP, ICMP, IGMP, SNMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPOE, DDNS, FTP, IP Filter, QoS, Bonjour	
Compatibility	ONVIF, PSIA, CGI	
Max. User Access	20 users	
Smart Phone	iPhone, iPad, Android, Windows Phone	
Auxiliary Interface		
Memory Slot	Micro SD, Max 64GB	
Alarm	1/1 channel In/Out	
General		
Power Supply / Consumption	DC12V, PoE / Max 6W	
Working Environment	-30°C~+60°C, Less than 95% RH	
Vandal Resistance	IK10	
Dimensions / Weight	110mmx54mm 0.25kg	

Item 3.1.6

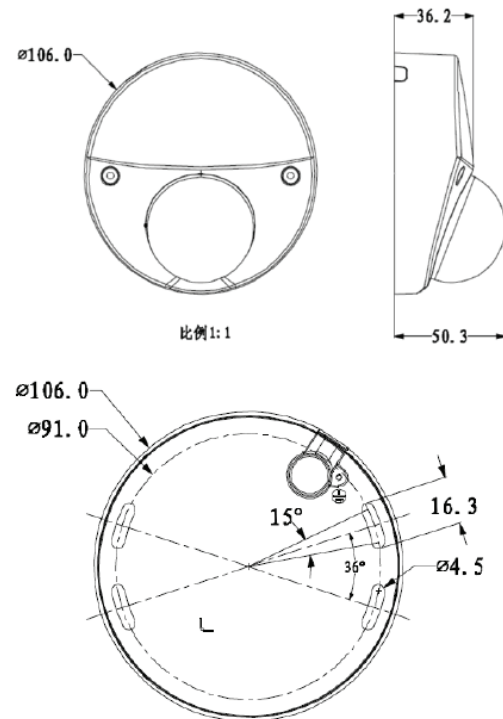
TruVision Wedge IR Camera,
TVW-3101, or equal



2MP WDR IR mini Dome Network Camera w/ fixed lens

- 1/2.8" 2Megapixel progressive scan STARVIS™ CMOS
- H.265+&H.264+ triple-stream encoding
- 50/60fps@2M(1920×1080)
- Smart Detection supported
- WDR (120dB), Day/Night (ICR), 3DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, STORM VMS
- 2.8mm fixed lens
- Maximum length of IR LEDs: 20m
- Micro SD memory, IP67, IK10, PoE

Dimensions (mm)



Popular Mounting Solutions





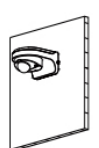
Junction Box
INSX139



Wall
INSX204



Pole
INSX152

Junction Mount	Pole Mount
INSX139	INSX204 + INSX152
	
Wall Mount	
INSX204	
	

INSWDO2IRWF

Product Specifications



Camera					
Image Sensor	1/2.8" 2Megapixel progressive scan CMOS				
Effective Pixels	1920(H)x1080(V)				
RAM/ROM	256MB/32MB				
Scanning System	Progressive				
Electronic Shutter Speed	Auto/Manual, 1/3(4)~1/100000s				
Minimum Illumination	0.009Lux/F2.0(Color,1/3s,30IRE); 0.07Lux/2.0(Color,1/30s,30IRE); 0Lux/F2.0(IR on)				
S/N Ratio	More than 50dB				
IR Distance	Distance up to 20m (66ft)				
IR LEDs	10				
Camera Features					
Day/Night	Auto(ICR) / Color / B/W				
Backlight Compensation	BLC / HLC / WDR(120dB)				
White Balance	Auto/Natural/Street Lamp/Outdoor/Manual				
Gain Control	Auto/Manual				
Noise Reduction	3D DNR				
Digital Zoom	16x				
Privacy Masking	4 Areas				
Lens					
Lens Type	Fixed				
Mount Type	Board-in				
Focal Length	2.8mm				
Max. Aperture	F2.0				
Viewing Angle	H: 110° (87°, 51°), V:58° (48°, 30°)				
Optical Zoom	N/A				
Focus Control	Fixed				
Pan/Tilt/Rotation	Pan:0°~60°; Tilt:0°~80°; Rotation:0°~360°				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	44m(144ft)	17m(56ft)	9m(30ft)	4m(13ft)
Video					
Compression	H.265+/H.265/H.264+/H.264				
Resolution	1080P(1920x1080)/1.3M(1280x960)/720P(1280x720)/D1(704x576/704x480)/VGA(640x480)/CIF(352x288/352x240)				
Frame Rate	Main Stream: 1080P (1~50/60fps)				
	Sub Stream: D1(1~25/30fps)				
	Third Stream: 1080P(1~25/30fps)				
Bit Rate	H.264: 24~9472Kbps; H.265: 14~5632Kbps				
Audio					
Compression	G.711a/ G.711Mu/ AAC/ G.726				

INSWDO2IRWF

Product Specifications



Intelligence	
IVS	Tripwire, Intrusion, Object Abandoned/Missing
Adv. Intelligent Functions	Face Detection
Network	
Ethernet	RJ-45 (10/100Base-T)
Protocol	HTTP;HTTPS;TCP;ARP;RTSP;RTP;UDP;SMTP;FTP; DHCP;DNS;DDNS;PPPOE;IPv4/v6;QoS;UPnP;NTP; Bonjour;802.1x;Multicast;ICMP;IGMP;SNMP
Compatibility	ONVIF, PSIA, CGI
Maximum User Access	10 Users /20 Users
Smart Phone	iOS, Android
Interface	
Video Interface	N/A
Audio Interface	Built-in Mic
RS485	N/A
Alarm	N/A
General	
Power Supply	DC12V, PoE (802.3af)(Class 0)
Power Consumption	<4.5W
Working Environment	-30° C ~ +60° C (-22° F ~ +140° F) / Less than 95% RH
Ingress Protection	IP67
Vandal Protection	IK10
Dimensions	Φ106mm×50.3mm (4.17"×1.98")

Item 3.1.7

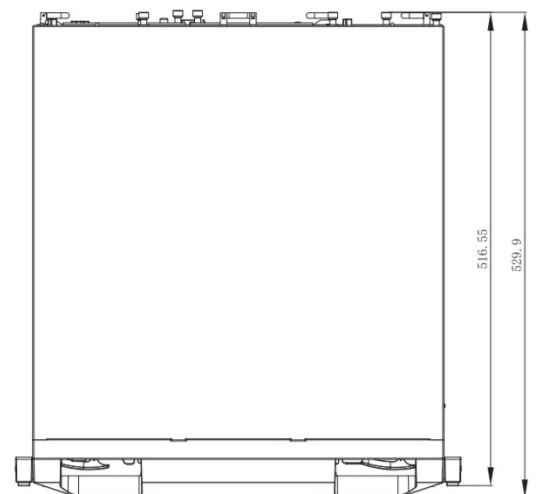
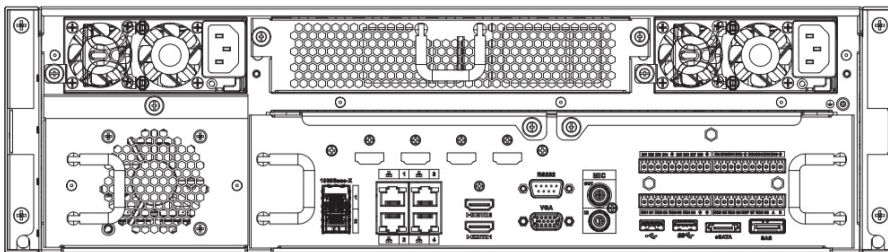
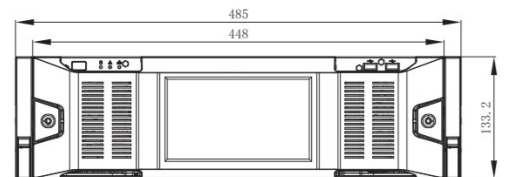
TruVision Network Video Recorder,
TVN-7001-96T, or equal

128 CHANNEL 16 BAY 4K NVR

- Intel Processor
- Max 64/128 IP Camera Inputs
- Max 384Mbps Incoming Bandwidth
- Up to 12MP Resolution for Preview and Playback
- Supports RAID 0/1/5/6/10
- iSCSI and Mini SAS for Expanded Storage Space
- Smart Tracking and Intelligent Video
- Redundant Power & 7-inch HD LCD Monitor



System Drawing



INS128164K

Product Specifications



System	
Main Processor	Intel Quad-core Processor
Operating System	Embedded LINUX
Audio and Video	
IP Camera Input	64/128 Channel
Two-way Talk	1 Channel Input, 1 Channel Output, RCA
Display	
Interface	2 HDMI (up to 3840 x 2160 , Different Source), 1 VGA 4 HDMI (Optional)
Resolution	3840 x 2160 , 1920 x 1080 , 1280 x 1024, 1280 x 720 , 1024 x 768
Multi-screen Display	1st Screen: 1/4/8/9/16/25/36 2nd Screen: 1/4/8/9/16
OSD	Camera title, Time, Video loss, Camera lock, Motion detection, Recording
Recording	
Compression	H.265/H.264/MJPEG
Resolution	12MP, 8MP, 6MP, 5MP, 4MP, 3MP, 1080P, 1.3MP, 720P etc.
Record Rate	384Mbps
Bit Rate	16Kbps ~ 20Mbps Per Channel
Record Mode	Manual, Schedule (Regular, MD (Motion Detection), Alarm, IVS), Holiday, Stop
Record Interval	1 ~ 120 min (default: 60 min), Pre-record: 1 ~ 30 sec, Post-record: 10 ~ 300 sec
Video Detection and Alarm	
Trigger Events	Recording, PTZ, Tour, Alarm Out, Video Push, Email, FTP, Snapshot, Buzzer and Screen Tips
Video Detection	Motion Detection, MD Zones: 396 (22 x 18), Video Loss and Tampering
Alarm input	16 Channel, Low Level Effective, Green Terminal Interface
Relay Output	8 Channel, NO/NC Programmable, Green Terminal Interface
Tracking Trigger Event	Zoom, Tracking, Recording, Preset, Snapshot, Alarm, etc.
Playback and Backup	
Playback	128 Mbps in Raid 5 Mode; 64 Mbps in single HDD Mode
Search Mode	Time /Date, Alarm, MD and Exact Search (accurate to second)
Playback Function	Play, Pause, Stop, Rewind, Fast play, Slow Play, Next File, Previous File, Next Camera, Previous Camera, Full Screen, Repeat, Shuffle, Backup Selection, Digital Zoom
Backup Mode	USB Device/Network/eSATA Device
Third-party Support	
Third-party Support	Dahua, Arecont Vision, AXIS, Bosch, Brickcom, Canon, CP Plus, Dynacolor, Honeywell, Panasonic, Pelco, Samsung, Sanyo, Sony, Videotec, Vivotek, and more

INS128164K

Product Specifications



Network	
Interface	4 RJ-45 Ports (10/100/1000Mbps)
Ethernet Port	4 Ethernet Ports Joint Working or 4 Independent 1000Mbps Ethernet Ports
PoE	N/A
Network Function	HTTP, HTTPs, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP, Alarm Server, IP Search (Support Dahua IP camera, DVR, NVS, etc.)
Optical Fiber Interface	2 Giga Optical Fiber Interface
Max. User Access	128 users
Smart Phone	iPhone, iPad, Android
Interoperability	ONVIF 2.4, CGI Conformant
Storage	
Internal HDD	16 SATA III Ports, Up to 8 TB capacity for each HDD
HDD Mode	Single, Raid 0/1/5/6/10(Enterprise-level HDDs are recommended), Support Global HDD Hot-spare
eSATA	1 eSATA Port (Please contact technical engineer to confirm the compatible device)
SAS	1 Mini SAS Port, for Storage Expansion
Auxiliary Interface	
Front Cover	Support Hot-swap, 7-inch HD LCD (1920 × 1080 , 1280 × 1024, 1024 × 768)
USB	4 USB Ports (2 USB 2.0 , 2 USB 3.0)
RS232	1 Port, for PC Communication and Keyboard
RS485	1 Port, for PTZ Control
Electrical	
Power Supply	AC100V ~ 240V, 50 ~ 60 Hz, Redundant
Power Consumption	<51W (Without HDD)
Environmental	
Operating Conditions	-10°C ~ +55°C (+14°F ~ +131°F), 86 ~ 106kpa
Storage Conditions	20°C ~ +70°C (-4°F ~ +158°F), 0 ~ 90% RH
Construction	
Dimensions	3U, 485mm x 529.9mm x 133.2mm (19.1" x 20.9"x 5.2")

Item 3.1.8

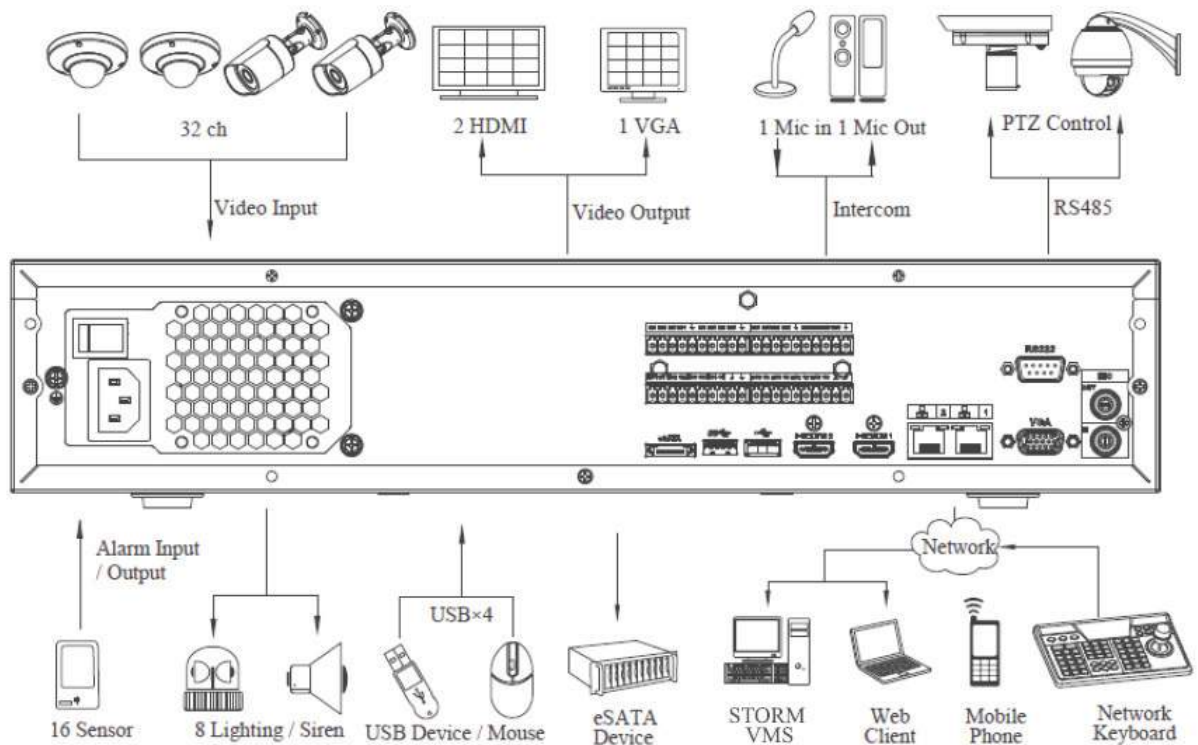
TruVision NVR-2IP, TVN2132P-32,
or equal



32CH 4K Network Video Recorder

- Maximum of 32 IP cameras supported
- Maximum 384 Mbps incoming bandwidth
- Up to 12MP resolution in preview & playback
- 1 VGA+2 HDMI
- Supports RAID 0 / 1 / 5 / 6 / 10 / 50 / 60
- Supports N+M hot standby
- Supports iSCSI to expand storage space
- All channels synchronous realtime playback, GRID interface
- Supports multiple brands of network cameras
- Supports 8 SATA HDDs up to 48TB
- 4 USB ports (3 USB 2.0, 1 USB 3.0)
- 1 eSATA port
- Multiple network monitoring: Web viewer, STORM CMS
- ONVIF Version 2.4 conformance

System Connection



INS324K

Product Specifications



System	
Main Processor	Intel Processors
Operating System	LINUX
Video & Audio	
IP Camera Inputs	32 channels
Two-way Voice	1channel Input, 1channel Output, RCA
Display	
Interface	2 HDMI (up to 3840 × 2160), 1 VGA
Resolution	3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720, 1024 × 768
Multi-screen Display	The 1 st screen: 1 / 4 / 8 / 9 / 16 / 25 / 36; the 2 nd screen: 1 / 4 / 8 / 9 / 16
OSD	Camera title, Time, Video loss, Camera lock, Motion detection, Recording
Recording	
Compression	H.264H / H.264 / MJPEG
Resolution	12MP, 8MP, 6MP, 5MP, 3MP, 1080P, 1.3MP, 720P, etc.
Recording Rate	256 Mbps
Bit Rate	1~ 20 Mbps
Recording Mode	Manual, Schedule (Regular (Continuous), MD (Video detection: Motion detection, Camera blank, Video loss), Alarm), Stop
Recording Interval	1~120 min (default: 60min), Pre-record: 1~30 sec, Post-record: 10~300 sec
Video Detection & Alarm	
Trigger Events	Recording, PTZ, Tour, Alarm out, Video Push, Email, FTP, Snapshot, Buzzer & Screen tips
Video Detection	Motion Detection, MD Zones: 396 (22×18), Video Loss & Camera Obscured
Alarm Input	16ch
Relay Output	8ch, Relay contact (1A at 24VDC), NO/NC programmable, green terminal interface
Playback & Backup	
Playback	128Mbps in Raid 5 mode, 64Mbps in single HDD mode
Search Mode	Time/Date, Alarm, MD & Exact search (accurate to second), Smart search
Playback Function	Play, Pause, Stop, Rewind, Fast play, Slow play, Next file, Previous file, Next camera, Previous camera, Full screen, Repeat, Shuffle, Backup selection, Digital zoom
Backup Mode	USB Device / Network / eSATA Device
Network	
Interface	2 RJ-45 ports (10/100/1000Mbps)
Ethernet Port	2 Ethernet ports jointly working or 2 independent 1000 Mbps Ethernet ports
Network Function	HTTP, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP, Alarm Server, IP Search
Maximum User Access	128 users
Smart Phone	iPhone, iPad, Android, Windows Phone
Storage	
Internal HDD	8 SATA 3 ports, up to 48TB
HDD Mode	Single, Raid 0 / 1 / 5 / 6 / 10 / 50 / 60 (Support global HDD hot-spare)
Auxiliary Interface	
USB	4 USB ports (3 USB 2.0, 1 USB 3.0)
eSATA	1 eSATA port
RS232	1 port, For PC communication & keyboard
RS485	1 port, For PTZ control
General	
Power Supply	AC110V~240V, 50~60Hz, Less than 40W (without HDD)
Working Environment	-10°C to +55°C / 10% to 90% RH / 86 to 106kpa
Dimension / Weight	482mm × 450mm × 91mm / 9 kg (without HDD)

32CH 4K Network Video Recorder Model Numbers:

INS324K4T: 32CH 4K Network Video Recorder **W/4TB** of Storage
INS324K6T: 32CH 4K Network Video Recorder **W/6TB** of Storage
INS324K8T: 32CH 4K Network Video Recorder **W/8TB** of Storage
INS324K10T: 32CH 4K Network Video Recorder **W/10TB** of Storage
INS324K12T: 32CH 4K Network Video Recorder **W/12TB** of Storage
INS324K16T: 32CH 4K Network Video Recorder **W/16TB** of Storage
INS324K20T: 32CH 4K Network Video Recorder **W/20TB** of Storage

INS324K24T: 32CH 4K Network Video Recorder **W/24TB** of Storage
INS324K28T: 32CH 4K Network Video Recorder **W/28TB** of Storage
INS324K32T: 32CH 4K Network Video Recorder **W/32TB** of Storage
INS324K36T: 32CH 4K Network Video Recorder **W/36TB** of Storage
INS324K40T: 32CH 4K Network Video Recorder **W/40TB** of Storage
INS324K44T: 32CH 4K Network Video Recorder **W/44TB** of Storage
INS324K48T: 32CH 4K Network Video Recorder **W/48TB** of Storage

Item 3.1.9

TruVision 360 Degree Dome Round
Back Box (mount), or equal

INSX132



INSX132

Waterproof Junction Box

- Material: Aluminum
- Dimensions: 150mm x 150mm x 40mm
- Color: White
- Type of Installation: Wall
- Net Weight: 0.6kg
- Load Bearing Capacity: 3kg

Item 3.1.10

TruVision 360 Cup Base (mount), or equal

INSX100



INSX100
Mount Adapter

- Material: Aluminum
- Dimensions: 150.8mm x 37mm
- Color: White
- Type of Installation: Suspended
- Net Weight: 0.2kg
- Load Bearing Capacity: 3kg

Item 3.1.11

TruVision 360 Degree Dome Round
Angle Back Box (mount), or equal

INSX132



INSX132

Waterproof Junction Box

- Material: Aluminum
- Dimensions: 150mm x 150mm x 40mm
- Color: White
- Type of Installation: Wall
- Net Weight: 0.6kg
- Load Bearing Capacity: 3kg

Item 3.1.12

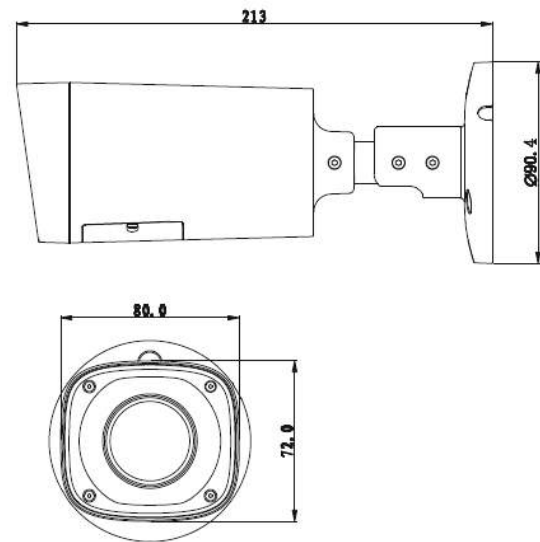
TruVision Bullet Camera,
TVB-4404, or equal



2.4MP HDCVI Bullet Camera with Autofocus and IR

- 1/2.8" 2.4 Megapixel CMOS
- 25/30fps at 1080P, 25/30/50/60fps at 720P
- High speed, long distance real-time transmission over COAX
- 1080P and standard definition switchable
- OSD Menu, control over coaxial cable
- DWDR, Day/Night (ICR), AWB, AGC, BLC, 3D-DNR
- 2.7~12mm motorized lens with autofocus
- Maximum length of IR LEDs: 30m, Smart IR
- IP67, DC12V
- Outdoor / Indoor

Dimensions(mm)



Popular Mounting Solutions



+



JUNCTION BOX

INSBO24IRCA

INSX135



+



+



POLE MOUNT

INSBO24IRCA

INSX135

INSX150

Accessories



INSXBALUN



Power Supply:

- SW1205-4CB
- SW1205-8CB
- SW1210-8CB
- SW1210-16CB

INSBO24IRCA

Product Specifications



Camera	
Image Sensor	1/2.8" 2.4 Megapixel CMOS
Effective Pixels	1984(H) × 1225(V)
Electronic Shutter	1/3s~1/100,000s
Video Frame Rate	25/30/50/60fps at 720P; 25/30fps at 1080P
Synchronization	Internal
Minimum Illumination	0.05 Lux at F1.2 (AGC ON), 0 Lux IR on
Video Output	1-channel BNC HDCVI high definition video output / CVBS standard definition video output (Can switch)
Camera Features	
Maximum length of IR LEDs	30m, Smart IR
Day/Night	Auto (ICR) / Color / B/W
Noise Reduction	2D/3D
OSD Menu	Support
Lens	
Focal Length	2.7~12mm
Viewing Angle	H: 105.5°
Lens Type	Motorized / Fixed Iris
Mount Type	14
General	
Power Supply	DC12V±10%
Power Consumption	Maximum 7.5W
Working Environment	-30°C to +60°C / Less than 95% RH (no condensation)
Transmission Distance	Over 500m via 75-3 coaxial cable
Ingress Protection	IP67
Dimensions (W×D×H)	213mm × 80mm × 72mm
Weight	0.55 kg
Material	Metal

Item 3.1.13

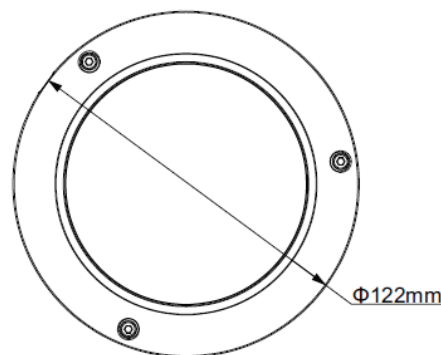
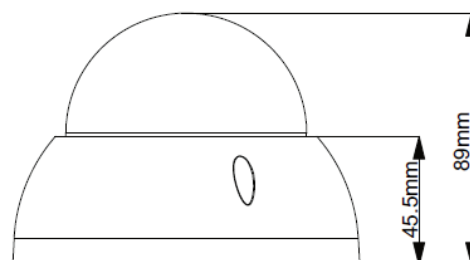
TruVision Dome Camera,
TVD-4404, or equal

2.1MP 1080P Dome Camera with IR and WDR

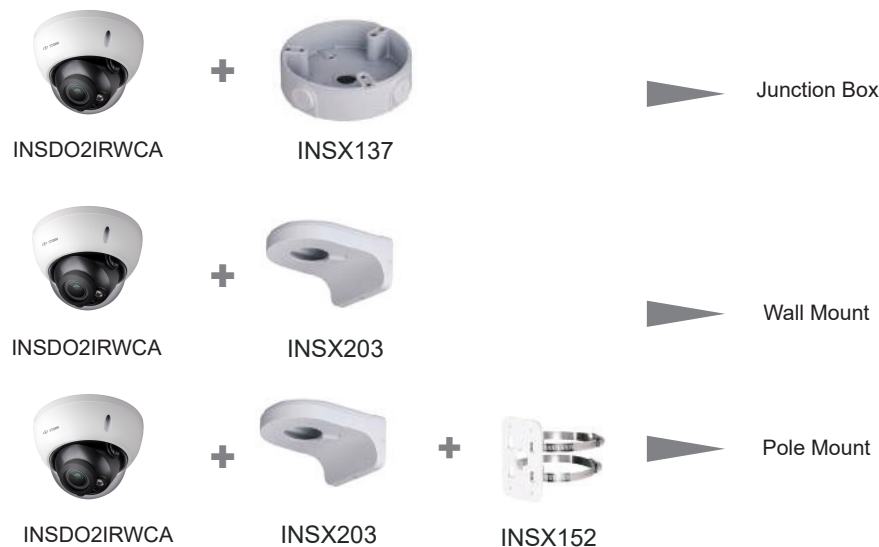
- 1/2.7" 2.1 megapixel CMOS
- 25/30 fps @1080P and 25/30/50/60fps @720P
- High speed, long distance real-time transmission
- HD and SD dual-output
- OSD Menu, control over coaxial cable (or twisted pair with balun)
- True WDR(120dB), Day/Night(ICR), AWB, AGC, BLC, 3DNR
- 2.7 - 12mm motorized lens
- Maximum length of IR LEDs: 30m, Smart IR
- IP67, IK10, DC12V



Dimensions (mm)



Popular Mounting Solutions



Accessories



INSXBALUN



Power Supply:

SW1205-4CB
SW1205-8CB
SW1210-8CB
SW1210-16CB

INSDO2IRWCA

Product Specifications



Camera	
Image Sensor	1/2.7" 2.1Megapixel CMOS
Effective Pixels	1928(H)×1088(V)
Scanning System	Progressive
Electronic Shutter Speed	PAL: 1.3s~1/30000s NTSC: 1s~1/30000s
Minimum Illumination	0.03Lux/F1.4, 0Lux IR on
S/N Ratio	More than 65dB
IR Distance	Up to 30m (98feet)
Camera Features	
Day/Night	Auto (ICR) / Manual
Blacklight Compensation	BLC / HLC / WDR (120dB)
White Balance	Auto / Manual
Gain Control	AGC
Noise Reduction	2D / 3D
Lens	
Lens Type	Motorized lens / Fixed iris
Mount Type	Board-in
Focal Length	2.7-12mm
Max. Aperture	F1.4
Viewing Angle	H: 99°~37°
Focus Control	Auto / Manual
Pan/Tilt/Rotation	Pan:0°~355°; Tilt:0°~75°; Rotation:0°~355°
Video	
Resolution	1080P (1920×1080)
Frame Rate	25/30fps@1080P, 25/30/50/60fps@720P
Video Output	1-channel BNC HDCVI high definition video output & 1-channel BNC CVBS video output CVBS tester out
General	
Power Supply	12V DC ±25%
Power Consumption	Max 5W (12V DC, IR on)
Working Environment	-30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
Ingress Protection	IP67
Vandal Protection	IK10
Dimensions	Φ122mm×88.9mm (Φ4.8"×3.5")

Item 3.1.14

TruVision TVR-4508HD-8T (8 Channel),
or equal

8 channel Mini 1U Universal Video Recorder (UVR)

- Supports HDCVI/ AHD/ TVI/ CVBS and IP video inputs
- H.264+ and H.264 dual stream video compression
- 1080P non-realtime recording
- Each channel supports up to 5 megapixels
- HDMI and VGA simultaneous video outputs
- Supports 1 SATA HDD, **8TB**



INS81UVR Product Specification

System	
Main Processor	Embedded Processor
Operating System	Embedded LINUX
Video & Audio	
IP Camera Inputs	8 channels
Audio	Audio in and out
Display	
Interface	1 HDMI, 1 VGA
Resolution	1920 × 1080 , 1280 × 1024, 1280 × 720 , 1024 × 768
Multi-screen display	1/ 4/ 8/ 9/ 16
OSD	Camera title, Time, Video loss, Camera lock, Motion detection, Recording
Recording	
Compression	H.264+ / H.264
Resolution	1080P, 720P, 960H, D1, HD1, BCIF, CIF, QCIF
Recording Rate	Main stream: 1080P(1-15fps) 720P/ 960H/ D1/ HD1/ BCIF/ CIF/ QCIF (1-25/30fps) Sub stream: D1/ CIF/ QCIF (1-25/30fps)
Bit Rate	1Kbps - 6144Kbps per channel
Recording Mode	Manual, Scheduled (Regular, Continuous), MD (Video detection: Motion Detection, Camera Blank, Video Loss), Alarm, Stop
Recording Interval	1 - 60 min (default: 60 min), Pre-record: 1 - 30 sec, Post-record: 10 - 300 sec

INS81UVR

Product Specification



Video Detection & Alarm	
Trigger Events	Recording, PTZ, Tour, Alarm Out, Video Push, Email, FTP, Snapshot, Buzzer and Screen Tips
Video Detection	Motion Detection, MD Zones: 396 (22 × 18), Video Loss, Tampering and Diagnosis
Playback & Backup	
Sync Playback	1/ 4/ 9
Search Mode	Time / Date, Alarm, MD and Exact Search (accurate to second)
Playback Functions	Play, Pause, Stop, Rewind, Fast play, Slow Play, Next File, Previous File, Next Camera, Previous Camera, Full Screen, Repeat, Shuffle, Backup Selection, Digital Zoom
Backup Mode	USB Device/Network
Network	
Interface	1 RJ-45 Port (100Mbps)
Network Functions	HTTP, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP, Alarm Server, P2P, IP Search (Support STORM IP camera, DVR, NVS, etc.)
Maximum user access	128 users
Smart Phone	iPhone, iPad, Android
Storage	
Internal HDD	1 SATA Port, up to 8TB capacity
USB	2.0 USB
General	
Power Supply	DC12V/2A
Power Consumption	More than 10W (without HDD)
Working Environment	-10°C to 55°C (14°F to 131°F), 86 - 106kpa
Dimension (W×D×H)	Mini 1U, 325mm × 255mm × 55mm
Weight	1.5kg (3.3 lb) (without HDD)

8 channels Mini 1U Universal Video Recorder (UVR):

- INS81UVR:** 8 channels with no TB of storage
- INS81UVR2T:** 8 channels with **2TB** of storage
- INS81UVR4T:** 8 channels with **4TB** of storage
- INS81UVR6T:** 8 channels with **6TB** of storage
- INS81UVR8T:** 8 channels with **8TB** of storage

Item 3.1.14

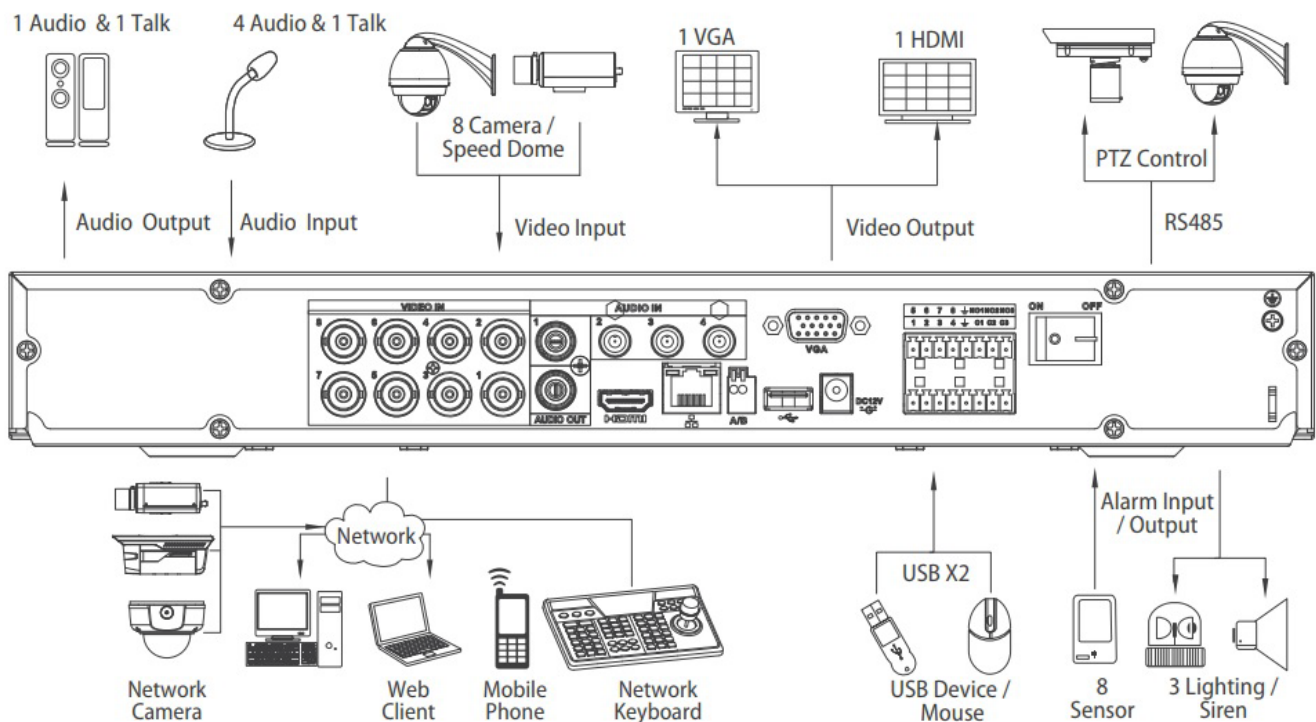
TruVision TVR-4516HD-12 (16 Channel),
or equal

16 Channel Penta-brid 1080P 1U
Digital Video Recorder



- Embedded processor
- H.264+/H.264 dual-stream video compression
- Support HDCVI/AHD/TVI/CVBS/IP video inputs
- Max 6/12/24 channels IP camera inputs, each channel up to 5MP
- Max 24/48/96Mbps Incoming Bandwidth
- Smart Search and Intelligent Video System

System Connection



INS162UVR

Product Specification



System	
Main Processor	Embedded Processor
Operating System	Embedded LINUX
Display	
Interface	1 HDMI ,1 VGA
Resolution	1920×1080, 1280×1024, 1280×720, 1024×768
Multi-screen Display	1/4/8/9/16/25
OSD	Camera title, Time, Video loss, Camera lock, Motion detection, Recording
Video Detection and Alarm	
Trigger Events	Recording, PTZ, Tour, Alarm Out, Video Push, Email, FTP, Snapshot, Buzzer and Screen Tips
Video Detection	Motion Detection, MD Zones: 396 (22 × 18), Video Loss, Tampering and Diagnosis
Alarm input	8/8/16
Relay Output	3
Playback and Backup	
Playback	1/4/9/16
Search Mode	Time /Date, Alarm, MD and Exact Search (accurate to second)
Playback Function	Play, Pause, Stop, Rewind, Fast play, Slow Play, Next File, Previous File, Next Camera, Previous Camera, Full Screen, Repeat, Shuffle, Backup Selection, Digital Zoom
Backup Mode	USB Device/Network
Storage	
Internal HDD	2 SATA Ports, up to 8TB capacity for each disk
eSATA	N/A
Auxiliary Interface	
USB	2 USB Ports (1 USB 2.0 , 1 USB 3.0)
RS232	N/A
RS485	1 Port, for PTZ Control
Third-party Support	
Third-party Support	Dahua, Arecont Vision, AXIS, Bosch, Brickcom, Canon, CP Plus, Dynacolor, Honeywell, Panasonic, Pelco, Samsung, Sanyo, Sony, Videotec, Vivotek, and more
Audio and Video	
HDCVI Camera Input	4/8/16 Channel
IP Camera Input	4+2/8+4/16+8 Channel, each channel up to 5MP
Audio In/Out	4 Channel input,1 Channel output, RCA
Two-way Talk	Reuse audio in(channel 1)/out, RCA

INS162UVR

Product Specification



Recording	
Compression	H.264+/H.264
Resolution	1080P, 720P, 960H, D1, HD1, BCIF, CIF, QCIF
Record Rate	Main stream: 1080P/720P/960H/D1/HD1/BCIF/CIF/ QCIF (1~25/30fps)
	Sub stream: D1/CIF/QCIF(1~25/30fps)
Bit Rate	1Kbps ~ 6144Kbps Per Channel
Record Mode	Manual, Schedule (Regular, Continuous), MD (Video detection: Motion Detection, Video Loss, Tampering), Alarm, Stop
Record Interval	1 ~ 60 min (default: 60 min), Pre-record: 1 ~ 30 sec, Post-record: 10 ~ 300 sec
Network	
Interface	1 RJ-45 Port (1000M)
Network Function	HTTP, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP, Alarm Server, P2P, IP Search (Support Inaxsys IP camera, DVR, NVS, etc.)
Max. User Access	128 users
Interoperability	ONVIF 2.42, CGI Conformant
General	
Power Supply	DC12V/5A
Power Consumption	<15W (Without HDD)
Working Environment	-10°C ~ +55°C (+14°F ~ +131°F), 0~ 90% RH
Weight	2.35kg (5.2 lb) (without HDD)
Dimensions	1U, 375mm×287mm×53mm (14.8" x 11.3" x 2.1")

16 Channel Penta-brid Digital Video Recorder:

INS162UVR: 16channels with no TB of storage

INS162UVR2T: 16 channels with **2TB** of storage

INS162UVR4T: 16 channels with **4TB** of storage

INS162UVR6T: 16 channels with **6TB** of storage

INS162UVR8T: 16 channels with **8TB** of storage

INS162UVR10T: 16 channels with **10TB** of storage

INS162UVR12T: 16 channels with **12TB** of storage

INS162UVR14T: 16 channels with **14TB** of storage

INS162UVR16T: 16 channels with **16TB** of storage



NITRO CONSTRUCTION SERVICES