



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 3

List View

General Information Contact Default Values Discount Document Information Clarification Request

Procurement Folder: 2011308

Procurement Type: Central Purchase Order

Vendor ID: VS0000045819

Legal Name: SWIPE RESOURCES LLC

Alias/DBA: HAMZA MASUD

Total Bid: \$89,250.00

Response Date: 07/23/2026

Response Time: 9:30

Responded By User ID: swiperesources

First Name: Hamza

Last Name: Masud

Email: hamza.masud@swiperesou

Phone: 7038706182

SO Doc Code: CRFQ

SO Dept: 0705

SO Doc ID: LOT2700000001

Published Date: 7/8/26

Close Date: 7/23/26

Close Time: 13:30

Status: Closed

Solicitation Description: Lottery Network Equipment - Cisco Wireless Access Points

Total of Header Attachments: 3

Total of All Attachments: 3



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

State of West Virginia
Solicitation Response

Proc Folder: 2011308
Solicitation Description: Lottery Network Equipment - Cisco Wireless Access Points
Proc Type: Central Purchase Order

Solicitation Closes	Solicitation Response	Version
2026-07-23 13:30	SR 0705 ESR07232600000000479	1

VENDOR
VS0000045819
SWIPE RESOURCES LLC

Solicitation Number: CRFQ 0705 LOT27000000001
Total Bid: 89250
Response Date: 2026-07-23
Response Time: 09:30:48
Comments:

FOR INFORMATION CONTACT THE BUYER
Brandon L Barr
304-558-2652
brandon.l.barr@wv.gov

Vendor
Signature X **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	Wireless access point	51.00000	EA	1750.000000	89250.00

Comm Code	Manufacturer	Specification	Model #
43222640			

Commodity Line Comments: Cisco Wireless 9176I(W7,3 radio,3 band 4x4,UWB), Global and Meraki MR Advanced License and Support, 3YR

Extended Description:

See the specifications and Exhibit A - Pricing Page for more details

EXHIBIT A – Pricing Page

Section	Description	Manufacturer and Model if Bidding "or Equal" products	Unit of Measure	Quantity	Unit Cost	Extended Cost
3.1.1	Cisco CW9176I-RTG (indoor, internal antenna) Wi-Fi 7 wireless access points	Cisco Wireless 9176I(W7,3 radio,3 band 4x4,UWB), Global, Meraki MR Advanced License and Support, 3YR	Each	51	\$ 1,750.00	\$ 89,250.00
			Overall Total Cost		\$ 89,250.00	

Please note: This information is being captured for auditing purposes.

Any product or service not on the Agency provided Pricing Page will not be allowable. The state cannot accept alternate pricing pages, failure to use Exhibit-A Price Page or a No-Bid may lead to disqualification of vendors bid. Bid responses that propose an "or equal" product instead of the specified products must include evidence demonstrating that the substitute part number meets or exceeds the standards set forth by the attached specifications.

Vendor should type or electronically enter the information into the Pricing Page to prevent errors in the evaluation.

BIDDER /VENDOR INFORMATION:

Vendor Name:	Swipe Resoures LLC
Address:	7491 Flag Point Ct.
City, St. Zip:	Manassas, VA 20109
Phone No.:	(703) 870-6182
Email Address:	hamza.masud@swiperesources.com

7/23/2026

HAMZA MASUD

Vendor Signature:

Date:



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

State of West Virginia
Centralized Request for Quote
Info Technology

Proc Folder: 2011308

Doc Description: Lottery Network Equipment - Cisco Wireless Access Points

Reason for Modification:

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2026-07-08	2026-07-23 13:30	CRFQ 0705 LOT2700000001	1

BID RECEIVING LOCATION

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

VENDOR

Vendor Customer Code:

Vendor Name : Swipe Resources LLC

Address : 7491 Flag Point Ct.

Street :

City : Manassas

State : VA

Country : USA

Zip : 20109

Principal Contact : Hamza Masud

Vendor Contact Phone: (703) 870-6182

Extension:

FOR INFORMATION CONTACT THE BUYER

Brandon L Barr
304-558-2652
brandon.l.barr@wv.gov

Vendor
Signature X *H. Masud*

FEIN# 85-1143501

DATE 7/23/2026

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

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. **PRE-BID MEETING:** The item identified below shall apply to this Solicitation.

☒ A pre-bid meeting will not be held prior to bid opening

☐ 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 individual is permitted to represent more than one vendor at the pre-bid meeting. Any individual that does attempt to represent two or more vendors will be required to select one vendor to which the individual's attendance will be attributed. The vendors not selected will be deemed to have not attended the pre-bid meeting unless another individual attended on their behalf.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying 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. 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.

Bids submitted in paper, facsimile, or via wvOASIS must contain a signature. Failure to submit a bid in any form without a signature will result in rejection of your bid.

A bid submitted in paper or facsimile form should contain the information listed below on the face of the submission envelope or fax cover sheet. Otherwise, the bid may be rejected by the Purchasing Division.

VENDOR NAME:
BUYER: Brandon Barr
SOLICITATION NO.: CRFQ LOT2700000001
BID OPENING DATE: July 23, 2026
BID OPENING TIME: 1:30pm ET
FAX NUMBER: (304) 558-3970

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.

Bid Delivery Address and Fax Number:

Department of Administration, Purchasing Division 2019 Washington Street East
Charleston, WV 25305-0130
Fax: 304-558-3970

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 or via delivery by mail).

Bid Opening Date and Time: Thursday, July 23, 2026 by 1:30pm ET

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 Acknowledgement Form. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

15A. RECIPROCAL PREFERENCE: The State of West Virginia applies a reciprocal preference to all solicitations for commodities and printing in accordance with W. Va. Code § 5A-3-37(b). In effect, non-resident vendors receiving a preference in their home states, will see that same preference granted to West Virginia resident vendors bidding against them in West Virginia. Any request for reciprocal preference must include with the bid any information necessary to evaluate and confirm the applicability of the preference. A request form to help facilitate the request can be found at: www.state.wv.us/admin/purchase/vrc/Venpref.pdf.

15. SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES:

For any solicitations publicly advertised for bid, in accordance with West Virginia Code § 5A-3-37 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.

16. 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 § 148-1-4.7.

17. 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.

18. 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.”

19. ACCEPTANCE/REJECTION: The State may accept or reject any bid in whole, or in part in accordance with W. Va. Code of State Rules § 148-1-4.6. and § 148-1-6.3.”

GENERAL TERMS AND CONDITIONS:

1. CONTRACTUAL AGREEMENT: Issuance of an Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance by the State of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid, or on the Contract if the Contract is not the result of a bid solicitation, 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.

☐ **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:

☐ the contract will continue for _____ years;

☐ the 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).

☒ **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.

☐ **Construction/Project Oversight:** This Contract becomes effective on the effective start date listed on the first page of this Contract, identified as the State of West Virginia contract cover page containing the signatures of the Purchasing Division, Attorney General, and Encumbrance clerk (or another page identified as _____), and continues until the project for which the vendor is providing oversight is complete.

☐ **Other:** Contract Term specified in _____

4. AUTHORITY TO PROCEED: Vendor is authorized to begin performance of this contract on the date of encumbrance listed on the front page of the Award Document unless either the box for "Fixed Period Contract" or "Fixed Period Contract with Renewals" has been checked in Section 3 above. If either "Fixed Period Contract" or "Fixed Period Contract with Renewals" has been checked, Vendor must not begin work until it receives a separate notice to proceed from the State. The notice to proceed will then be incorporated into the Contract via change order to memorialize the official date that work commenced.

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/Award Document 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.

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

Vendor must maintain:

☒ **Commercial General Liability Insurance** in at least an amount of: \$1,000,000.00 per occurrence.

☐ **Automobile Liability Insurance** in at least an amount of: _____ per occurrence.

☐ **Professional/Malpractice/Errors and Omission Insurance** in at least an amount of: _____ per occurrence. Notwithstanding the foregoing, Vendor's are not required to list the State as an additional insured for this type of policy.

☐ **Commercial Crime and Third Party Fidelity Insurance** in an amount of: _____ per occurrence.

☐ **Cyber Liability Insurance** in an amount of: _____ per occurrence.

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

☐ **Pollution Insurance** in an amount of: _____ per occurrence.

☐ **Aircraft Liability** in an amount of: _____ per occurrence.

☐

☐

☐

☐

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, included in the Contract, 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. If that occurs, the State may notify the Vendor that an alternative source of funding has been obtained and thereby avoid the automatic termination. Non-appropriation or non-funding shall not be considered an event of default.

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 regarding 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.

31. YOUR SUBMISSION IS A PUBLIC DOCUMENT: Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 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.

32. LICENSING: In accordance with West Virginia Code of State Rules § 148-1-6.1.e, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. 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.

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

34. VENDOR NON-CONFLICT: Neither Vendor nor its representatives are permitted to have any interest, nor shall they 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.

39. 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.division@wv.gov.

40. BACKGROUND CHECK: In accordance with W. Va. Code § 15-2D-3, 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.

41. 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.
- c. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:
 1. 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
 2. 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. PROHIBITION AGAINST USED OR REFURBISHED: Unless expressly permitted in the solicitation published by the State, Vendor must provide new, unused commodities, and is prohibited from supplying used or refurbished commodities, in fulfilling its responsibilities under this Contract.

45. VOID CONTRACT CLAUSES: This Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

46. ISRAEL BOYCOTT: Bidder understands and agrees that, pursuant to W. Va. Code § 5A-3-63, it is prohibited from engaging in a boycott of Israel during the term of this contract.

REQUEST FOR QUOTATION
West Virginia Lottery Networking Equipment

SPECIFICATIONS

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of West Virginia Lottery to establish a contract for the one-time purchase of networking infrastructure equipment, Cisco CW9176I-RTG (indoor, internal antenna) Wi-Fi 7 wireless access points with support and maintenance included.
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”** means networking infrastructure equipment with support and maintenance included, for West Virginia Lottery Data Centers as more fully described in these specifications.
 - 2.2 **“Pricing Page”** means the pages, contained in wvOASIS or attached as Exhibit A, upon which Vendor should list its proposed price for the Contract Items.
 - 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.
3. **GENERAL REQUIREMENTS:**
 - 3.1 **Mandatory Contract Item Requirements:** Contract Item must meet or exceed the mandatory requirements listed below.
 - 3.1.1 **Contract Item #1 – Vendor must provide Fifty-One (51) Cisco CW9176I-RTG (indoor, internal antenna) Wi-Fi 7 wireless access points**

Each access point must include:

 - 3.1.2 Tri-band (2.4 GHz, 5 GHz, 6 GHz) client-serving radios.
 - 3.1.3 4x4:4 MU-MIMO and OFDMA capability on each client-serving radio in accordance with IEEE 802.11be (Wi-Fi 7), providing a total of twelve (12) client spatial streams.
 - 3.1.4 Dedicated WIDS/WIPS and spectrum analytics via a built-in scanning radio.
 - 3.1.5 Dedicated IoT radio supporting 2.4 GHz Bluetooth Low Energy (BLE) v5.3 and 802.15.4 protocols.
 - 3.1.6 Aggregate wireless data rate of up to 18 Gbps.
 - 3.1.7 One (1) 100 Mbps / 1 Gbps / 2.5 Gbps / 5 Gbps / 10 Gbps Multigigabit Ethernet (mGig) RJ-45 uplink port.

REQUEST FOR QUOTATION
West Virginia Lottery Networking Equipment

4. CONTRACT AWARD:

4.1 Contract Award: The Contract is intended to provide Agencies with a purchase price for the 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 Page: Vendor should complete the Pricing Page (**Exhibit – A**) by inserting the unit cost for each item listed to calculate the extended cost, then add extended cost together for the Overall Total Cost. Vendor should complete the Pricing Page in full as failure to complete the Pricing Page in its entirety, or a no-bid, may result in Vendor's bid being disqualified.

Vendors should type or electronically enter the information into the Pricing Page to prevent errors in the evaluation.

5. PAYMENT:

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

6. DELIVERY AND RETURN:

6.1 Shipment and Delivery: Vendor shall ship the Contract Items immediately after being awarded this Contract and receiving a purchase order or notice to proceed. Vendor shall deliver the Contract Items within thirty (30) calendar days after receiving a purchase order or notice to proceed. Contract Items must be delivered to the Agency at, Attention: Darrin Stroup, West Virginia Lottery 900 Pennsylvania Ave., Charleston, WV 25302.

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

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

6.3 Delivery Payment/Risk of Loss: Vendor shall deliver the Contract Items F.O.B. destination to the Agency's location.

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. The vendor shall either make arrangements for the

EXHIBIT A – Pricing Page

Section	Description	Manufacturer and Model if Bidding "or Equal" products	Unit of Measure	Quantity	Unit Cost	Extended Cost
3.1.1	Cisco CW9176I-RTG (indoor, internal antenna) Wi-Fi 7 wireless access points	Cisco Wireless 9176I(W7,3 radio,3 band 4x4,UWB), Global Meraki MR Advanced License and Support, 3YR	Each	5	\$ \$1750.00 -	\$ \$89250.00-
				Overall Total Cost	\$	-

\$89250.00

Please note: This information is being captured for auditing purposes.

Any product or service not on the Agency provided Pricing Page will not be allowable. The state cannot accept alternate pricing pages, failure to use Exhibit-A Price Page or a No-Bid may lead to disqualification of vendors bid. Bid responses that propose an "or equal" product instead of the specified products must include evidence demonstrating that the substitute part number meets or exceeds the standards set forth by the attached specifications.

Vendor should type or electronically enter the information into the Pricing Page to prevent errors in the evaluation.

BIDDER /VENDOR INFORMATION:

Vendor Name:	Swipe Resources LLC
Address:	7491 Flag Point Ct.
City, St. Zip:	Manassas, VA 20109
Phone No.:	(703) 870-6182
Email Address:	hamza.masud@swiperesources.com

LI Masud

Vendor Signature:

7/23/2026

Date:



CW9176I / CW9176D1 Datasheet

High-Performance Wi-Fi 7 Wireless





Cisco Wireless 9176 Series Wi-Fi 7 access points are ideal for high-density environments and critical applications. These access points support both on-premises and cloud management. Cisco Wireless' Wi-Fi 7 access points can leverage Wi-Fi 7 to support video streaming, augmented reality (AR), and virtual reality (VR) applications. These access points offer real-time insights and personalized user experiences.

The Cisco Wireless 9176 Series Wi-Fi 7 access points enable operation in the 2.4, 5 and 6GHz bands for higher throughput and capacity. These access points provide three 4x4 radios and IoT radios.

The Cisco Wireless 9176 Series offers an Omni-directional antenna model, the CW9176I, suitable for most enterprise deployments and an internal directional antenna model, the CW9176D1, designed for use cases and areas with high ceilings such as auditoriums, warehouses, and other large open space areas. The CW9176D1 is suitable for areas that typically require external antennas. Since the CW9176D1 uses a built-in directional antenna, eliminating the need for additional hardware to achieve effective wireless coverage.

Operational management is flexible, allowing network management to be switched at any time. If a network with Cisco Wireless 9176 Series access points was originally an on-premises deployment, it can be changed to cloud-based management without the need to purchase and redistribute additional hardware.

Cisco Meraki Cloud Management

Management of the CW9176 is through the dashboard utilizing a browser-based interface that enables quick deployment without extensive staging. Since the CW9176 is self-configuring and managed over the web, it can be deployed at a remote location in a matter of minutes, facilitating remote deployment.

24x7 monitoring via the Meraki cloud provides real-time alerts for network issues. Remote diagnostic tools facilitate troubleshooting over the web, enabling efficient management of distributed networks.

The CW9176's firmware is automatically kept up to date via the cloud. New features, bug fixes, and enhancements are delivered seamlessly over the web. This eliminates manual software updates and ensures security patches are applied.

Pairing the Cisco Wireless 9176 Series access points with the Meraki cloud platform provides a unified IT experience for network monitoring and management.

Through the dashboard, Meraki provides sophisticated and scalable tools to automate network optimization, deploy policy and segmentation configurations across thousands of sites and devices. It also can manage a full-stack network with SD-WAN, Access, and IoT technologies. The platform supports over 3.5 million active networks around the world.

Working together, the Cisco Wireless 9176 Series and Cisco Meraki offer such features as:

- Cisco Spaces
- Cisco Identity Services Engine
- Meraki Health intelligent optimization and assurance
- Meraki Vision, smart cameras, and sensors for network closet monitoring

Cisco Catalyst Center and Catalyst 9800 WLC support

Cisco Wireless 9176 Series access points can also be managed with Catalyst 9800 WLC and Cisco Catalyst Center. Cisco Catalyst Center allows you to understand your network with real-time analytics, quickly detect and contain security threats, and easily provide network-wide consistency through automation and virtualization.

Working together, the Cisco Wireless 9176 Series and Catalyst Center offer such features as:

- Cisco Spaces
- Cisco Identity Services Engine
- Cisco Catalyst Center Analytics and Assurance along with Intelligence Capture (iCAP)

For information about Cisco Catalyst Center, refer to the [Cisco Networking Solution Overview](#).

Software Configurable Flex Radio Architecture for Dual 5 GHz Support

The Cisco Wireless 9176 supports a software-defined flex radio which can be operated in either a 2.4 GHz or 5 GHz mode. This provides an option to operate the AP in either a dual-band configuration with 5 GHz and 6 GHz configuration or a tri-band configuration.

Tri-band configuration uses the spectrum in the 6 GHz frequency range, which provides additional channels to increase throughput and reduce interference from legacy devices. 6 GHz support ensures that the CW9176 supports future technologies.

High-Performance 802.11be Compatible Wireless

The CW9176 is a cloud-managed 4x4:4 802.11be compatible access point that emphasizes wireless performance and efficiency. Designed for next-generation deployments in offices, schools, hospitals, retail shops, and hotels, the CW9176 offers high throughput, enterprise-grade security, and simple management.

The CW9176 provides a maximum of 18 Gbps* aggregate frame rate with concurrent 2.4 GHz, 5 GHz, and 6 GHz radios. A dedicated fourth radio provides real-time WIDS/WIPS with automated RF optimization, and a fifth integrated IoT radio supports Bluetooth scanning and beaconing.

Combining cloud management, robust hardware, multiple radios, and extensive software features, the CW9176 supports demanding uses, including high-density deployments and applications such as voice and video.

Product Highlights

- 4x4:4 UL/DL MU-MIMO 802.11be compatible
- Built-in USB, GPS/GNSS module

- 18 Gbps tri-radio aggregate frame rate
- 24x7 real-time WIDS/WIPS and spectrum analytics via dedicated Scanning radio
- Integrated Bluetooth Low Energy Beacon and scanning radio
- Single 10 Gbps mGig Ethernet port support
- USB 2.0 host interface (Type A connector) with 9W power budget
- Dedicated 2.4 GHz IoT Radio with Application hosting technology
- Full-time Wi-Fi location tracking via dedicated Scanning radio
- Integrated enterprise security and guest access
- Application-aware traffic shaping
- Optimized for voice and video
- Self-configuring, plug-and-play deployment
- Enhanced transmit power and receive sensitivity

Features

Tri-radio Aggregate Frame Rate of up to 18 Gbps*

A 6 GHz 4x4:4, 5 GHz 4x4:4 and 2.4 GHz 4x4:4 radio offer a combined tri-radio aggregate frame rate of 18 Gbps*, with upto 11,520 Mbps in 6 GHz band, 5700 Mbps in 5 GHz band and 688 Mbps in 2.4 GHz band. Technologies like transmit beamforming and enhanced receive sensitivity allow the CW9176 to support a higher client density than typical enterprise-class access points, resulting in better performance for more clients from each AP.

* Refers to maximum over-the-air data frame rate capability of the radio chipset, and may exceed data rates allowed by IEEE 802.11be operation.

Multi Link Operation (MLO)

With support for features of 802.11be, the CW9176 can operate in multiple bands simultaneously to achieve higher throughput and improved SLA. This improves network performance and the end-user experience.

Multi User Multiple Input Multiple Output (MU-MIMO)

With support for features of 802.11be, the CW9176 offers DL/UL MU-MIMO and OFDMA for more efficient transmission to multiple clients. Suited for environments with numerous mobile devices, MU-MIMO and OFDMA enable multiple clients to receive data simultaneously.

Bluetooth Low Energy Beacon and Scanning Radio

An integrated Bluetooth radio provides seamless deployment of BLE Beacon functionality and effortless visibility of Bluetooth devices. The CW9176 enables the next generation of location-aware applications while future-proofing deployments.

Automatic Cloud-Based RF Optimization

The RF data collected by the dedicated fourth radio is continuously fed back to the Meraki cloud. This data is then used to automatically tune the channel selection, transmit power, and client connection settings for optimal performance under even the most challenging RF conditions.

Integrated Enterprise Security and Guest Access

The CW9176 features integrated, easy-to-use technologies to provide secure connectivity for employees and guests alike. Advanced security features such as AES hardware-based encryption, Enterprise authentication with 802.1X, and Active Directory integration provide wired-like security while still being easy to configure. CW9176 also supports WPA3 192-bit encryption for added wireless network security. One-click guest isolation provides secure, Internet-only access for visitors. PCI compliance reports check network settings against PCI requirements to simplify secure retail deployments.

Dedicated Scanning Radio Delivers 24x7 Air Marshal and RF Analytics

The CW9176's dedicated tri-band scanning and security radio continually assesses the environment, characterizing RF interference and containing (in 2.4GHz and 5GHz only, since 6GHz mandates PMF) wireless threats like rogue access points. There's no need to choose between wireless security (AirMarshal), advanced RF analysis, and serving client data - a dedicated fourth radio means that all functions occur in real-time, without any impact on client traffic or AP throughput.

Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) Integration

Meraki Systems Manager natively integrates with the CW9176 to offer automatic, context-aware security. Meraki Systems Manager's self-service enrollment

helps to rapidly deploy MDM without installing additional equipment, and then dynamically tie firewall and traffic shaping policies to client posture.

Application-Aware Traffic Shaping

The CW9176 includes an integrated layer 7 packet inspection, classification, and control engine, enabling the configuration of QoS policies based on traffic type, helping to prioritize mission-critical applications while setting limits on recreational traffic like peer-to-peer and video streaming. Policies can be implemented per network, per SSID, per user group, or per individual user for maximum flexibility and control.

Voice and Video Optimizations

Industry-standard QoS features are built-in and easy to configure. Wireless Multimedia (WMM) access categories, 802.1p, and DSCP standards support, all ensure important applications get prioritized correctly, not only on the CW9176 but on other devices in the network. Unscheduled Automatic Power Save Delivery (U-APSD) and the new Target Wait Time feature in 802.11ax clients ensure minimal battery drain on wireless VoIP phones.

Self-configuring, Self-Maintaining, Always Up-to-Date

When plugged in, the CW9176 automatically connects to the Meraki cloud, downloads its configuration, and joins the appropriate network. Administrators can schedule automatic firmware upgrades for their dashboard network seamlessly. This ensures the network is kept up-to-date with bug fixes, security updates, and new features.

Meraki Health

CW9176 supports analytics to provide machine learning-based anomaly detection, server root cause analysis, wireless client scoring based on performance and connectivity metrics and network benchmarking for networks of similar size and vertical. Additionally, the CW9176 provides advanced location analytics via API and graphs in the dashboard to provide a clear picture of client density and their movement across the floor plan.

Choice of Mode

Cisco Wireless 9176 Series access points can be managed either on-premises with Catalyst 9800 Wireless Lan Controllers (WLC) or cloud-managed through the dashboard. Customers have the flexibility to deploy these access points in one mode and migrate to the other mode in the future.

Specifications

Category	Specifications
	• 2.4 GHz 802.11b/g/n/ax/be client access radio (or) • 5 GHz 802.11a/n/ac/ax/be client access radio (XOR flexible radio) • 5 GHz 802.11a/n/ac/ax/be client access radio • 6 GHz 802.11 ax/be client access radio • 2.4 GHz IoT Radio
Radios	• 2.4 GHz, 5 GHz, and 6 GHz tri-band Air Marshal WIDS/WIPS, spectrum analysis, & location analytics radio  Due to the 6 GHz band requiring PMF some Air Marshal functions may not be effective • 2.4 GHz Bluetooth Low Energy (BLE) radio with Beacon and BLE scanning support Concurrent operation of all five radios. BLE Version 5.3, software upgradable to 6.0 in the future.
GPS	Built-in GPS/ GNSS module for location analytics

Category

Specifications

Antenna

- CW9176I
 - 2.4 GHz: Peak gain 5 dBi, internal antenna, omnidirectional in azimuth
 - 5 GHz: (XOR) Peak gain 5 dBi, internal antenna, omnidirectional in azimuth
 - 5 GHz: Peak gain 6 dBi, internal antenna, omnidirectional in azimuth
 - 6 GHz: Peak gain 6 dBi, internal antenna, omnidirectional in azimuth

802.11ax, 802.11ac Wave 2 and 802.11n Capabilities

- CW9176D1
 - 2.4 GHz: Peak gain 7 dBi, internal antenna, directional, 80x80 beamwidth
 - 5 GHz: (XOR) Peak gain 7 dBi, internal antenna, directional in azimuth
 - 5 GHz: Peak gain 8 dBi, internal antenna, directional, 70x70 beamwidth
 - 6 GHz: Peak gain 8 dBi, internal antenna, directional 70x70 beamwidth
- DL-OFDMA**, UL-OFDMA**, TWT support**, BSS coloring**
- 4 x 4 multiple input, multiple output (MIMO) with four spatial streams
- SU-MIMO, UL MU-MIMO**, and DL MU-MIMO support
- Maximal ratio combining (MRC) & beamforming
- 20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40* and 80 MHz channels (802.11ax)



Note: *40MHz channels are supported only in the 5GHz band.

802.11be Capabilities

- Up to 4096-QAM on 2.4 GHz, 5 GHz and 6 GHz bands
- 20 MHz channels on 2.4 GHz bands
- 20, 40, 80, 160 MHz on 5 GHz bands
- 20, 40, 80, 160, 320 MHz on 6 GHz bands
- MLO (Multi-link operation) across different bands
- MRU (Multiple Resource Unit) allocation in OFDMA
- 4 x 4 multiple input, multiple output (MIMO) with four spatial streams

Power

- Power over Ethernet: 42.5 - 57 V 802.3bt / 802.3at (Low Power Mode) / 802.3af compliant (Low Power Mode)

Category	Specifications
	• Minimum power consumption: (15.4W min 802.3af - low power mode) • Maximum power consumption: (39W max 802.3bt) • Power over Ethernet injector sold separately • Recommended Power Injector: ◦ CW-INJ-8: Cisco Wireless 802.3bt Power Over Ethernet Injector (power cable separate SKU) • Supported Power Injectors: ◦ MA-INJ-6: Meraki Multigigabit 802.3bt Power over Ethernet Injector (power cable separate SKU) ◦ Cisco AIR-PWRINJ-7 802.3bt Power cord - MA-PWR-CORD-XX (XX Country Code) should be ordered separately for the Ethernet injector
Interfaces	• 1x 100M / 1G / 2.5G / 5G / 10G BASE-T Ethernet (RJ45) • Management console port (RJ-45) with default speed of 115200 bps (this port will be disabled once the AP is in Meraki Managed Mode) • USB 2.0 at 9W
Mounting	• All standard mounting hardware included • Desktop, ceiling, and wall mount capable • Ceiling tile rail (9/16, 15/16 or 1 1/2" flush or recessed rails), assorted cable junction boxes • Bubble level on the mounting cradle for accurate horizontal wall mounting
Physical Security	• Kensington lock slot
Environment	• CW9176I ◦ Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C) • Nonoperating (storage) altitude test: 25°C (77°F) at 15,000 ft (4570 m) • Operating temperature: 32° to 122°F (0° to 50°C) • Operating humidity: 10% to 90% (noncondensing) • Operating altitude test: 40°C (104°F) at 9843 ft (3000 m)

Category**Specifications**

- CW9176D1
 - Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C)
 - Nonoperating (storage) altitude test: 25°C (77°F) at 15,000 ft (4570 m)
- Operating temperature: 32° to 122°F (0° to 50°C)
- Operating humidity: 10% to 90% (noncondensing)
- Operating altitude test: 40°C (104°F) at 9843 ft (3000 m)

Reliability

- Mean time between failure (MTBF): 981,608 hrs at 25°C operating temperature
- Mean time between failure (MTBF): 349,710 hrs at 50°C operating temperature

Physical Dimensions

- CW9176I
 - 9.5 x 9.5 x 2.0 in. (24 x 24 x 5.1cm)
 - Weight: 3.4 lb. (1.56 kg)
- CW9176D1
 - 9.5 x 9.5 x 2.0 in. (24 x 24 x 5.1cm)
 - Weight: 3.4 lb. (1.56 kg)

Security

- Integrated layer 7 firewall with mobile device policy management
- Real-time WIDS/WIPS with alerting and automatic rogue AP containment with Air Marshal
- Flexible guest access with device isolation
- VLAN tagging (802.1q) and tunneling with IPsec VPN
- PCI compliance reporting
- WPA2-PSK, WPA2-Enterprise with 802.1X, WPA3 - Personal**, WPA3 - Enterprise**, WPA3 - Enhanced Open (OWE)***
- EAP-TLS, EAP-TTLS, EAP-MSCHAPv2, EAP-SIM
- Advanced Encryption Standard (AES)
- Enterprise mobility management (EMM) and Mobile device management (MDM) integration
- Cisco ISE integration for guest access and BYOD posturing

Quality of Service

- Advanced power save (U-APSD)

Category

Specifications

Mobility

- WMM access categories with DSCP and 802.1p support
- Layer 7 application traffic identification and shaping

Analytics

- PMK, OKC, and 802.11r for fast layer 2 roaming
- Distributed or centralized layer 3 roaming
- Embedded location analytics reporting and device tracking
- Global layer 7 traffic analytics reporting per network, per device, and per application

LED Indicators

- 1 power/booting/firmware upgrade status

Regulatory

- RoHS
- For additional country-specific regulatory information, please contact Meraki sales

Warranty

- Indoor access point
- Lifetime hardware warranty with advanced replacement included

Ordering Information

- CW9176I Cloud Managed Omnidirectional 802.11be Compatible AP
- CW9176D1 Cloud Managed Directional 802.11be Compatible AP
- Recommended Power Injector:
 - CW-INJ-8: Cisco Wireless 802.3bt Power Over Ethernet Injector (power cable separate SKU)
- Supported Power Injectors:
 - MA-INJ-6: Meraki Multigigabit 802.3bt Power over Ethernet Injector (power cable separate SKU)
 - Cisco AIR-PWRINJ-7 802.3bt



Power cord - MA-PWR-CORD-XX (XX Country Code) should be ordered separately for the Ethernet injector

Note: Cisco Subscription or Meraki access point license required.

9176 Power Negotiation and Features

Power source	2.4-GHz radio	5-GHz radio	6 -GHz radio	Link Speed	USB	Max PoE power consumption
802.3bt (Class 5) (UPOE)	4x4	4x4	4x4	1 x 10G	Y (9W)	39W
802.3at (PoE+)	2x2	4x4	4x4	1x 2.5G	N	25.5W
802.3af (PoE)	-	-	-	1x 1G	N	13.95W

9176D1 Power Negotiation and Features

Power source	2.4-GHz radio	5-GHz radio	6 -GHz radio	Link Speed	USB	Max PoE power consumption
802.3bt (Class 5) (UPOE)	4x4	4x4	4x4	1 x 10G	Y (9W)	39W
802.3at (PoE+)	2x2	4x4	4x4	1x 2.5G	N	25.5W
802.3af (PoE)	-	-	-	1x 1G	N	13.95W



Note: Actual power consumption may vary depending on the AP usage. CW9176 models need 802.3bt, Class 6 that can supply 60W of power for full operation.

Compliance and Standards

Category	Standard
IEEE Standards	• 802.3 ab/bz
	• 802.3 af/at/bt
	• 802.11a/b/g/n/ac/ax/be
	• 802.11d/h/i/k/r/u/v/w
Certifications	• Wi-Fi Alliance: Wi-Fi 7 (R1), Wi-Fi 6 (R2), Wi-Fi 6E, WPA3-R3, WPA3-Suite B, Enhanced Open Security
	• Bluetooth SIG: Bluetooth Low Energy

Category

Standard

Safety Approvals

- CSA and CB 60950 & 62368
- EN 60601 certified
- Conforms to UL 2043 (Plenum Rating)

Radio Approvals

- FCC Part 15C
- 15E RSS-247 (Canada)
- EN 300 328 (v2.1.1)
- EN 301 893 (v2.1.1)
- AS/NZS 4268 (Australia/NZ)
- NOM-121 (Mexico)
- NCC LP0002 (Taiwan)



Note: For additional country-specific regulatory information, please contact Meraki sales

EMI Approvals (Class B)

- FCC Part 15B
- ICES-003 (Canada)
- EN 301 489-1-17
- EN 55032
- EN 55024 (Europe)
- CISPR 32 (Australia/NZ) VCCI (Japan)

Exposure Approvals

- FCC Part 2 RSS-102 (Canada)
- EN 50385
- EN 6231
- EN 62479 (Europe)
- AS/NZS 2772 (Australia/NZ)

Context and Comparisons

802.11be, 802.11ax, 802.11ac Wave 2 and 802.11n, 802.11be Capabilities

MR44	MR46	CW9166	CW9176I	CW9176D1
DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**
			MLO	MLO
2.4 GHz: 2 x 2 multiple input, multiple output (MIMO) with two spatial streams	2.4GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	2.4 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	2.4 GHz 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	2.4 GHz 4 x 4 multiple input, multiple output (MIMO) with four spatial streams
5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams
		6 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	6 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	6 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams
Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming
SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support
20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40* and 80 MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40* and 80 MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40*, 80MHz and 160MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40*, 80MHz and 160MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40*, 80MHz and 160MHz channels (802.11ax)
			320MHz channels (802.11be)	320MHz channels (802.11be)



Note: *40MHz channels are supported only in 5 & 6 GHz bands.

MR44	MR46	CW9166	CW9176I	CW9176D1
Up to 1024-QAM on both 2.4 GHz & 5 GHz bands	Up to 1024-QAM on both 2.4 GHz & 5 GHz bands	Up to 1024-QAM on all three - 2.4 GHz, 5 GHz and 6 GHz bands	Up to 4096-QAM on all three - 2.4 GHz, 5 GHz and 6 GHz bands	Up to 4096-QAM on all three - 2.4 GHz, 5 GHz and 6 GHz bands
Packet aggregation	Packet aggregation	Packet aggregation	Packet aggregation	Packet aggregation

Power

MR44	MR46	CW9166I	CW9176I	CW9176D1
Power over Ethernet: 42.5 - 57 V (802.3at) or 37 - 57 V (802.3af) - low power mode **	Power over Ethernet: 42.5 - 57 V (802.3at compliant)	Power over Ethernet: 42.5 - 57 V (802.3at and 802.3bt compliant)	Power over Ethernet: 42.5 - 57 V (802.3at and 802.3bt compliant)	Power over Ethernet: 42.5 - 57 V (802.3at and 802.3bt compliant)
Alternative: 12 V DC input	Alternative: 12 V DC input	Alternative: 54 V DC input	Alternative: Power Injectors	Alternative: Power Injectors
Power consumption: 30W max (802.3at) or 15W max (802.3af) - low power mode **	Power consumption: 30W max (802.3at required)	Power consumption: 30.5W max with USB support and 25W max without USB support	Power consumption: 39W max with USB support and 30W max without USB support	Power consumption: 39W max with USB support and 30W max without USB support
Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector sold separately	Power over Ethernet injector sold separately



Note: ** features can be enabled via future firmware updates

Interfaces

MR44	MR46	CW9166I	CW9176I	CW9176D1
1x 100/1000/2.5G BASE-T Ethernet (RJ45)	1x 100/1000/2.5G BASE-T Ethernet (RJ45)	1x 100/1000/2.5G/5G BASE-T Ethernet (RJ45)	1x 1000/2.5G/5G/10G BASE-T Ethernet (RJ45)	1x 1000/2.5G/5G/10G BASE-T Ethernet (RJ45)

MR44	MR46	CW9166I	CW9176I	CW9176D1
1x DC power connector (5.5 mm x 2.5 mm, center positive)	1x DC power connector (5.5 mm x 2.5 mm, center positive)	1x DC power connector (8 mm, center positive)	Alternative: Power Injectors	Alternative: Power Injectors

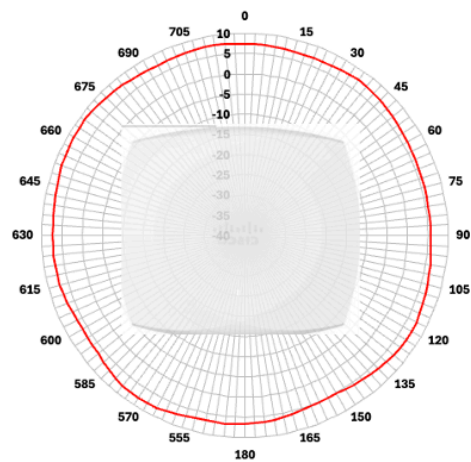
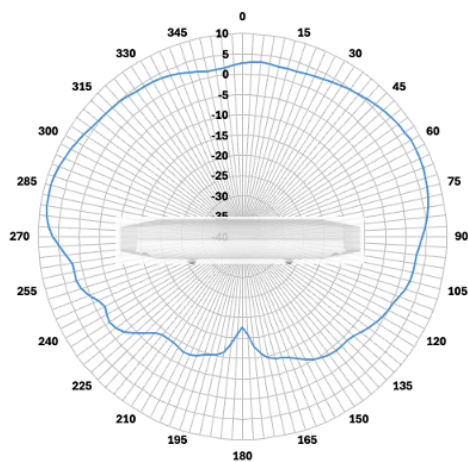
Physical Dimensions

MR44	MR46	CW9166I	CW9176I	CW9176D1
12.05" x 5.06" x 1.74" (306.0 x 128.4 x 44.3 mm), not including mount plate	12.05" x 5.06" x 1.74" (306.0 x 128.4 x 44.3 mm), not including mount plate	9.5 x 9.5 x 2.2 in. (241.3 x 241.3 x 56.9 mm), not including mount plate	9.5 x 9.5 x 2.0 in. (241.3 x 241.3 x 50.8 mm), not including mount plate	9.5 x 9.5 x 2.0 in. (241.3 x 241.3 x 50.8 mm), not including mount plate
Weight: 26.07 oz (0.739 kg)	Weight: 1.76lbs (0.800 kg)	Weight: 3.54 lb. (1.60 kg)	Weight: 3.40lbs (1.56kg)	Weight: 3.40lbs (1.56kg)

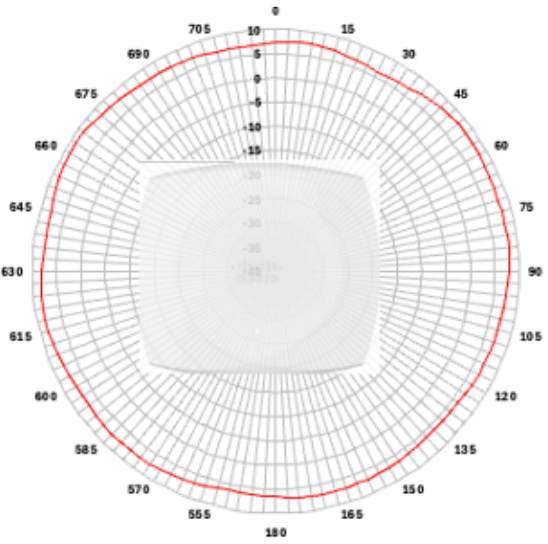
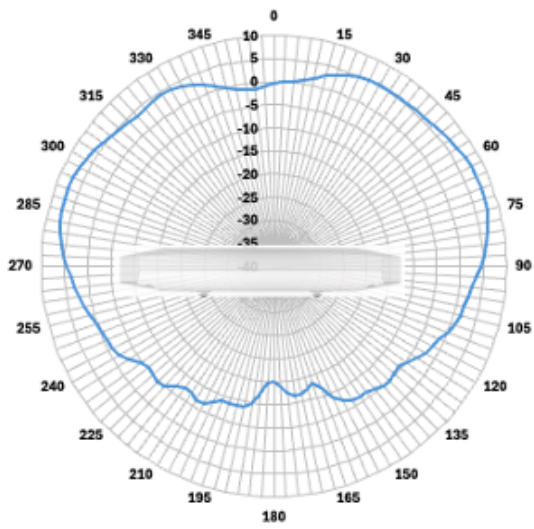
Signal Coverage Patterns

Client Serving Radios

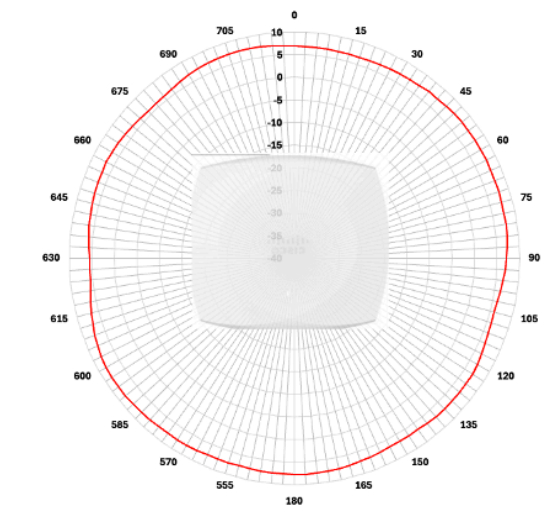
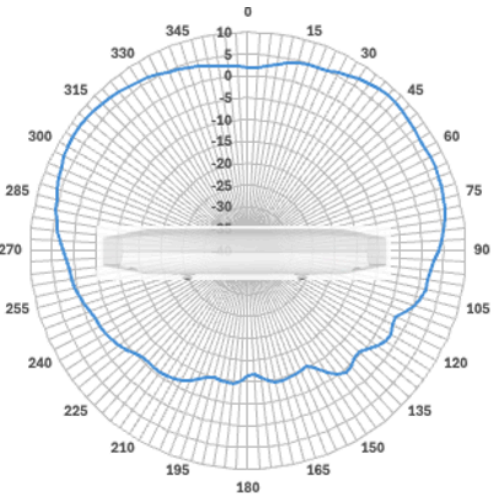
CW9176I 6 GHz Radio



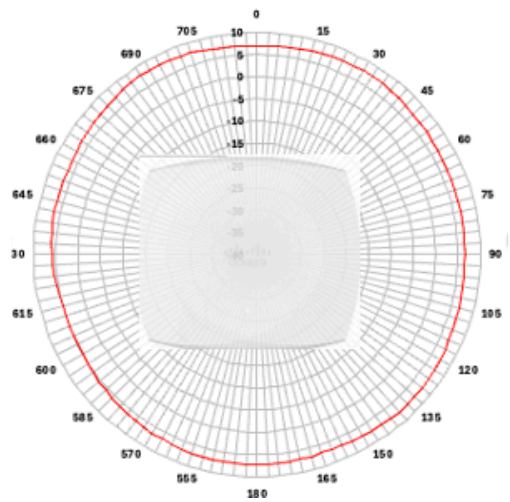
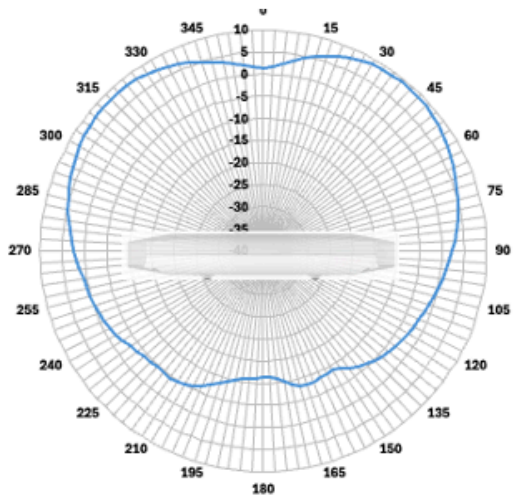
CW9176I 5 GHz Radio Slot 1



CW9176I 5 GHz Radio Slot 2



CW9176I 2.4 GHz Radio

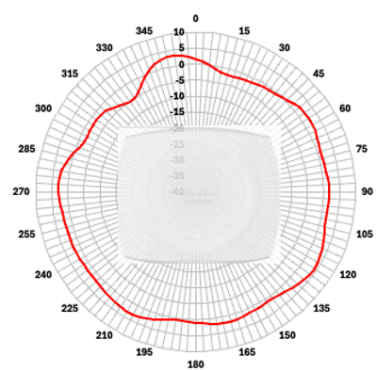
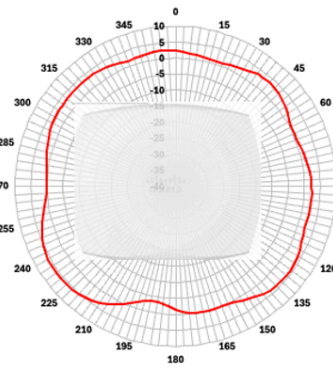
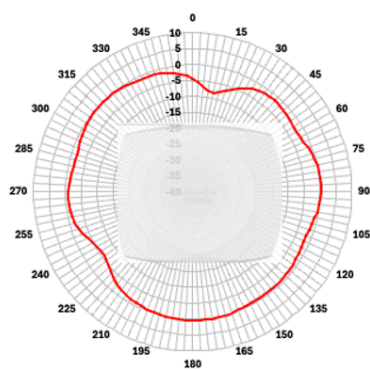
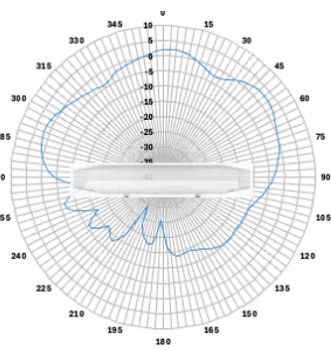
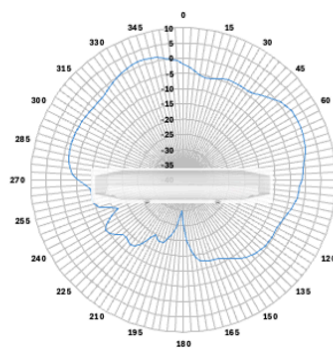
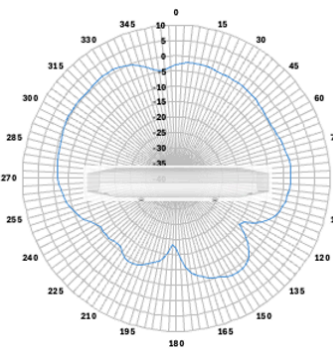


CW9176I AI/ML-Driven Scan Radio

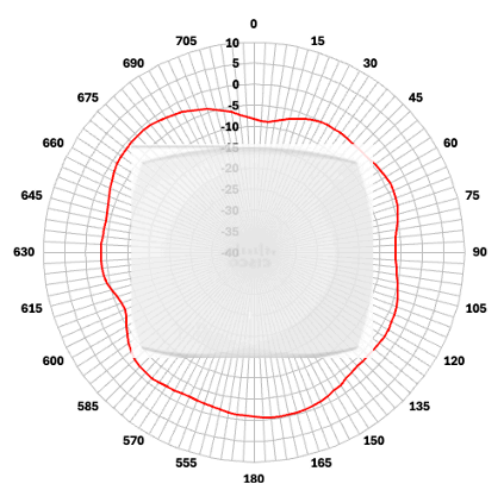
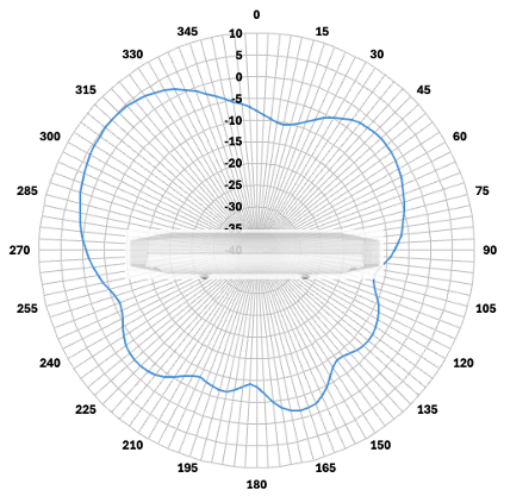
2.4 GHz

5 GHz

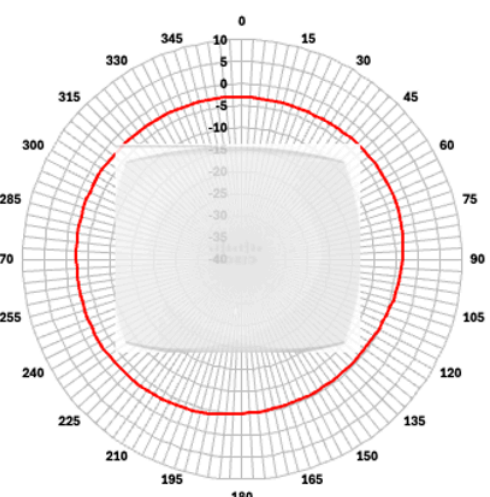
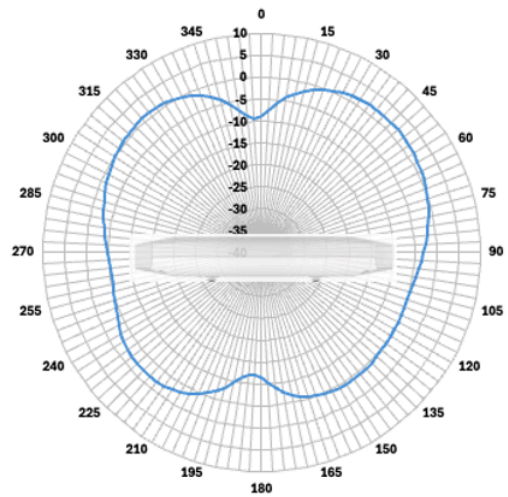
6 GHz



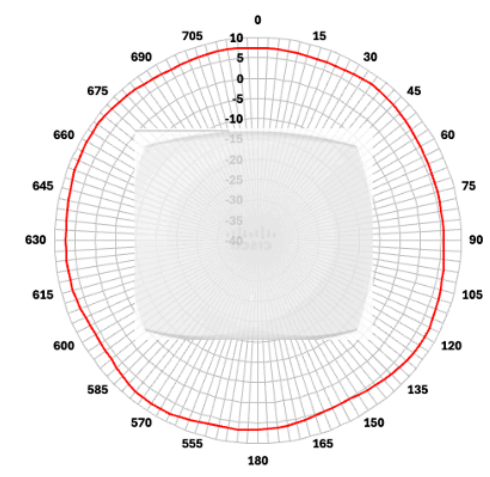
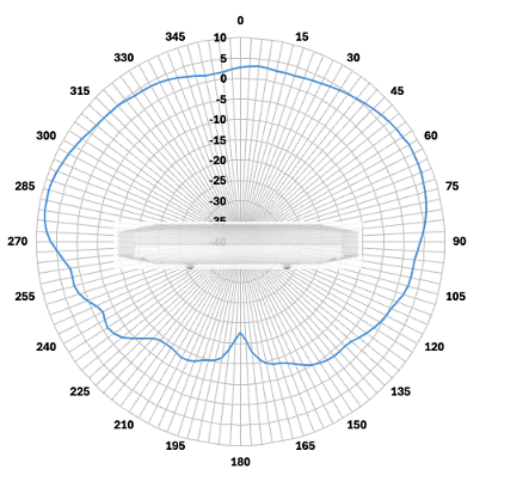
CW9176I IoT Radio



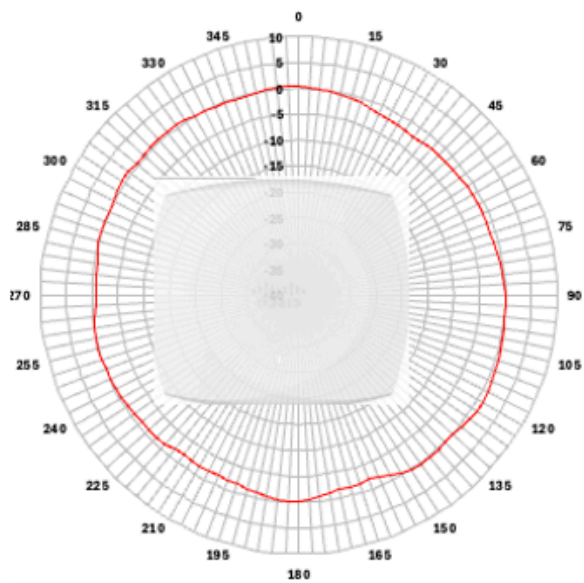
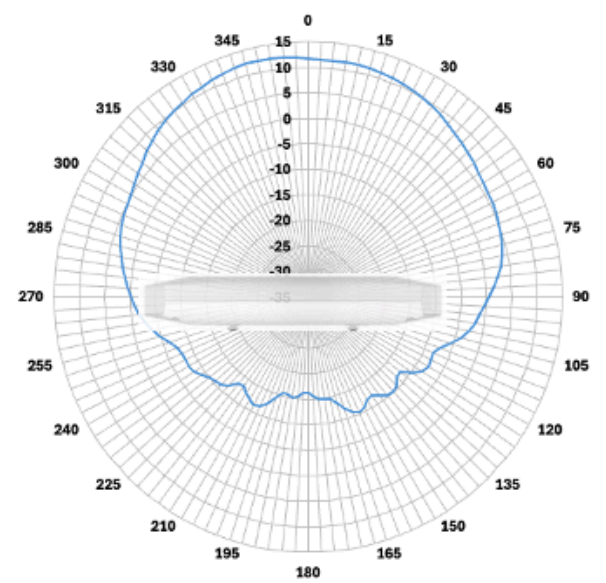
CW9176I GNSS Radio



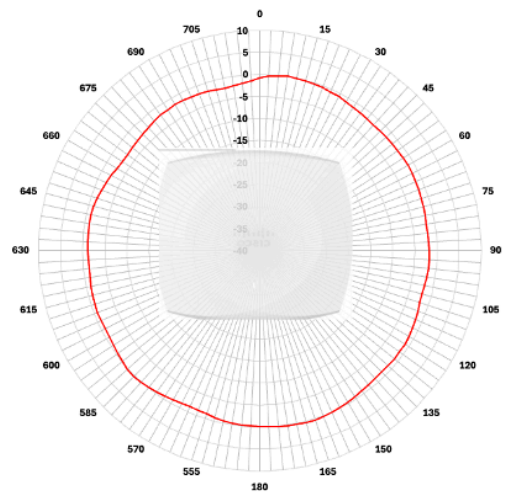
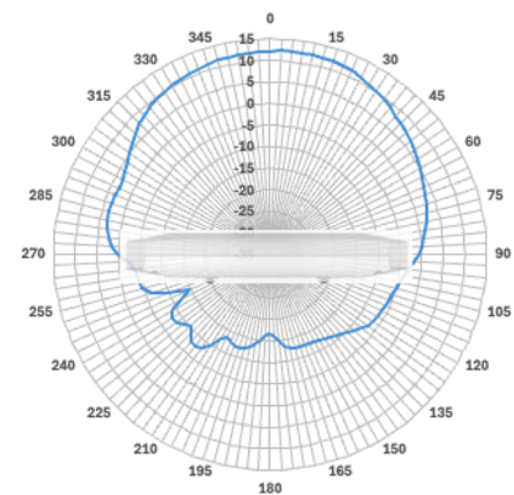
CW9176D1 6 GHz Radio



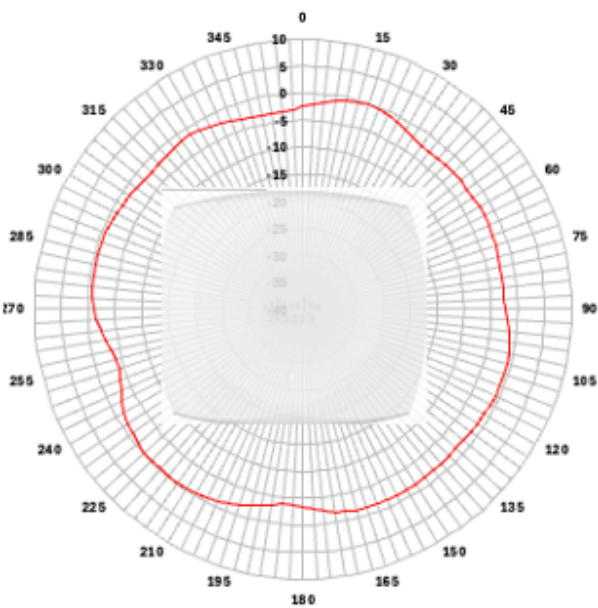
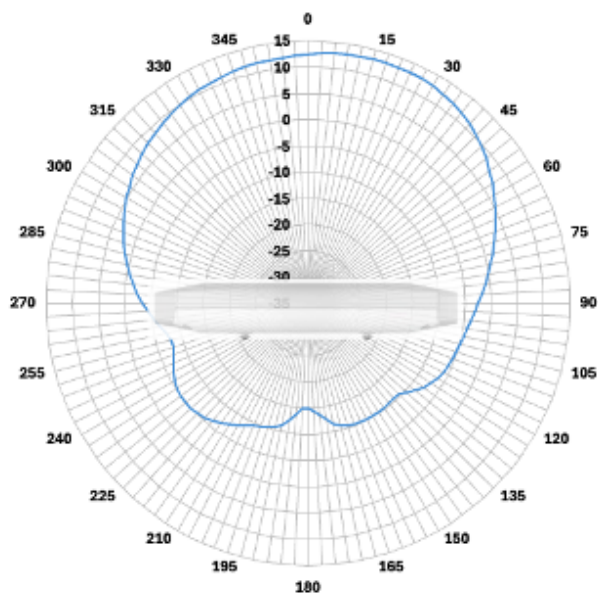
CW9176D1 5 GHz Radio Slot 1



CW9176D1 5 GHz Radio Slot 2



CW9176D1 2.4 GHz Radio

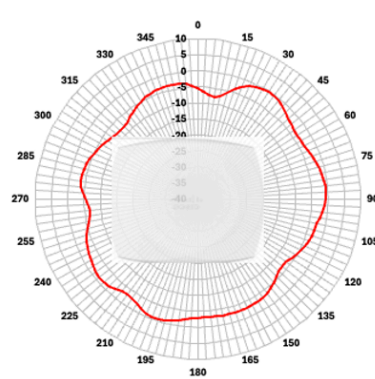
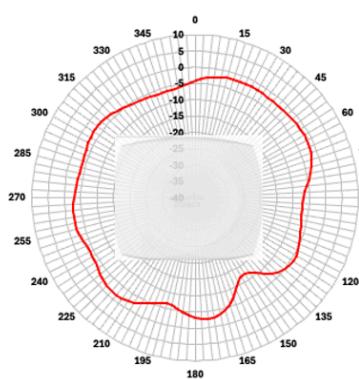
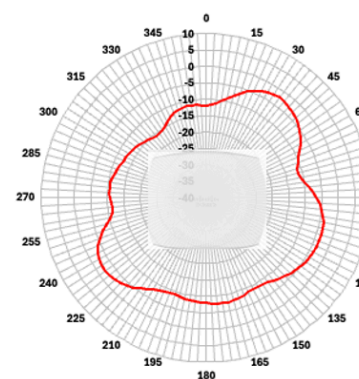
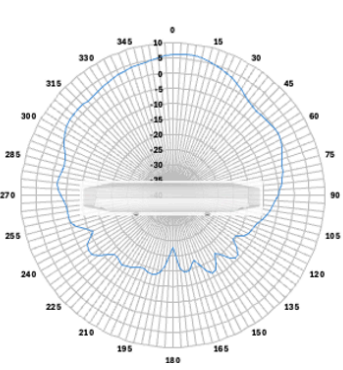
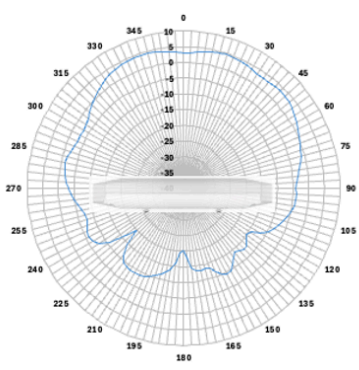
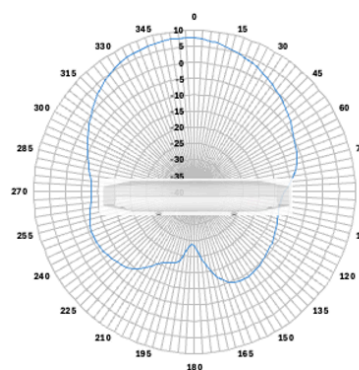


CW9176D1 AI/ML-Driven Scan Radio

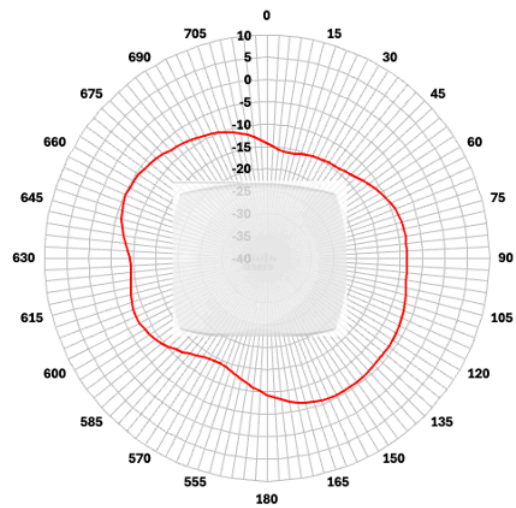
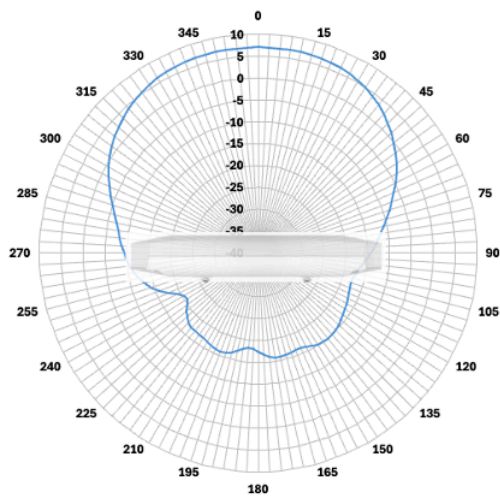
2.4 GHz

5 GHz

6 GHz



CW9176D1 IoT Radio



CW9176D1 GNSS Radio

