



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

 List View

General Information

Contact

Default Values

Discount

Document Information

Procurement Folder: 17573

SO Doc Code: CRFQ

Procurement Type: Central Purchase Order

SO Dept: 0506

Vendor ID: 000000219123

SO Doc ID: JWH1500000002

Legal Name: POMEROY IT SOLUTIONS SALES CO

Published Date: 10/8/14

Alias/DBA:

Close Date: 10/14/14

Total Bid: \$20,480.00

Close Time: 13:30

Response Date: 10/14/2014

Status: Closed

Response Time: 13:15

Solicitation Description: ADDENDUM NO. 1 for 40 Wireless Access Points (WAP's)

Total of Header Attachments: 0

Total of All Attachments: 0



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

State Of West Virginia
Solicitation Response

Proc Folder : 17573

Solicitation Description : ADDENDUM NO. 1 for 40 Wireless Access Points (WAP's)

Proc Type : Central Purchase Order

Date issued	Solicitation Closes	Solicitation No	Version
	2014-10-14 13:30:00	SR 0506 ESR10141400000000532	1

VENDOR

000000219123

POMEROY IT SOLUTIONS SALES CO

FOR INFORMATION CONTACT THE BUYER

Bryan Rosen
(304) 558-4741
bryan.d.rosen@wv.gov

Signature X	FEIN #	DATE
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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 Points (WAP's)	40.00000	EA	\$512.00	

Comm Code	Manufacturer	Specification	Model #
43222640			

Extended Description :	Wireless Access Points AH-AP-121-N-FCC Aerohive AP121 (or equal).
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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

Proc Folder: 17573

Doc Description: ADDENDUM NO. 1 for 40 Wireless Access Points (WAP's)

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2014-10-08	2014-10-14 13:30:00	CRFQ 0506 JWH1500000002	2

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:

Michelle Clark, Inside Sales

Pomeroy IT Solutions

500 Westmoreland Office Park

Dunbar, WV 25064

Phone: (304) 746-4434

Fax: 1 (866) 307-5674

FOR INFORMATION CONTACT THE BUYER

Bryan Rosen

(304) 558-4741

bryan.d.rosen@wv.gov

Signature X

FEIN # 61-1352158

DATE

10/14/2014

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

INVOICE TO		SHIP TO	
PROCUREMENT OFFICER - 304-256-6600 HEALTH AND HUMAN RESOURCES JACKIE WITHROW HOSPITAL 105 SOUTH EISENHOWER DR		PROCUREMENT OFFICER - 304-256-6600 HEALTH AND HUMAN RESOURCES JACKIE WITHROW HOSPITAL 105 SOUTH EISENHOWER DR	
BECKLEY	WV25801	BECKLEY	WV 25801
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Wireless Access Points (WAP's)	40.00000	EA	\$512.00	\$20,480.00

Comm Code	Manufacturer	Specification	Model #
43222640	Meraki/Cisco	Meraki MR18 performance oriented for enterprise, campus, healthcare with 3yr Enterprise License	MR18-HW

Extended Description :

Wireless Access Points AH-AP-121-N-FCC Aerohive AP121 (or equal).

JWH1500000002	Document Phase Final	Document Description ADDENDUM NO. 1 for 40 Wireless Access Points (WAP's)	Page 3 of 3
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ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

REQUEST FOR QUOTATION
CRFQ JWH1500000002 Wireless Access Points for Jackie Withrow Hospital

SPECIFICATIONS

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of The WVDHHR / BHHR / Jackie Withrow Hospital to establish a contract for the one time purchase of 40 new Wireless Access Points (WAP's.)
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 new Wireless Access Points (WAP's) per the below specifications.
 - 2.2 **"Pricing"** means the unit price and extended amount inserted on the commodity lines.
 - 2.3 **"RFQ"** means the official request for quotation published by the Purchasing Division and identified as CRFQ JWH1500000002.
3. **GENERAL REQUIREMENTS:**
 - 3.1 **Mandatory Contract Item Requirements:** Contract Item must meet or exceed the mandatory requirements listed below.
 - 3.1.1 **Aerohive AP121 802.11n Dual Radio Access Point, #AH-AP-121-N-FCC (or equal)**
 - 3.1.1.1 Wireless Access Point (WAP) must be indoor plenum rated 2 radio 2x2 802.11a/b/g/n, 1 10/100/1000, USB, FCC regulatory domain, without power supply.
 - 3.1.1.2 Wireless Access Point (WAP) must be desktop mountable and include a wall mount bracket.
 - 3.1.1.3 Wireless Access Point (WAP) must include a physical security lock point.
 - 3.1.1.4 Wireless Access Point (WAP) antennas must be (1) 2x Integrated single band, 2.4-2.5 GHz Omni-directional, 4.0 dBi gain (2) 2x Integrated single band 5.1-5.8 GHz Omni-directional, 4.0 dBi gain.

REQUEST FOR QUOTATION
CRFQ JWH1500000002 Wireless Access Points for Jackie Withrow Hospital

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 insert the unit price on the commodity lines and multiply the unit price by the estimated quantities shown for that item. Vendor should complete the commodity lines in their entirety as failure to do so may result in Vendor's bids being disqualified.

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 30 working days after receiving a purchase order. Contract Items must be delivered to Agency at 105 S Eisenhower Dr. Beckley, WV 25801.

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. Vendor shall either make arrangements for the

REQUEST FOR QUOTATION
CRFQ JWH1500000002 Wireless Access Points for Jackie Withrow Hospital

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.

7 Vendor Default:

- 7.1** The following shall be considered a vendor default under this Contract.

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

- 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.

ADDENDUM ACKNOWLEDGEMENT FORM

SOLICITATION NO.: JWH1500000002

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:

(Check the box next to each addendum received)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6 |
| <input 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.

Pomeray IT Solutions
Company
Michelle [Signature]
Authorized Signature
10/14/2014
Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.

Revised 6/8/2012

SOLICITATION NUMBER: JWH1500000002

Addendum Number: 1

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 PROVIDE A COPY OF VENDOR QUESTIONS AND RESPONSES. (ATTACHMENT A).
2. TO PROVIDE ADDENDUM ACKNOWLEDGMENT. THIS DOCUMENT SHOULD BE SIGNED AND RETURNED WITH YOUR BID. FAILURE TO SIGN AND RETURN MAY RESULT IN THE DISQUALIFICATION OF YOUR BID.

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

CRFQ 0506 JWH1500000002 Addendum number 1

The following question was asked in regards to CRFQ 0506 JWH1500000002 (The purchase of new Wireless Access Points for Jackie Withrow Hospital.)

Question: Do you want a one year service agreement with this, and do you need any licenses?

Answer: A one year service agreement is not needed, but we do require a license with each Wireless Access Point (WAP) being purchased.

End of questions.

*****This is to add the following specifications to the Wireless Access Points (WAP's)**

- 1) Access points must have the ability to revert to the factory default with and without intervention from the Wireless Control/Network management system (WCNMS) Hive Manager version 6.2r1a.**
- 2) Access points must support configuration roo-back in the event a configuration change prevents connectivity to the WCNMS.**
- 3) Access points must continuously operate independent of the WCNMS in the event of connectivity loss.**
- 4) Access points must be able to broadcast network Service Set Identifiers (SSID) with AES:CCMP encryption**
- 5) Access points must be able to provide for Wi-Fi Alliance certified WPA/WPA2, IEEE 802.11i, IEEE 802.1x, and per-user Pre-shared Keys per SSID**
- 6) Access points must be shipped with a minimum of a ceiling tile mount (15/16") and a wall mount kit with other mounting options available.**
- 7) Access points must have a limited lifetime warranty for replacement to at least 5 years after the end-of-sale for the device.**

Bill To:

Bryan Rosen
WV Health and Human Resources
JACKIE WITHROW HOSPITAL,
105 SOUTH EISENHOWER DR
BECKLEY, WV 25801

Phone: (304)558-4741

Email: bryan.d.rosen@wv.gov

Ship To:

Bryan Rosen
WV Health and Human Resources
JACKIE WITHROW HOSPITAL,
105 SOUTH EISENHOWER DR
BECKLEY, WV 25801

Phone: (304)558-4741

Srl	Mfr. Part	Description	Price	Qty.	Extended
*1	MR18-HW	Meraki MR18 Cloud Managed AP Mfr: MERAKI	\$ 350.00	40	\$ 14,000.00
2	LIC-ENT-3YR	Cisco Meraki MR Enterprise License and Support, 3 Years Mfr: MERAKI	\$ 162.00	40	\$ 6,480.00
2 item(s)			Sub-Total		\$ 20,480.00
			Freight:		\$ 0.00
			Tax @ 0%		\$ 0.00
			Total		\$ 20,480.00

(*) Tax exempted Part(s)

Terms and Conditions

This quotation has been prepared by Pomeroy based upon current product pricing and product availability as of the date of this quotation. The quotation provided hereon is subject to change if, after the issuance of this quotation, product pricing and/or product availability is affected as the direct result of a force majeure event or circumstance that is beyond Pomeroy's reasonable control.

For any questions regarding our returns policy, please contact your Pomeroy sales associate or Click on the link below for a copy of our written policy. <https://shop.pomeroy.com/CustomPages/CustomPage.aspx?PageId=3186>

Quote valid until: 11/13/2014

Payment Details

Company PO []
Payment Term 30 days
Additional References
Customer Name
Sales Consultant

Shipping Details and Delivery

Shipping Via Delivery
Shipping Carrier Account No: JACKIE
WITHROW HOSPITAL


Vendor Signature
FEIN# 61-1352158

Purchase Orders can be faxed to:
Michelle Clark 1.866.307.5674

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 for four (4) years immediately preceding the date of this certification; **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 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who 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 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 employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this 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) reject the bid; 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.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), 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: Pomeroy IT Solutions

Signed: Michelle [Signature]

Date: 10/14/2014

Title: Inside Sales

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

MANDATE: 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 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: Pomeroy IT Solutions

Authorized Signature: Michelle [Signature] Date: 10/14/2014

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 14 day of Oct, 2014.

My Commission expires Aug 22, 2016.

AFFIX SEAL HERE

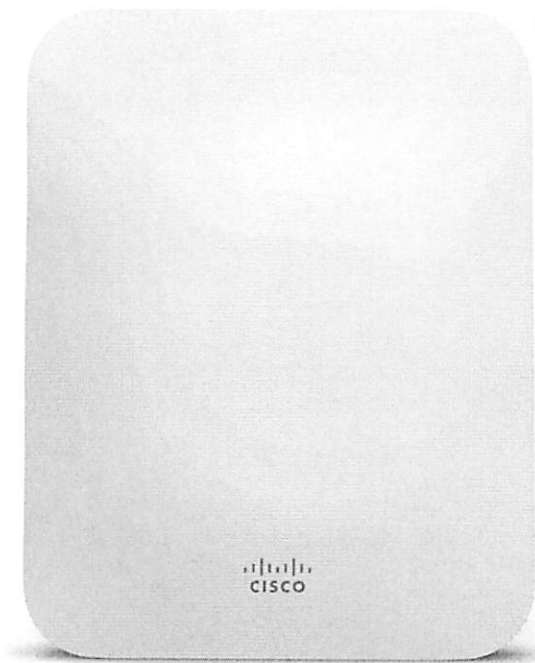
NOTARY PUBLIC

Judith A. Snodgrass
Purchasing Affidavit (Revised 07/01/2012)



MR18

Dual-radio 2x2 MIMO 802.11n access point with third radio dedicated to RF and security



Dual-band cloud-managed wireless LAN

The Cisco Meraki MR18 is an industry-first three-radio, cloud managed 2x2 MIMO 802.11n access point designed for deployments in offices, schools, hospitals, hotels, and large retail stores. The MR18 features dual-concurrent, dual-band operation and advanced 802.11n technologies such as MIMO and beam forming, delivering the high throughput and reliable coverage required by demanding business applications like voice and video. Not only does the MR18 provide speeds of up to 600 Mbps with two concurrent 2x2:2 MIMO radios, but also delivers unprecedented security and spectrum visibility via a third radio dedicated to 24x7 WIDS/WIPS and advanced RF analytics.

MR18 and Meraki Cloud Management: A Powerful Combo

The MR18 is managed via the Meraki cloud, with an intuitive browser-based interface that lets you get up and running quickly without training or certifications. Since the MR18 is self-configuring and managed over the web, it can even be deployed at a remote location without on-site IT staff.

The MR18 is monitored 24x7 via the cloud, which delivers real-time alerts if your network encounters problems. Remote diagnostics tools enable real-time troubleshooting over the web, meaning multi-site, distributed networks can be managed remotely.

The MR18's firmware is always kept up to date from the cloud. New features, bug fixes, and enhancements are delivered seamlessly over the web, meaning no manual software updates to download or missing security patches to worry about.

Product Highlights

- Dual-concurrent 802.11n radios
- Up to 600 Mbps combined data rate
- 24x7 real-time WIPS/WIDS and spectrum analytics via dedicated third radio*
- Enhanced transmit power and receive sensitivity
- Self-healing, zero-configuration mesh
- Integrated enterprise security and guest access
- Application-aware traffic shaping
- Self-configuring, plug-and-play deployment
- Sleek, low profile design blends into office environments
- Optimized for voice and video

Features

Dual enterprise class 802.11n radios, up to 600 Mbps

The MR18 features two powerful radios and advanced RF design for enhanced receive sensitivity. Combined with 802.11n technologies including 2x2 MIMO and transmit beamforming, the MR18 delivers data rates of up to 600 Mbps and enhanced coverage, meaning fewer access points are required for a given deployment. In addition, the MR18 uses band steering to automatically serve 5 GHz-capable clients with the 5 GHz radio, maximizing capacity in the 2.4 GHz range for older 802.11b/g and 2.4 GHz-only clients

Dedicated third radio delivers 24x7 wireless security and RF analytics*

The MR18's dedicated dual-band third radio scans the environment continuously, characterizing RF interference and containing wireless threats like rogue access points. No more need to choose between wireless security, advanced RF analysis, and serving client data: a dedicated third radio means that all three occur in real-time, without any impact to client traffic or AP throughput.

Application-aware traffic shaping

The MR18 includes an integrated layer 7 packet inspection, classification, and control engine, enabling QoS policies based on traffic type. Integrated support for Wireless Multi Media (WMM) and 802.1p DSCP tagging. Prioritize your mission critical applications, while setting limits on recreational traffic, e.g., peer-to-peer and video streaming.

Automatic RF optimization with spectrum analysis

The MR18's sophisticated, automated RF optimization means that there is no need for the dedicated hardware and RF expertise typically required to tune a wireless network. An integrated spectrum analyzer monitors the airspace for neighboring WiFi devices as well as non-802.11 interference – microwave ovens, Bluetooth headsets, etc. The Meraki cloud then automatically optimizes the MR18's channel selection, transmit power, and client connection settings, providing optimal performance even under challenging RF conditions.

Integrated enterprise security and guest access

The MR18 features integrated, easy-to-use security technologies to provide secure connectivity for employees and guests alike. Advanced security features such as AES hardware-based encryption and WPA2-Enterprise authentication with 802.1X and Active Directory integration provide wire-like security while still being easy to configure. One-click guest isolation provides secure, Internet-only access for visitors. The integrated policy firewall (Identity Policy Manager) enables granular group or device-based access control. Meraki Teleworker VPN makes it easy to extend the corporate LAN to remote sites, without requiring clients and devices to have client VPN software. PCI compliance reports check network settings against PCI requirements to simplify secure retail deployments.

Secure wireless environments 24x7 using Air Marshal

There's no need to choose between a wireless intrusion prevention system (WIPS) and serving client data: thanks to the dedicated third radio, Air Marshal, a highly optimized built-in WIPS, scans continuously for threats and remediates them as commanded, all without disrupting client service. Alarms and auto-containment of malicious and rogue APs are configured via flexible remediation policies, ensuring optimal security and performance in even the most challenging wireless environments.

High performance mesh

The MR18's advanced mesh technologies like multi-channel routing protocols and multiple gateway support enable scalable, high throughput coverage of hard-to-wire areas with zero configuration. Mesh also improves network reliability – in the event of a switch or cable failure, the MR18 will automatically revert to mesh mode, providing continued gateway connectivity to clients.

Self-configuring, self-optimizing, self-healing

When plugged in, the MR18 automatically connects to the Meraki cloud, downloads its configuration, and joins the appropriate network. It self optimizes, determining the ideal channel, transmit power, and client connection parameters. It also self heals, responding automatically to switch failures and other errors.

Low profile, environmentally friendly design

Despite its incredible power and feature set, the MR18 is the lowest profile 802.11n access point available – at just one inch thick, it blends seamlessly into any environment. In addition to looking great, the MR18 is earth friendly: we've eliminated excess packaging and documentation, and 90% of the access point materials are recyclable. A maximum power draw of only 9.8 watts and a cloud-managed architecture mean that pollution, material utilization and electricity bills are minimized.

*Available Q2 CY2014 via software update

Specifications

Radios		Interfaces
One 2.4 GHz 802.11b/g/n radio, one 5 GHz 802.11a/n radio		1x 100/1000Base-T Ethernet (RJ45) with 48V DC 802.3af PoE
Dedicated radio for dual-band WIPS & spectrum analysis*		1x DC power connector (5mm x 2.1mm, center positive)
Concurrent operations of all three radios		
Max data rate 600 Mbit/s		
Operating Bands:		Security
FCC (US)	EU (Europe)	Integrated policy firewall (Identity Policy Manager)
2.412-2.484 GHz	2.412-2.484 GHz	Mobile device policies
5.150-5.250 GHz (UNII-1)	5.150-5.250 GHz (UNII-1)	Air Marshal: Real-time WIPS (wireless intrusion prevention system) with alarms
5.725 -5.825 GHz (UNII-3)	5.250-5.350, 5.470-5.600, 5.650-5.725 GHz (UNII-2)	Guest isolation
		Teleworker VPN with IPsec
		PCI compliance reporting
		WEP, WPA, WPA2-PSK, WPA2-Enterprise with 802.1X
		TKIP and AES encryption
		VLAN tagging (802.1q)
802.11n Capabilities		Quality of Service
2 x 2 multiple input, multiple output (MIMO) with two spatial streams		Wireless Quality of Service (WMM/802.11e)
Maximal ratio combining (MRC)		DSCP (802.1p)
Beamforming		Layer 7 application traffic shaping and firewall
20 and 40 MHz channels		
Packet aggregation		
Cyclic shift diversity (CSD) support		
Power		Mobility
Power over Ethernet: 24 - 57 V (802.3af compatible)		PMK and OKC credential support for fast Layer 2 roaming
12V DC		802.11r and 802.11k
Power consumption: 9.8 W max		Layer 3 roaming
Power over Ethernet injector and DC adapter sold separately		
Mounting		LED Indicators
All standard mounting hardware included		2 Ethernet status
Desktop and wall mount		1 power/booting/firmware upgrade status
Ceiling tile rail (9/16, 15/16 or 1 1/2" flush or recessed rails), assorted cable junction boxes		
Physical Security		Regulatory
Security screw included		Anatel (Brazil), FCC (US), IC (Canada), CE (Europe), C-Tick (Australia/New Zealand)
Kensington lock hard point		RoHS
Anti-tamper cable bay		For additional country-specific regulatory information, please contact Meraki sales
Concealed mount plate		
Environment		Mean Time Between Failure (MTBF)
Operating temperature: 32 °F to 104 °F (0 °C to 40 °C)		575,000 hours
Humidity: 5 to 95% non-condensing		
Physical Dimensions		Guarantee
7.25" x 5.69" x 1.17" (186 mm x 146 mm x 30 mm) excluding deskmount feet or mount plate		Lifetime hardware warranty with advanced replacement included
Weight: 25.7 oz (0.73 kg)		
Antenna		Ordering Information
Integrated omni-directional antennas		MR18-HW Cisco Meraki MR18 Cloud Managed AP
Gain: 3 dBi @ 2.4 GHz, 5 dBi @ 5 GHz		MA-INJ-4-XX Cisco Meraki 802.3at Power over Ethernet Injector (XX = US, EU, UK or AU)
		AC-MR-1-XX Cisco Meraki AC Adapter for MR Series (XX = US, EU, UK or AU)
		Note: Cisco Meraki Enterprise license required.

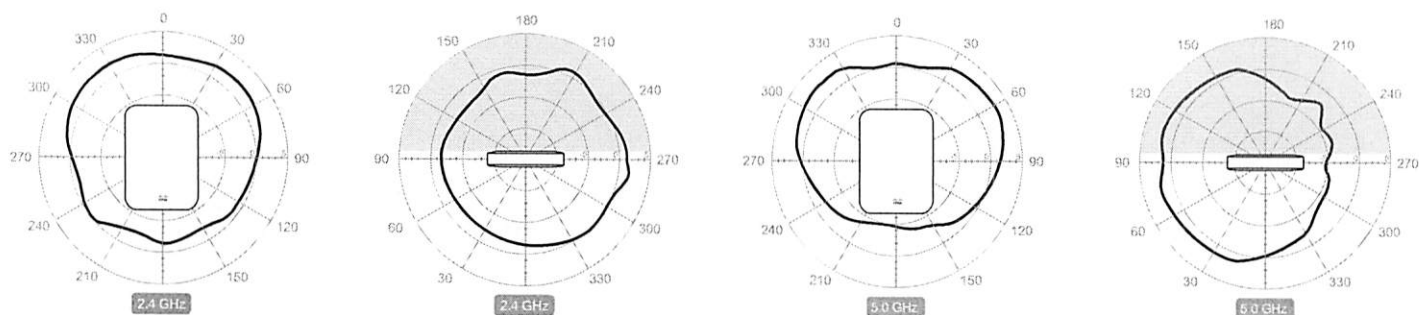
*Available Q2 CY2014 via software update

RF Performance Table

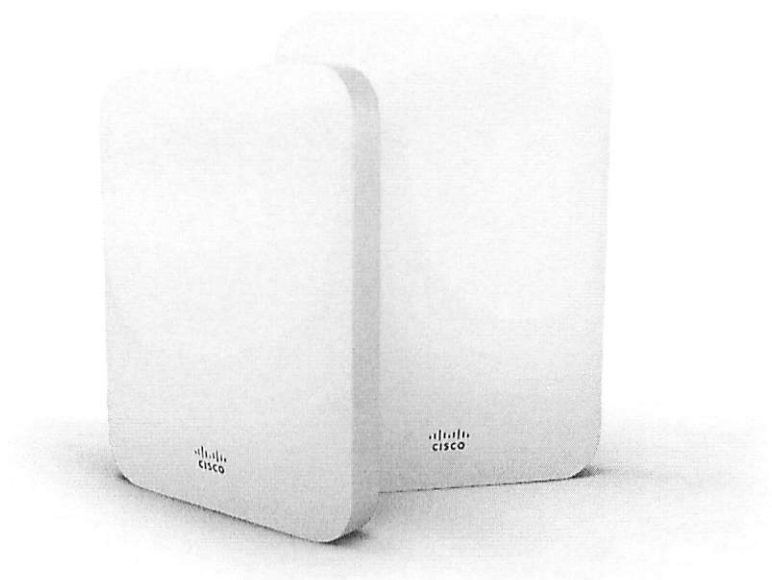
Operating Band	Operating Mode	Data Rate	TX Power (dBm)	RX Sensitivity
2.4 GHz	802.11b	1 Mb/s 11 Mb/s	24 24	-91 -89
2.4 GHz	802.11g	6 Mb/s 54 Mb/s	23 20	-92 -82
2.4 GHz	802.11n (HT20)	MCS0/8 HT20 MCS7/15 HT20	24 19	-93 -75
2.4 GHz	802.11n (HT40)	MCS0/8 HT40 MCS7/15 HT40	22 19	-91 -78
5 GHz	802.11a	6 Mb/s 54 Mb/s	24 20	-98 -80
5 GHz	802.11n (HT20)	MCS0/8 HT20 MCS7/15 HT20	24 19	-98 -80
5 GHz	802.11n (HT40)	MCS0/8 HT40 MCS7/15 HT40	23 14	-94 -73

* Maximum hardware capability shown above. Transmit power is configurable in increments of 1 dB and is automatically limited to comply with local regulatory settings.

Signal Coverage Patterns



MR Cloud Managed Wireless Access Points



Overview

The Meraki MR series is the world's first enterprise-grade line of cloud-managed WLAN access points. Designed for challenging enterprise environments, the MR access points use advanced 802.11ac and 802.11n technologies including MIMO, beam forming and channel bonding to deliver the throughput and reliable coverage required by demanding business applications.

Centralized Cloud Management

The award-winning Cisco Meraki cloud management architecture provides powerful and intuitive centralized management, while eliminating the cost and complexity of traditional on-site wireless controllers. Seamlessly manage campus-wide WiFi deployments and distributed multi-site networks with zero-touch access point provisioning, network-wide visibility and control, cloud-based RF optimization, seamless firmware updates and more. With an intuitive browser-based user interface, Meraki WLANs configure in minutes without training or dedicated staff. Adding new sites to a network takes minutes, not hours or days, and there's no need to train additional staff to monitor or manage the remote networks. Meraki devices self-provision, enabling large campus and multi-site deployments without on-site IT.

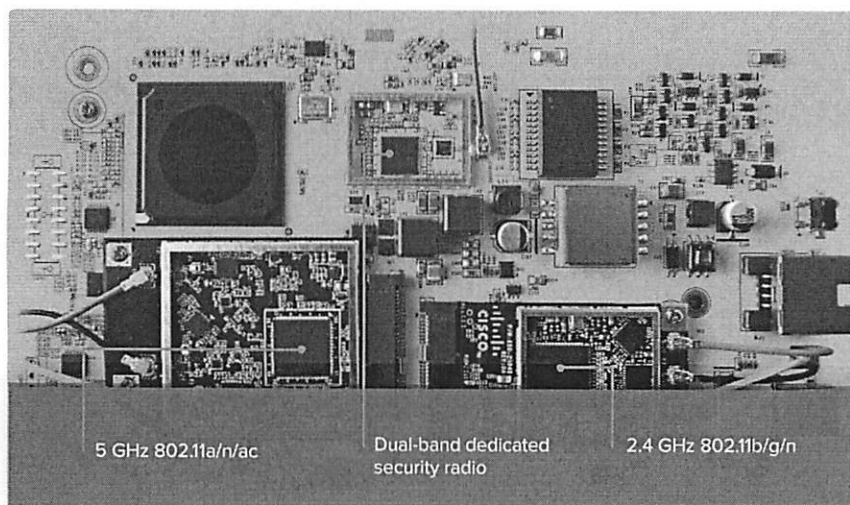
Class-Leading Enterprise Features

The MR series comes equipped with industry-leading features that make them ideal for demanding enterprise deployments:

- Self-configuring, plug-and-play deployment
- 802.11ac and 802.11n MIMO with up to three spatial streams, built for voice and video
- Integrated enterprise security and guest access
- Dedicated radio for security and RF optimization with integrated spectrum analysis (indoor models)
- Integrated intrusion detection and prevention system (WIDS/WIPS)
- Self-learning application-aware traffic analytics engine
- Flexible group policy engine for creating and applying application-aware policies by network, device-type, and end-user
- Self-healing, zero-configuration mesh
- Role-based administration and automatic, scheduled firmware upgrades delivered over the web
- E-mail and text message alerts upon power loss, downtime, or configuration changes

Inside the Meraki MR

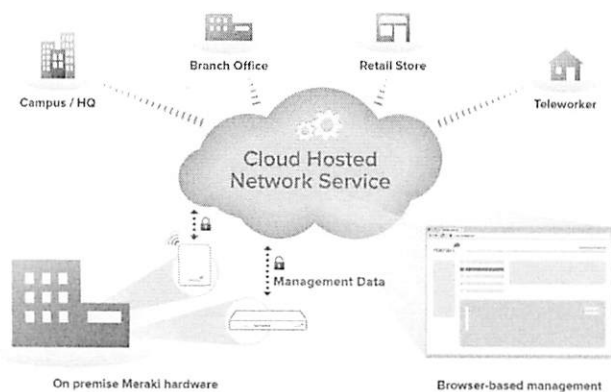
MR34 shown, features vary by model



Rapid Deployment and Scalability

Built from the ground up for multi-site networks, Meraki access points have revolutionized distributed branch wireless networking. Zero-touch deployments, multi-site visibility and control, and automated alerts make deploying, securing, and centrally managing branch networks a breeze.

The Meraki cloud-managed architecture enables plug and play branch deployments and provides centralized visibility and control across any number of distributed locations. Since Meraki MR series APs are managed entirely through the Meraki web-based dashboard, configuration and diagnostics can be performed remotely just as easily as they can be performed on-site, eliminating costly field visits. Each device downloads its configuration via Meraki's cloud, applying your network and security policies automatically so you don't have to provision them on-site.



Meraki Cloud Management Architecture

High Performance RF Design

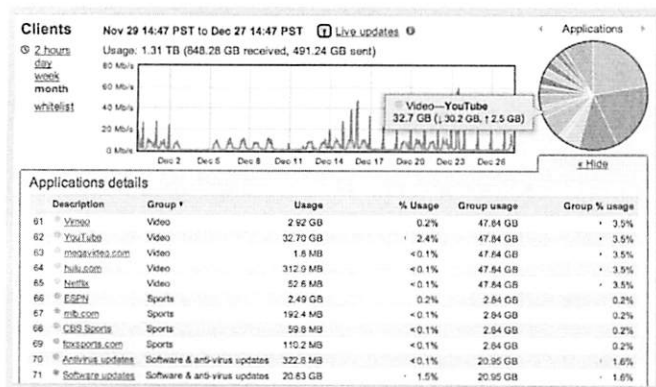
Every Meraki access point continuously and automatically monitors its surroundings to maximize WiFi performance. By measuring channel utilization, signal strength, throughput, signals from non-Meraki APs, and non-WiFi interference, Meraki APs automatically optimize WiFi performance of individual APs and maximize system-wide performance.

Meraki APs have been deployed and proven in the most demanding environments, supporting more than 100 users per AP and collectively serving hundreds of Megabits per second of user traffic to thousands of devices. By eliminating traditional hardware controllers, Meraki also eliminates the performance bottleneck that often chokes high-density wireless deployments.

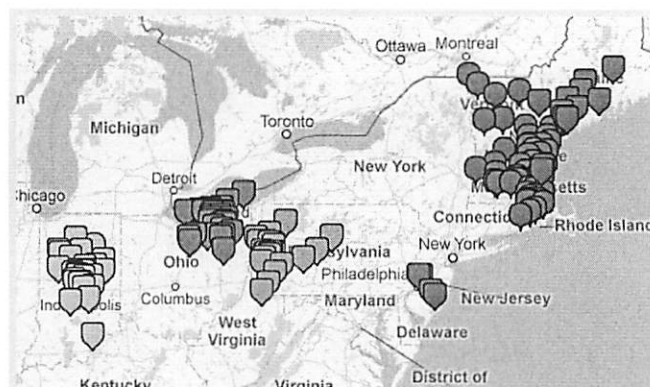
By measuring utilization from neighboring APs, detecting WiFi signals from non-Meraki APs, and identifying non-WiFi interference, Meraki APs continuously stay on top of changing and challenging conditions. Tools such as real-time spectrum analysis and live channel utilization deliver immediate information on the RF environment at any part of the network. Even in dynamic environments, Meraki networks automatically detect and adapt to interference from non-WiFi sources.

Real-time and historical metrics ensure maximum system-wide performance. Wireless channels, AP output power, and client connection settings are automatically adapted to changing performance and interference conditions, eliminating the need for tedious manual adjustment of dozens of independent parameters.

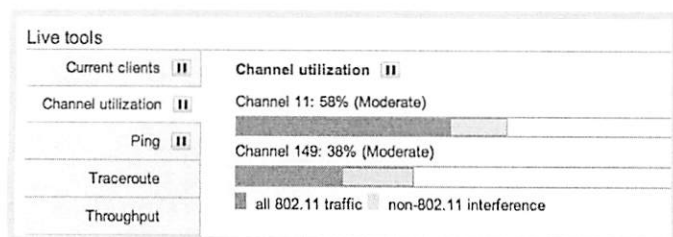
Mesh networking, included in every Meraki AP, extends coverage to hard to wire areas and creates a self-healing network that is resilient to cable and switch failures, continuing to operate despite failures or configuration changes in the rest of the network, without the need for manual configuration or optimization.



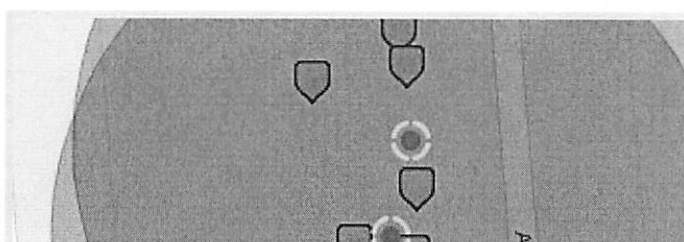
User Analytics and Traffic Shaping



Multi-Site Management



Live Troubleshooting Tools



Air Marshal: Real-Time Wireless Intrusion Prevention System

Enterprise Security and a Dedicated Radio

The MR series comes equipped with complete out-of-the-box enterprise class security. Segment wireless users, applications, and devices; secure your network from attacks and enforce the right policies for each class of users. A built-in stateful policy firewall, 802.1X/RADIUS support, and native Active Directory integration deliver fine-grained access control, while a guest access firewall provides secure, Internet-only guest WiFi in just one click. Integrated network access control (NAC) provides end-user anti-virus scanning for accurate client device posture assessment to protect your wired and wireless network against virus infections.

Indoor APs feature a radio dedicated to full-time scanning, rogue AP containment, and automatic RF optimization. With Air Marshal, it is possible to set up a real-time wireless intrusion detection and prevention system (WIDS/WIPS) with user-defined threat remediation policies and intrusion alarms, enabling secure wireless environments without complex setup or systems integration. Auto RF eliminates the need for manual RF configuration by scanning the environment for utilization, interference, and other metrics, and computing the optimal channel and power settings for every AP in the network. Meraki WLANs are fully HIPAA and PCI compliant.

Built-in Guest Access

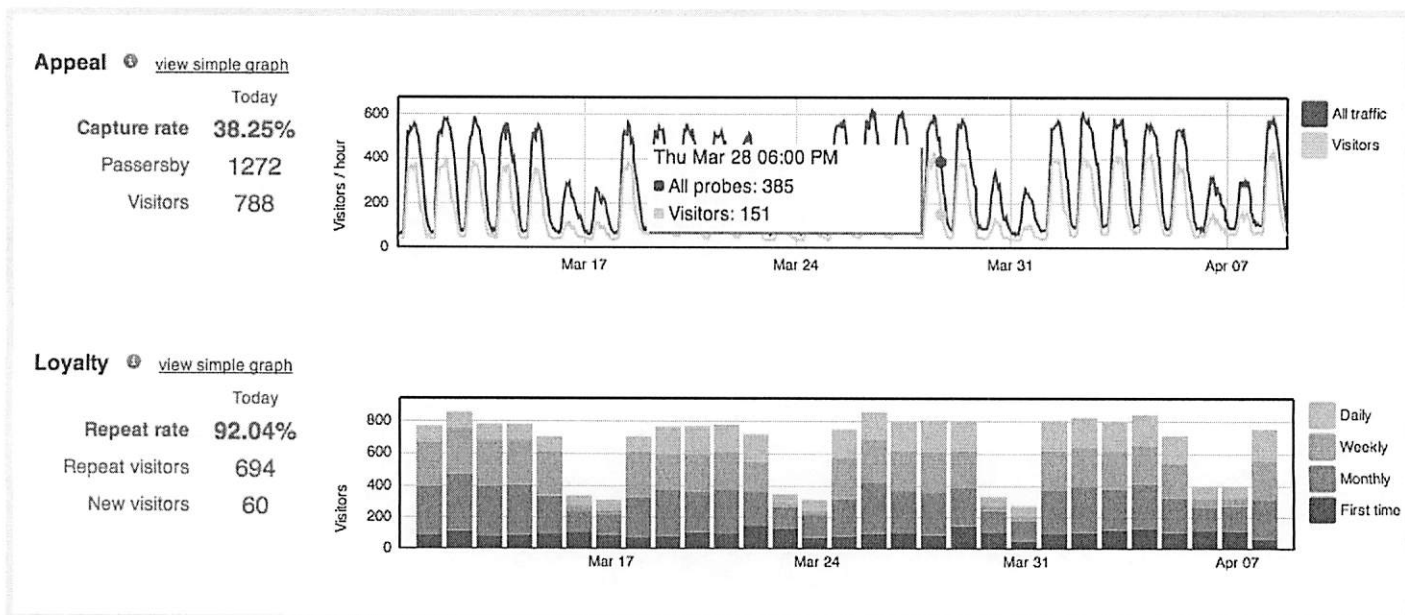
Meraki cloud management provides the ability to customize and integrate splash pages onto each Meraki MR access point, with options for click-through or sign-on splash using your own RADIUS server or the Meraki cloud-based RADIUS user database. The Meraki MR series features a complete array of built-in captive portal tools,

including a guest ambassador portal for new-user sign-on, splash sign-in tracking, application blocking and traffic shaping, free and paid tiers of access, integrated credit-card processing and prepaid codes generation, and splash by-pass for corporate-issued or recognized devices.

Presence

The Meraki MR series tracks probing MAC addresses from associated and non-associated clients. This data is exported in real time from the access points to Meraki's cloud for analytics; information is then calculated and then presented in the Meraki dashboard to display metrics such as user dwell-time, repeat visits and capture rate (people passing by vs. coming inside a site). This

information can be used by retailers, hospitality, and enterprise customers to understand foot traffic and visitor behavior across sites, and can facilitate an optimization of opening hours, marketing initiatives, and staffing policies.



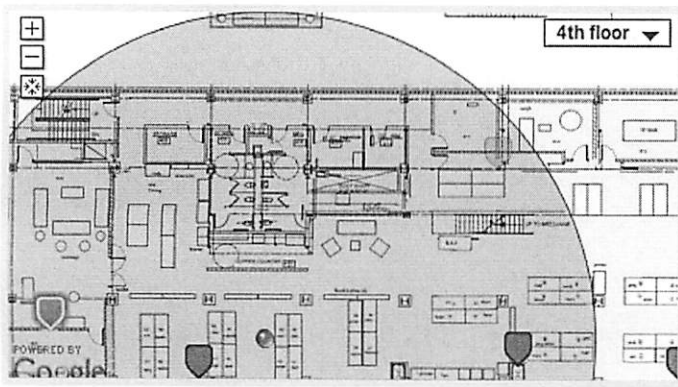
Presence Analytics (for non-associated clients)

BYOD-ready, Out of the Box

User-owned devices have exploded onto networks everywhere, with new iPads, Androids, and smartphones connecting every day. Meraki MR series APs feature built-in support for BYOD and make it easier than ever to securely track and support user-owned iPads, tablets, smartphones, and laptops – without extra appliances, licenses, or complex VLAN configurations. Using integrated Layer 7 client fingerprinting, client devices are automatically identified and classified, letting you distinguish between iPads and iPhones, device operating systems, and even manufacturer. Device-specific policies can be automatically applied to restrict, quarantine, or throttle user-owned devices. Client fingerprinting combined with a heuristics-driven reporting engine allows you to generate detailed reports of BYOD clients that have connected, measure the bandwidth and

applications they've accessed, and even see their percentage of total traffic. Bonjour forwarding facilitates seamless discovery of Apple devices across VLANs, rounding out a full BYOD-centric feature set.

Complete with a free mobile device management (MDM) client agent called Systems Manager, monitor each of your organization's devices, showing useful metrics including client hardware/software information and recent location, and centrally manage your corporate devices with a great degree of granularity; log in with remote desktop or command-line, push new applications, and remotely lock and erase devices.



Client Location Tracking

Top operating systems

#	OS	# Clients ▼	% Clients	Usage	% Usage
1	Apple iPhone	843	38.5%	163.22 GB	7.8%
2	Mac OS X	495	22.6%	1.20 TB	59.0%
3	Apple iPad	168	7.7%	78.78 GB	3.8%
4	Apple iPod	167	7.6%	45.13 GB	2.2%
5	Windows 7	158	7.2%	304.96 GB	14.6%
6	Android	144	6.6%	13.77 GB	0.7%
7	Windows XP	59	2.7%	26.65 GB	1.3%
8	Windows Vista	44	2.0%	81.39 GB	3.9%
9	Apple iOS	31	1.4%	1.40 GB	0.1%
10	Mac OS X 10.6	28	1.3%	84.06 GB	4.0%

Device Reporting and Analytics

Assign group policies by device type

Enabled: assign group policies automatically by device type

What is this?

Groups for device types

Device type	Group policy	Actions
Android	throttle	X
iPad	whitelist	X

[Add group policy for a device type.](#)

Device-Based Group Policies

Auto-Tunneling VPN Technology

Leveraging the Meraki cloud architecture, site-to-site VPNs can be enabled via a single click without any command-line configurations or multi-step key permission setups; Meraki cloud management automatically tunnels, hole punches, and configures devices to eliminate the complexity seen in traditional VPN setups. Complete with IPsec encryption, deploy the following architectural setups within minutes:

- Teleworker VPN: Securely extend the corporate LAN to remote sites wirelessly, using the MR series with your own server or a Meraki MX
- Site-to-site VPN: Multi-branch VPN w/ WAN optimization and Content Filtering (using Meraki MX Security Appliance)
- Secure roaming: Layer 2 and layer 3 roaming for large campus environments

Distributed Packet Processing

Meraki devices execute packet processing at the edge. Each wireless access point features a high performance CPU that enforces layer 3-7 firewall policies, application QoS, network access control (NAC), and more. Meraki networks scale seamlessly: add capacity by simply deploying more APs, without concern for controller bottlenecks or choke points.

Every Meraki wireless access point is built with the packet processing resources to secure and control its client traffic, without need for a wireless LAN controller. Meraki APs are built with a high performance CPU, hardware-accelerated encryption, and extended memory resources to implement stateful firewall policies, voice and video optimization, and even layer 7 traffic classification and QoS.

Product Options



	MR12	MR18	MR26	MR34
Usage	WLAN Small Branch, Teleworker, Home Office	Performance oriented WLAN, Enterprise, Campus, Healthcare	High Performance & Capacity WLAN, High-Density Campus, Enterprise	Highest Performance & Capacity (802.11ac) WLAN, Highest-Density Campus, Enterprise
Radio Specification	1 x 802.11b/g/n radio 300 Mbps max rate 2x2 MIMO, beamforming	1 x 802.11b/g/n radio 1 x 802.11a/n radio 1 x dual-band radio for WIDS/WIPS and RF management 600 Mbps max rate 2x2 MIMO with 2 streams, beamforming	1 x 802.11b/g/n radio 1 x 802.11a/n radio 1 x dual-band radio for WIDS/WIPS and RF management 900 Mbps max rate 3x3 MIMO with 3 streams, beamforming	1 x 802.11b/g/n radio 1 x 802.11a/n/ac radio 1 x dual-band radio for WIDS/WIPS and RF management 1.75 Gbps max rate 3x3 MIMO with 3 streams, beamforming
Interface	1 x Gigabit and 1 x 10/100 Mbps Ethernet ports	1 x Gigabit Ethernet port	1 x Gigabit Ethernet port	1 x Gigabit Ethernet port
Power	802.3af PoE DC power adaptor	802.3af PoE DC power adaptor	802.3af PoE DC power adaptor	802.af PoE (low-power mode), 802.3at PoE+ DC power adapter
Physical Design	Low-profile industrial design	Low-profile industrial design	Low-profile industrial design	Low-profile industrial design
Performance Features	Priority Voice Enterprise-grade CPU Hardware-accelerated encryption	2-stream, 2x2 MIMO Third radio dedicated to security and RF management Priority Voice Power Save (802.11e/WMM) Enterprise-grade CPU Hardware-accelerated encryption High-density support Band steering	3-stream, 3x3 MIMO Third radio dedicated to security and RF management Priority Voice Power Save (802.11e/WMM) Enterprise-grade CPU Hardware-accelerated encryption High-density support Band steering	3-stream, 3x3 MIMO Third radio dedicated to security and RF management Priority Voice Power Save (802.11e/WMM) Enterprise-grade CPU Hardware-accelerated encryption High-density support Band steering
Mesh Networking	Basic mesh	High performance multi-radio mesh	High performance multi-radio mesh	Highest performance multi-radio mesh
Dimensions	7.3" x 5.8" x 1.0" (185 mm x 147 mm x 25 mm)	7.25" x 5.69" x 1.17" (186 mm x 146 mm x 30 mm), not including deskmount feet or mount plate	8.2" x 5.9" x 1.3" (210 mm x 150 mm x 32.5 mm) not including deskmount feet or mount plate	10.0" x 6.1" x 1.5" (253.4 mm x 155.8 mm x 37.1 mm), not including deskmount feet or mount plate
Weight	16 oz (0.45 kg)	25.7 oz (0.73 kg)	19.4 oz (0.55 kg)	25 oz (0.7kg)

*See individual datasheets for detailed specification information such as regulatory compliance and antenna radiation patterns

Product Options



	MR62	MR66
Usage	Rugged/Outdoor WLAN, Outdoor Campuses, Industrial	Rugged/outdoor WLAN, Outdoor Campuses, Industrial, Point-to-Point Links
Radio Specification	1 x 802.11b/g/n radio 300 Mbps max rate 2x2 MIMO, beamforming	1 x 802.11b/g/n radio 1 x 802.11a/n radio 600 Mbps max rate 2x2 MIMO, beamforming
Interface	1 x Gigabit Ethernet port	1 x Gigabit Ethernet port
Power	802.3af PoE	802.3af PoE
Physical Design	Rugged industrial design Water and dust sealed (IP67 rated) Vibration and shock tested	Rugged industrial design Water and dust sealed (IP67 rated) Vibration and shock tested
Performance Features	Priority Voice Enterprise-grade CPU Hardware-accelerated encryption	Priority Voice Power Save (802.11e/WMM) Enterprise-grade CPU Hardware-accelerated encryption High-density support Band-steering
Mesh Networking	Basic mesh	High performance multi-radio mesh
Dimensions	10.5" x 7.6" x 2.2" (267mm x 192mm x 57mm)	10.5" x 7.6" x 2.2" (267mm x 192mm x 57mm)
Weight	1.5 lb (680 g)	1.9 lb (862 g)

*See individual datasheets for detailed specification information such as regulatory compliance

Model	License	Description
All Cisco Meraki MR access points	LIC-ENT-1YR	Cisco Meraki MR Enterprise License and Support, 1 Year
	LIC-ENT-3YR	Cisco Meraki MR Enterprise License and Support, 3 Years
	LIC-ENT-5YR	Cisco Meraki MR Enterprise License and Support, 5 Years
	LIC-ENT-7YR	Cisco Meraki MR Enterprise License and Support, 7 Years
	LIC-ENT-10YR	Cisco Meraki MR Enterprise License and Support, 10 Years