MR36

Dual-band, 802.11ax Wi-Fi 6 access point delivering high efficiency wireless for future-proof deployments

High performance 802.11ax wireless

The Cisco Meraki MR36 is a cloud-managed 2x2:2 802.11ax access point that raises the bar for wireless performance and efficiency. Designed for next-generation deployments in offices, schools, hospitals, shops, and hotels, the MR36 offers high throughput, enterprise-grade security, and simple management.

The MR36 provides a maximum of 1.7 Gbps* aggregate frame rate with concurrent 2.4 GHz and 5 GHz radios. A dedicated third radio provides real-time WIDS/WIPS with automated RF optimization, and a fourth integrated radio delivers Bluetooth scanning and beaconing.

With the combination of cloud management, high performance hardware, multiple radios, and advanced software features, the MR36 makes an outstanding platform for the most demanding of uses—including high-density deployments and bandwidth or performance-intensive applications like voice and high-definition video.

MR36 and Meraki Cloud Management

Management of the MR36 is performed through the Meraki cloud, with an intuitive browser-based interface that enables rapid deployment without time-consuming training or costly certifications. Because the MR36 is self-configuring and managed over the web, it can be deployed at a remote location in a matter of minutes, even without on-site IT staff.

24x7 monitoring via the Meraki cloud delivers real-time alerts if a network encounters problems. Remote diagnostic tools enable immediate troubleshooting over the web so that distributed networks can be managed with a minimum of hassle.

The MR36's firmware is automatically kept up to date via the cloud. New features, bug fixes, and enhancements are delivered seamlessly over the web. This means no manual software updates to download or missing security patches to worry about.

Product Highlights

- 2x2:2 MU-MIMO 802.11ax
- 1.7* Gbps dual-radio aggregate frame rate
- 24x7 real-time WIDS/WIPS and spectrum analytics via dedicated third radio
- Integrated Bluetooth Low Energy Beacon
- Integrated scanning radio
- Enhanced transmit power and receive sensitivity
- Integrated enterprise security and guest access
- Application-aware traffic shaping
- Optimized for voice and video
- Self-configuring, plug-and-play deployment
- Sleek design blends into office environments
- Full-time Wi-Fi location tracking via dedicated 3rd radio

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

Features

Dual–radio aggregate frame rate of up to 1.7 Gbps*
5 GHz 2x2:2 radio and 2.4 GHz 2x2:2 radio offer a combined dual–radio aggregate frame rate of 1.7 Gbps*, with up to 1,201 Mbps in the 5 GHz band and 573 Mbps in the 2.4 GHz band. Technologies like transmit beamforming and enhanced receive sensitivity allow the MR36 to support a higher client density than typical enterprise-class access points, resulting in better performance for more clients, from each AP.

Multi User Multiple Input Multiple Output (MU-MIMO)
With support for features of 802.11ax, the MR36 offers MU-MIMO and OFDMA for more efficient transmission to multiple clients. Especially suited to environments with numerous mobile devices, MU-MIMO enables multiple clients to receive data simultaneously. This increases the total network performance and improves the end user experience.

Dedicated third radio delivers 24x7 wireless security and RF analytics
The MR36's dedicated dual-band scanning and security radio continually assesses the environment, characterizing RF interference and containing wireless threats like rogue access points. There's no need to choose between wireless security, advanced RF analysis, and serving client data - a dedicated third radio means that all functions occur in real-time, without any impact to client traffic or AP throughput.

Bluetooth Low Energy Beacon and scanning radio
An integrated fourth Bluetooth radio provides seamless deployment of BLE Beacon functionality and effortless visibility of Bluetooth devices. The MR36 enables the next generation of location-aware applications while future proofing deployments, ensuring it's ready for any new customer engagement strategies.

Automatic cloud-based RF optimization
The MR36's sophisticated and automated RF optimization means that there is no need for the dedicated hardware and RF expertise typically required to tune a wireless network. The RF data collected by the dedicated third 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 MR36 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 Enterprise authentication with 802.1X and Active Directory integration provide wired-like security while still being easy to configure. 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.

Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration
Meraki Systems Manager natively integrates with the MR36 to offer automatic, context-aware security. 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 MR36 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 MR36, but on other devices in the network. Unscheduled Automatic Power Save Delivery (U-APSD) and new Target Wait Time features in 802.11ax clients ensure minimal battery drain on wireless VoIP phones.

Self-configuring, self-maintaining, always up-to-date
When plugged in, the MR36 automatically connects to the Meraki cloud, downloads its configuration, and joins the appropriate network. If new firmware is required, this is retrieved by the AP and updated automatically. This ensures the network is kept up-to-date with bug fixes, security updates, and new features.

Advanced analytics
Drilling down into the details of network usage provides highly granular traffic analytics. Visibility into the physical world can be enhanced with journey tracking through location analytics. Visitor numbers, dwell time, repeat visit rates, and track trends can all be easily monitored in the dashboard and deeper analysis is enabled with raw data available via simple APIs.

MR70 Tx / Rx Tables | **2.4 GHz**

Operating Band	Operating Mode	Data Rate	TX Power (conducted)	RX Sensitivity
2.4 GHz	802.11b	1 Mb/s	20 dBm	-100 dBm
		2 Mb/s	20 dBm	-90 dBm
		5.5 Mb/s	20 dBm	-90 dBm
		11 Mb/s	20 dBm	-90 dBm
2.4 GHz	802.11g	6 Mb/s	19 dBm	-94 dBm
		9 Mb/s	19 dBm	-93 dBm
		12 Mb/s	19 dBm	-91 dBm
		18 Mb/s	19 dBm	-89 dBm
		24 Mb/s	16 dBm	-86 dBm
		36 Mb/s	16 dBm	-82 dBm
		48 Mb/s	16 dBm	-78 dBm
		54 Mb/s	16 dBm	-77 dBm
2.4 GHz	802.11n (HT20)	MCS0	18.5 dBm	-95 dBm
		MCS1	18.5 dBm	-92 dBm
		MCS2	18.5 dBm	-90 dBm
		MCS3	18.5 dBm	-87 dBm
		MCS4	18.5 dBm	-83 dBm
		MCS5	14.5 dBm	-79 dBm
		MCS6	14.5 dBm	-78 dBm
		MCS7	14.5 dBm	-76 dBm
2.4 GHz	802.11ac (VHT20)	MCS0	18.5 dBm	-95 dBm
		MCS1	18.5 dBm	-92 dBm
		MCS2	18.5 dBm	-90 dBm
		MCS3	18.5 dBm	-87 dBm
		MCS4	18.5 dBm	-83 dBm
		MCS5	14.5 dBm	-79 dBm
		MCS6	14.5 dBm	-78 dBm
		MCS7	14.5 dBm	-77 dBm
		MCS8	14 dBm	-72 dBm

MR70 Tx / Rx Tables | **2.4 GHz**

Operating Band	Operating Mode	Data Rate	TX Power (conducted)	RX Sensitivity
2.4 GHz	802.11ax (HE20)	MCS0	19 dBm	-93 dBm
		MCS1	19 dBm	-90 dBm
		MCS2	19 dBm	-88 dBm
		MCS3	19 dBm	-85 dBm
		MCS4	19 dBm	-81 dBm
		MCS5	14.5 dBm	-77 dBm
		MCS6	14.5 dBm	-76 dBm
		MCS7	14.5 dBm	-75 dBm
		MCS8	14 dBm	-70 dBm
		MCS9	14 dBm	-68 dBm
		MCS10	13.5 dBm	-65 dBm
		MCS11	13.5 dBm	-63 dBm
2.4 GHz	802.11n (HT40)	MCS0	17 dBm	-92 dBm
		MCS1	17 dBm	-89 dBm
		MCS2	17 dBm	-87 dBm
		MCS3	17 dBm	-84 dBm
		MCS4	17 dBm	-80 dBm
		MCS5	14.5 dBm	-76 dBm
		MCS6	14.5 dBm	-75 dBm
		MCS7	14.5 dBm	-74 dBm

MR70 Tx / Rx Tables | **2.4 GHz**

Operating Band	Operating Mode	Data Rate	TX Power (conducted)	RX Sensitivity
2.4 GHz	802.11ac (VHT40)	MCS0	17 dBm	-91 dBm
		MCS1	17 dBm	-88 dBm
		MCS2	17 dBm	-86 dBm
		MCS3	17 dBm	-83 dBm
		MCS4	17 dBm	-79 dBm
		MCS5	14.5 dBm	-75 dBm
		MCS6	14.5 dBm	-74 dBm
		MCS7	14.5 dBm	-73 dBm
		MCS8	14 dBm	-69 dBm
		MCS9	14 dBm	-69 dBm
2.4 GHz	802.11ax (HE40)	MCS0	18.5 dBm	-90 dBm
		MCS1	18.5 dBm	-87dBm
		MCS2	18.5 dBm	-85 dBm
		MCS3	18.5 dBm	-82 dBm
		MCS4	18.5 dBm	-78 dBm
		MCS5	14.5 dBm	-74 dBm
		MCS6	14.5 dBm	-73 dBm
		MCS7	14.5 dBm	-72 dBm
		MCS8	14 dBm	-67 dBm
		MCS9	14 dBm	-65 dBm
		MCS10	13.5 dBm	-65 dBm
		MCS11	13.5 dBm	-63 dBm

MR70 Tx / Rx Tables | **5 GHz**

Operating Band	Operating Mode	Data Rate	TX Power (conducted)	RX Sensitivity
5 GHz	802.11a	6 Mb/s	17.5 dBm	-92 dBm
		9 Mb/s	17.5 dBm	-91 dBm
		12 Mb/s	17.5 dBm	-89 dBm
		18 Mb/s	17.5 dBm	-87 dBm
		24 Mb/s	15 dBm	-83 dBm
		36 Mb/s	15 dBm	-80 dBm
		48 Mb/s	15 dBm	-76 dBm
		54 Mb/s	15 dBm	-76 dBm
5 GHz	802.11n (HT20)	MCS0	17.5 dBm	-93 dBm
		MCS1	17.5 dBm	-90 dBm
		MCS2	17.5 dBm	-88 dBm
		MCS3	17.5 dBm	-85 dBm
		MCS4	17.5 dBm	-81 dBm
		MCS5	13.5 dBm	-77 dBm
		MCS6	13.5 dBm	-76 dBm
		MCS7	13.5 dBm	-75 dBm
5 GHz	802.11n (HT40)	MCS0	17.5 dBm	-91 dBm
		MCS1	17.5 dBm	-88 dBm
		MCS2	17.5 dBm	-86 dBm
		MCS3	17.5 dBm	-83 dBm
		MCS4	17.5 dBm	-79 dBm
		MCS5	13.5 dBm	-75 dBm
		MCS6	13.5 dBm	-74 dBm
		MCS7	13.5 dBm	-73 dBm

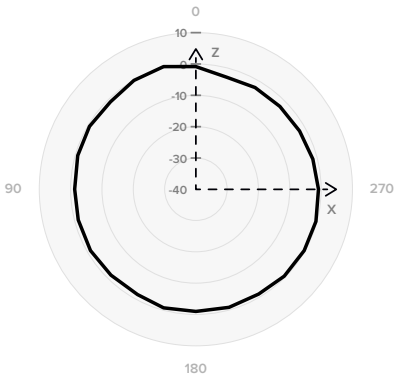
Operating Band	Operating Mode	Data Rate	TX Power (conducted)	RX Sensitivity
5 GHz	802.11ac (VHT20)	MCS0	17.5 dBm	-94 dBm
		MCS1	17.5 dBm	-91 dBm
		MCS2	17.5 dBm	-89 dBm
		MCS3	17.5 dBm	-86 dBm
		MCS4	17.5 dBm	-82 dBm
		MCS5	13.5 dBm	-78 dBm
		MCS6	13.5 dBm	-77 dBm
		MCS7	13.5 dBm	-76 dBm
		MCS8	13.5 dBm	-70 dBm
5 GHz	802.11ac (VHT40)	MCS0	17.5 dBm	-91 dBm
		MCS1	17.5 dBm	-88 dBm
		MCS2	17.5 dBm	-86 dBm
		MCS3	17.5 dBm	-83 dBm
		MCS4	17.5 dBm	-79 dBm
		MCS5	13.5 dBm	-75 dBm
		MCS6	13.5 dBm	-74 dBm
		MCS7	13.5 dBm	-73 dBm
		MCS8	13.5 dBm	-68 dBm
		MCS9	13.5 dBm	-67 dBm
5 GHz	802.11ac (VHT80)	MCS0	17.5 dBm	-88 dBm
		MCS1	17.5 dBm	-85 dBm
		MCS2	17.5 dBm	-83 dBm
		MCS3	17.5 dBm	-80 dBm
		MCS4	17.5 dBm	-76 dBm
		MCS5	13.5 dBm	-72 dBm
		MCS6	13.5 dBm	-71 dBm
		MCS7	13.5 dBm	-70 dBm
		MCS8	13.5 dBm	-65 dBm
		MCS9	13.5 dBm	-64 dBm

Operating Band	Operating Mode	Data Rate	TX Power (conducted)	RX Sensitivity
5 GHz	802.11ax (HE20)	MCS0	17.5 dBm	-93 dBm
		MCS1	17.5 dBm	-92 dBm
		MCS2	17.5 dBm	-88 dBm
		MCS3	17.5 dBm	-85 dBm
		MCS4	17.5 dBm	-81 dBm
		MCS5	13.5 dBm	-77 dBm
		MCS6	13.5 dBm	-76 dBm
		MCS7	13.5 dBm	-75 dBm
		MCS8	13.5 dBm	-70 dBm
		MCS9	13.5 dBm	-68 dBm
		MCS10	12 dBm	-65 dBm
		MCS11	12 dBm	-60 dBm
5 GHz	802.11ax (HE40)	MCS0	17 dBm	-91 dBm
		MCS1	17 dBm	-88 dBm
		MCS2	17 dBm	-86 dBm
		MCS3	17 dBm	-83 dBm
		MCS4	17 dBm	-79 dBm
		MCS5	13.5 dBm	-75 dBm
		MCS6	13.5 dBm	-74 dBm
		MCS7	13.5 dBm	-73 dBm
		MCS8	13.5 dBm	-68 dBm
		MCS9	13.5 dBm	-66 dBm
		MCS10	12 dBm	-63 dBm
		MCS11	12 dBm	-62 dBm

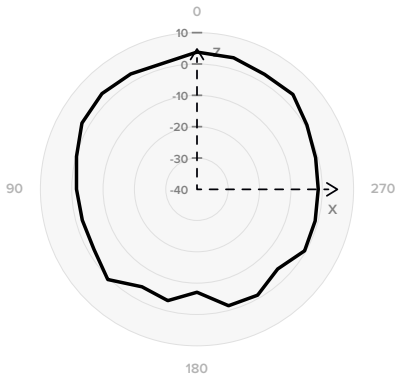
Operating Band	Operating Mode	Data Rate	TX Power (conducted)	RX Sensitivity
5 GHz	802.11ax (HE80)	MCS0	17.5 dBm	-88 dBm
		MCS1	17.5 dBm	-85 dBm
		MCS2	17.5 dBm	-83 dBm
		MCS3	17.5 dBm	-80 dBm
		MCS4	17.5 dBm	-76 dBm
		MCS5	13.5 dBm	-72 dBm
		MCS6	13.5 dBm	-71 dBm
		MCS7	13.5 dBm	-70 dBm
		MCS8	13.5 dBm	-65 dBm
		MCS9	13.5 dBm	-63 dBm
		MCS10	12 dBm	-60 dBm
		MCS11	12 dBm	-59 dBm

MR36

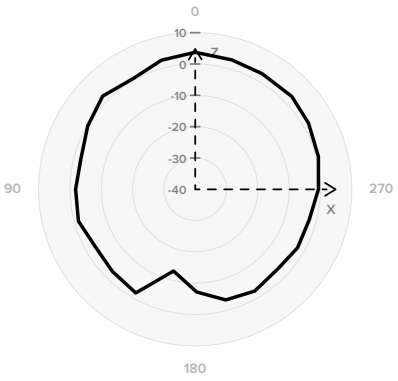
Signal Coverage Pattern for 2.4 GHz Antennas - Wireless



X-Y plane



X-Z plane

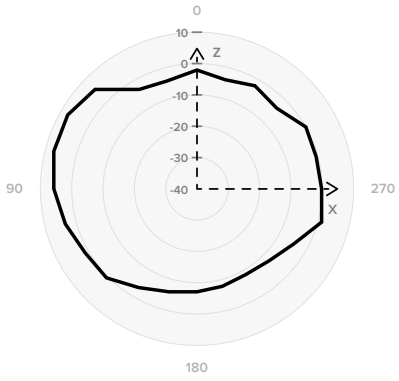


Y-Z plane

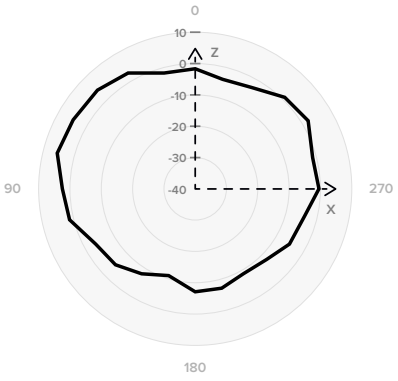
MR36

Signal Coverage Pattern for 5 GHz Antennas - Wireless

X-Y plane



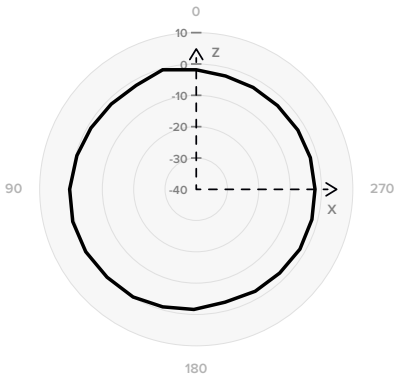
X-Z plane



Y-Z plane

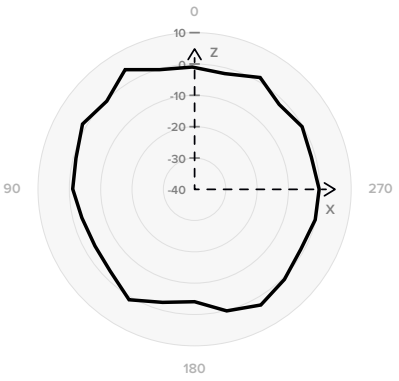
MR36

Signal Coverage Pattern for 2.4 GHz Antennas - Scanning



X-Y plane

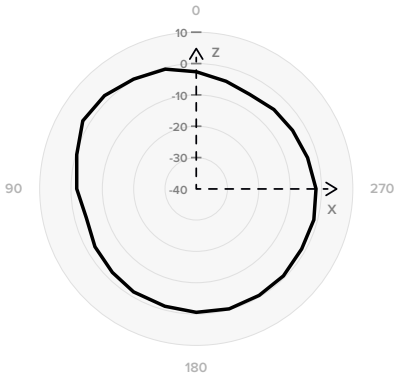
X-Z plane



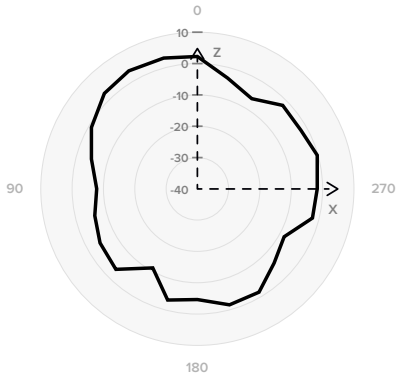
Y-Z plane

MR36

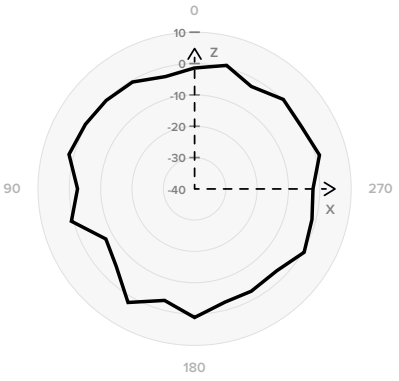
Signal Coverage Pattern for 5 GHz Antennas - Scanning



X-Y plane



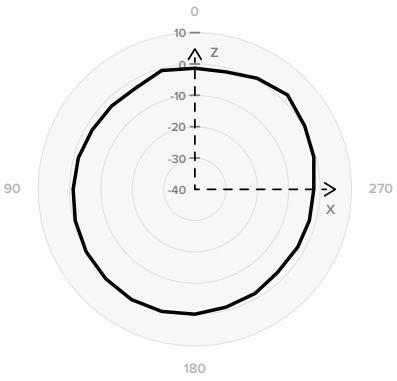
X-Z plane



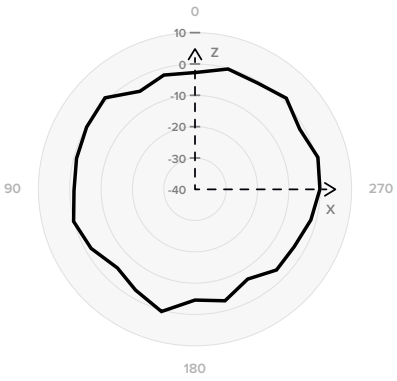
Y-Z plane

MR36

Signal Coverage Pattern for 2.4 GHz Antennas - Bluetooth



X-Y plane



X-Z plane

Y-Z plane

Specifications

Radios

2.4 GHz 802.11b/g/n/ax client access radio

5 GHz 802.11a/n/ac/ax client access radio

2.4 GHz & 5 GHz dual-band WIDS/WIPS, spectrum analysis, & location analytics radio

2.4 GHz Bluetooth Low Energy (BLE) radio with Beacon and BLE scanning support

Concurrent operation of all four radios

Supported frequency bands (country-specific restrictions apply):
- 2.412-2.484 GHz
- 5.150-5.250 GHz (UNII-1)
- 5.250-5.350 GHZ (UNII-2)
- 5.470-5.600, 5.660-5.725 GHz (UNII-2e)
- 5.725 -5.825 GHz (UNII-3)

802.11ax, 802.11ac Wave 2 and 802.11n Capabilities

DL-OFDMA**, UL-OFDMA**, TWT support**, BSS Coloring**

2 x 2 multiple input, multiple output (MIMO) with two 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)

Up to 1024-QAM on both 2.4 GHz & 5 GHz bands

Packet aggregation

Power

Power over Ethernet: 37 - 57 V (802.af compatible)

Alternative: 12 V DC input

Power consumption: 15W max (802.3af)

Power over Ethernet injector and DC adapter sold separately

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 mounting cradle for accurate horizontal wall mounting

Physical Security

Two security screw options (included) (10 mm long and 2.5 mm diameter and 4.7 mm head)

Kensington lock hard point

Concealed mount plate with anti-tamper cable bay

Environment

Operating temperature: 32 °F to 104 °F (0 °C to 40 °C)

Humidity: 5 to 95% non-condensing

Physical Dimensions

9.84" x 4.72" x 1.42" (25 cm x 12 cm x 3.6 cm), not including desk mount feet or mount plate

Weight: 492 g

Antenna

Internal Antenna (5.4 dBi gain at 2.4 GHz, 6 dBi gain at 5 GHz)

Interfaces

1x 10/100/1000 BASE-T Ethernet (RJ45)

1x DC power connector (5.5 mm x 2.5 mm, center positive)

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

WEP***, WPA, WPA2-PSK, WPA2-Enterprise with 802.1X, WPA3 - Personal**, WPA3 - Enterprise**, WPA3 - Enhanced Open (OWE)**

EAP-TLS, EAP-TTLS, EAP-MSCHAPv2, EAP-SIM

TKIP and AES encryption

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

Cisco ISE integration for Guest access and BYOD Posturing

Quality of Service

Advanced Power Save (U-APSD)

WMM Access Categories with DSCP and 802.1p support

Layer 7 application traffic identification and shaping

Mobility

PMK, OKC, & 802.11r for fast Layer 2 roaming

Distributed or centralized Layer 3 roaming

Analytics

Embedded location analytics reporting and device tracking

Global L7 traffic analytics reporting per network, per device, & per application

LED Indicators

1 power/booting/firmware upgrade status

Regulatory

RoHS

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

** Software features can be enabled via firmware updates

Specifications

Warranty
1 year hardware warranty with advanced replacement included

Ordering Information
MR36-HW: Meraki MR36 Cloud Managed 802.11ax AP
MA-PWR-30W-XX: Meraki AC Adapter for MR Series (XX = US/EU/UK/AU)
MA-INJ-4-XX: Meraki Gigabit 802.3at Power over Ethernet Injector (XX = US/EU/UK/AU)
MA-INJ-5-XX: Meraki Multigigabit 802.3at Power over Ethernet Injector (XX = US/EU/UK/AU)

Note: Meraki access point license required.

Compliance and Standards

IEEE Standardss
802.11a, 802.11ac, 802.11ax, 802.11b, 802.11e, 802.11g, 802.11h, 802.11i, 802.11k, 802.11n, 802.11r, and 802.11u***

Safety Approvals
CSA and CB 60950 & 62368
Conforms to UL 2043 (Plenum Rating)

Radio Approvals
Canada: FCC Part 15C, 15E, RSS-247
Europe: EN 300 328, EN 301 893
Australia/NZ: AS/NZS 4268
Mexico: IFT, NOM-208
Taiwan: NCC LP0002
For additional country-specific regulatory information, please contact Meraki Sale

EMI Approvals (Class B)
Canada: FCC Part 15B, ICES-003
Europe: EN 301 489-1-17, EN 55032, EN 55024
Australia/NZ: CISPR 22
Japan: VCCI

Exposure Approvals
Canada: FCC Part 2, RSS-102
Europe: EN 50385, EN 62311, EN 62479
Australia/NZ: AS/NZS 277

*** Feature can be enabled for required networks