Meraki MR12

Datasheet

The Meraki MR12 is an entry-level, single-radio 802.11n cloud-managed access point designed for deployment in home and branch offices, schools, hotels and retail stores. The MR12 uses 802.11n technologies including MIMO, beam forming and channel bonding to deliver the high throughput and extensive, reliable coverage required by the most demanding business applications, including voice and streaming video.

Controlled by the Cloud

The Meraki MR12 is managed and controlled by the Meraki Cloud Controller, meaning it has all the benefits of centralized management from the cloud without the cost and complexity of an on-site controller. The intuitive, web-based Dashboard management console offers centralized, multi-site management, detailed usage statistics and automated alerting capabilities. In addition, the MR12 offers powerful features like Traffic Shaper, which provides application-aware (layer 7) bandwidth shaping, and AutoRF, which performs system-wide channel and transmit power optimization to automatically mitigate RF interference. Since Meraki APs are managed from the cloud, your APs are always up to date with the latest application, device and interference signatures.

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Product Highlights

- 802.11n MIMO provides up to 300 Mbps throughput
- Enhanced transmit power and receive sensitivity
- High performance, self-healing mesh
- Integrated enterprise security and guest access
- Application-aware traffic shaping
- Self-configuring, plug-and-play deployment
- Optimized for voice and video
- Sleek, low profile design blends into office environments

Big RF Performance in a Small Package

The MR12 uses a powerful radio, enhanced receive sensitivity, and beam-forming to increase range by 50% compared to typical enterprise-class 802.11n APs, meaning fewer access points are required for a given deployment. And, at only one inch thick, the MR12 is the thinnest 802.11n enterprise access point yet. Its sleek design blends unobtrusively into office and school environments and makes installation easier.

Environmentally-Friendly Design

In addition to looking great, the MR12 is earth friendly: we've elminiated excess packaging and documentation, and 90% of the APs materials are recyclable. The MR12 has also been designed for low power consumption, so it not only costs less to operate, but can also be powered using standard 802.3af PoE switches and injectors. Finally, since Meraki networks do not require an on-site controller and can leverage economies of scale in our datacenters, network-wide material utilization and power consumption are minimized.

Fastest Deployed Wireless LAN

Since the MR12 is configured and controlled through the web-based Meraki Cloud Controller, deploying our plug-and-play access points takes literally minutes. The MR12 also features Meraki's award-winning, self-healing mesh technology, which can further reduce installation time by enabling rapid extension of your network into areas where laying cabling would be impractical. Once deployed, Meraki networks are incredibly easy to manage even with limited IT resources. Network administrators can remotely monitor and configure their networks from any web-enabled device and the Meraki Cloud Controller provides automatic, over-the-air firmware upgrades.

Industry's Lowest TCO

Meraki's cloud-managed architecture eliminates the need for expensive controller hardware and software, significantly reducing upfront capital expense. In addition, Meraki APs are sold with an all-inclusive software license, meaning no hidden and confusing support and maintenance fees, per-feature fees, and per-user fees. Finally, Meraki simplifies the network design process and allows even the largest networks to be managed by a single person, enabling allocation of IT staff to more strategic business projects than troubleshooting the wireless network.

Specifications

› Radio
- 802.11b/g/n radio
- Max throughput 300 mbit/s
- Operating band: 2.412-2.484 GHz

› 802.11n Capabilities
- 2 x 2 multiple input, multiple output (MIMO) with two spatial streams
- Maximal ratio combining (MRC)
- Beamforming
- 20 and 40 MHz channels
- Packet aggregation
- Cyclic shift diversity (CSD) support

› Power
- Power over Ethernet: 24 - 57 V (802.3af compatible)
- 12V DC
- Power consumption: 8.9 W max; 6.0 W typical
- Power over Ethernet injector and DC adapter sold separately

› Mounting
- All standard mounting hardware included
- Desktop
- Wall mount
- Ceiling tile rail (9/16, 15/16 or 1 ½" flush or recessed rails)
- Assorted cable junction boxes

› Physical Security
- Security screw included
- Kensington lock hard point
- Anti-tamper cable bay
- Concealed mount plate

› Environment
- Operating temperature: 32 °F to 104 °F (0 °C to 40 °C)
- Humidity: 5 to 95% non-condensing

› Physical Dimensions
- 7.3" x 5.8" x 1.0" (185 mm x 147 mm x 25 mm) not including desk-mount feet or mount plate
- Weight: 16 oz (0.45 kg)

› Antenna
- Integrated omni-directional antennas
- Gain: 3 dBi

› Interfaces
- 1x 100/1000Base-T Ethernet (RJ45) with 48V DC 802.3af PoE
- 1x 10/100Base-T Ethernet (RJ45)
- 1x DC power connector (5mm x 2.1mm, center positive)

› Security
- WEP, WPA
- WPA2-PSK
- WPA2-Enterprise with 802.1x
- TKIP and AES encryption
- VLAN tagging (802.1q)

› Quality of Service
- Wireless Quality of Service (WMM/802.11e)
- Advanced Power Save (U-APSD)
- DSCP (802.1p)

› LED Indicators
- 4 signal strength
- 1 Ethernet connectivity
- 1 power/booting/firmware upgrade status

› Regulatory
- FCC (US)
- IC (Canada)
- CE (Europe)
- IEC / EN60950-1
- RoHS

› Certifications
- Wi-Fi Alliance

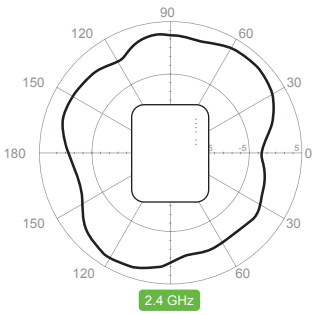
› Warranty
- Lifetime hardware warranty included

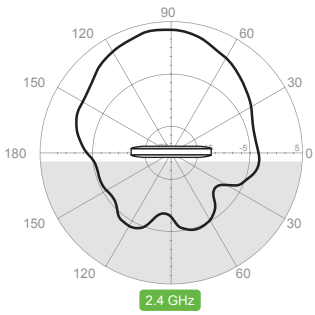
› RF Performance

Operating Band	Operating Mode	Data Rate	TX Power (dBm)	RX Sensitivity
2.4 GHz	802.11b	1 Mb/s	22	-96
		2 Mb/s	22	-94
		5.5 Mb/s	21	-95
		11 Mb/s	21	-92
2.4 GHz	802.11g	6 Mb/s	26	-95
		9 Mb/s	26	-94
		12 Mb/s	26	-93
		18 Mb/s	26	-93
		24 Mb/s	25	-91
		36 Mb/s	25	-87
		48 Mb/s	24	-83
		54 Mb/s	23	-81
2.4 GHz	802.11n (HT20)	MCS0/8 HT20	21	-96
		MCS1/9 HT20	21	-94
		MCS2/10 HT20	21	-92
		MCS3/11 HT20	21	-89
		MCS4/12 HT20	21	-85
		MCS5/13 HT20	21	-82
		MCS6/14 HT20	19	-81
		MCS7/15 HT20	18	-79
2.4 GHz	802.11n (HT40)	MCS0/8 HT40	21	-93
		MCS1/9 HT40	22	-91
		MCS2/10 HT40	21	-89
		MCS3/11 HT40	22	-86
		MCS4/12 HT40	21	-82
		MCS5/13 HT40	21	-79
		MCS6/14 HT40	19	-78
		MCS7/15 HT40	18	-76

*Maximum hardware capability shown above. Transmit power is configurable in increments of 1 dBm and is automatically limited by the Meraki Cloud Controller to comply with local regulatory settings.

› Signal Coverage Pattern





› Ordering Information

MR12-HW	Meraki MR12 Cloud-Managed Single-Radio 802.11n Access Point
POE-INJ-3-US	Meraki 802.3af Power over Ethernet Injector (US Plug)
POE-INJ-3-EU	Meraki 802.3af Power over Ethernet Injector (EU Plug)
POE-INJ-3-UK	Meraki 802.3af Power over Ethernet Injector (UK Plug)
POE-INJ-3-AU	Meraki 802.3af Power over Ethernet Injector (AU Plug)

Note: Meraki Cloud Controller license required.