Meraki MR24
Dual-Radio 3x3 MIMO 802.11n Access Point

Ultra-high performance cloud-managed wireless LAN

The Meraki MR24 is an enterprise class, dual-concurrent 3x3 MIMO 802.11n access point designed for high-density deployments in large offices, schools, hospitals and hotels that require premium performance. The MR24 features dual-concurrent, dual-band operation with the unprecedented speed of 3x3 MIMO 802.11n with three spatial streams, delivering the ultra-high throughput and reliable coverage required by the most demanding business applications like voice and high-definition streaming video.

MR24 and the Meraki Cloud Controller: A Powerful Combo

The MR24 is managed through the Meraki Enterprise Cloud Controller, with an intuitive browser-based interface that enables rapid deployment without training or certifications. Since the MR24 is self-configuring and managed over the web, it can even be deployed at a remote location without on-site IT staff.

The MR24 is monitored 24x7 from the Meraki Enterprise Cloud Controller which delivers real-time alerts if the network encounters problems. Remote diagnostics tools enable real-time troubleshooting over the web, meaning multi-site, distributed networks can be managed remotely.

The MR24'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.

Radios	MIMO Type	Spatial Streams	Maximum Throughput (Mbit/s)
1	2x2	2	300
2	2x2	2	600
2	3x3	2	600
2	*3x3*	*3*	*900*

Product Highlights

- 3x3 802.11n MIMO with three spatial streams
- Up to 900 Mbps combined throughput
- 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
- Integrated spectrum analysis

Features

Dual 3x3 MIMO 802.11n radios, up to 900 Mbit/sec

The MR24 is the first 3x3 MIMO enterprise access point to use three spatial streams. This advanced radio technology enables the MR24 to provide up to 450 Mbit/sec of throughput per radio, for a combined 900 Mbit/s. Technologies like transmit beamforming and enhanced receive sensitivity give the MR24 increased range compared to typical enterprise-class access points, resulting in fewer required APs for a given deployment. In addition, the MR24 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 clients.

Application-aware traffic shaping

The MR24 includes an integrated layer 7 packet inspection, classification, and control engine, enabling you to set 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 cloud-based RF optimization with spectrum analysis

The MR24'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, such as microwave ovens and Bluetooth headsets. The Meraki Cloud Controller then automatically tunes the MR24's channel selection, transmit power, and client connection settings for optimal performance even under challenging RF conditions.

Integrated enterprise security and guest access

The MR24 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. Our policy firewall (Identity Policy Manager) enables group or device-based, granular access policy control. Meraki Teleworker VPN makes it easy to extend the corporate LAN to remote sites, without requiring all clients and devices to have client VPN software. PCI compliance reports check network settings against PCI requirements to simplify secure retail deployments. Integrated WIPS detects, classifies, locates, and contains rogue AP's and client attacks.

Low profile, environmentally friendly design

Despite its robust feature set, the MR24 is packaged in a sleek, low profile enclosure that blends seamlessly into any environment. 90% of the access point materials are recyclable. A maximum power draw of only 12.5 watts and a cloud-hosted, multi-tenant controller mean that pollution, material utilization and your electric bill are kept to a minimum.

High performance mesh

The MR24's advanced mesh technologies like multi-channel routing protocols and multiple gateway support make it possible to cover hard-to-wire areas and improve network resilience. In the event of a switch or cable failure, the MR24 will automatically revert to mesh mode.

Self-configuring, self-optimizing, self-healing

When plugged in, the MR24 automatically connects to the Meraki Enterprise Cloud Controller, downloads its configuration, and joins the appropriate network. It self optimizes, determining the ideal channel, transmit power, and client connection parameters. It self heals, responding automatically to switch failures and other errors.

Specifications

Radios
- One 802.11b/g/n and one 802.11a/n radio
- Dual concurrent operation in 2.4 and 5 GHz bands
- Max throughput 900 Mbit/s
- Operating bands:

FCC (US)	EU (Europe)
2.412-2.484 GHz	2.412-2.484 GHz
5.150-5.250 GHz (UNII-1)	5.150-5.250 GHz (UNII-1)
5.725 -5.825 GHz (UNII-3)	5.250-5.350, 5.470-5.725 GHz (UNII-2)

802.11n Capabilities
- 3 x 3 multiple input, multiple output (MIMO) with three 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)
- 12 V DC
- Power consumption: 12.5 W max
- 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
- Padlock hard point (Master Lock 120T or equivalent)
- 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
- 8.6" x 6.2" x 1.4" (218 mm x 157 mm x 36 mm) not including desk-mount feet or mount plate
- Weight: 22 oz (0.62 kg)

Antenna
- Integrated omni-directional antennas
- Gain: 3 dBi @ 2.4 GHz, 5 dBi @ 5 GHz

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

Security
- Integrated policy firewall (Identity Policy Manager)
- Mobile device policies
- 24x7 WIPS (wireless intrusion prevention system)
- Rogue AP containment
- 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)

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)
- C-Tick (Australia/New Zealand)
- UL2043 (Plenum rating)
- RoHS

Certifications
- Wi-Fi Alliance

Warranty
- Lifetime hardware warranty with advanced replacement included

Ordering Information

MR24-HW	Meraki MR24 Cloud Managed AP
POE-INJ-3-XX	Meraki 802.3af Power over Ethernet Injector (XX = US, EU, UK or AU)
AC-MR-1-XX	Meraki AC Adapter for MR Series (XX = US, EU, UK or AU)

Note: Meraki Enterprise Cloud Controller license required.

› RF Performance Table

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	-93
		5.5 Mb/s	21	-96
		11 Mb/s	20	-92
2.4 GHz	802.11g	6 Mb/s	23	-95
		9 Mb/s	23	-94
		12 Mb/s	22	-95
		18 Mb/s	22	-96
		24 Mb/s	21	-94
		36 Mb/s	21	-90
		48 Mb/s	21	-84
		54 Mb/s	20	-82
2.4 GHz	802.11n (HT20)	MCS0/8 HT20	21	-97
		MCS1/9 HT20	21	-95
		MCS2/10 HT20	21	-93
		MCS3/11 HT20	20	-90
		MCS4/12 HT20	20	-86
		MCS5/13 HT20	20	-83
		MCS6/14 HT20	19	-82
		MCS7/15 HT20	18	-80
2.4 GHz	802.11n (HT40)	MCS0/8 HT40	20	-93
		MCS1/9 HT40	20	-92
		MCS2/10 HT40	20	-90
		MCS3/11 HT40	20	-87
		MCS4/12 HT40	20	-83
		MCS5/13 HT40	19	-79
		MCS6/14 HT40	18	-79
		MCS7/15 HT40	17	-78
5 GHz	802.11a	6 Mb/s	23	-97
		9 Mb/s	23	-96
		12 Mb/s	22	-94
		18 Mb/s	22	-92
		24 Mb/s	21	-91
		36 Mb/s	20	-87
		48 Mb/s	19	-85
		54 Mb/s	19	-82
5 GHz	802.11n (HT20)	MCS0/8 HT20	22	-99
		MCS1/9 HT20	22	-97
		MCS2/10 HT20	21	-93
		MCS3/11 HT20	20	-90
		MCS4/12 HT20	20	-79
		MCS5/13 HT20	19	-77
		MCS6/14 HT20	18	-77
		MCS7/15 HT20	15	-77
5 GHz	802.11n (HT40)	MCS0/8 HT40	22	-96
		MCS1/9 HT40	21	-95
		MCS2/10 HT40	20	-92
		MCS3/11 HT40	19	-92
		MCS4/12 HT40	18	-89
		MCS5/13 HT40	18	-82
		MCS6/14 HT40	17	-78
		MCS7/15 HT40	14	-76

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

› Signal Coverage Patterns

2.4 GHz   2.4 GHz   5.0 GHz   5.0 GHz