



MR44 Datasheet

High Performance 802.11ax Wireless

The Cisco Meraki MR44 is a cloud-managed 2x2:2 + 4x4:4 802.11ax access point that raises the bar for wireless performance and efficiency. Designed for next-generation deployments in offices, schools, hospitals, shops, and hotels, the MR44 offers high throughput, enterprise-grade security, and simple management.

The MR44 provides a maximum of 3 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 MR44 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.



MR44 and Meraki Cloud Management

Management of the MR44 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 MR44 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 MR44'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 (2.4GHz) + 4x4:4 (5GHz) MU-MIMO 802.11ax
- 3 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

Features

Dual-radio aggregate frame rate of up to 3 Gbps*

2.4 GHz 2x2:2 radio and 5 GHz 4x4:4 radio offer a combined dual-radio aggregate frame rate of 3 Gbps*, with up to 2,402 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 MR44 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 802.11ax operation.

Multi User Multiple Input Multiple Output (MU-MIMO)

With support for features of 802.11ax, the MR44 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 MR44'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 MR44 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 MR44'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 MR44 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 MR44 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 MR44 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 MR44, 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 MR44 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.

Specifications

Category	Specifications
Radios	<ul style="list-style-type: none"> • 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) • Supported frequency bands (country-specific restrictions apply): <ul style="list-style-type: none"> ◦ 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)
Antenna	<ul style="list-style-type: none"> • Internal Antenna (5.1dBi max gain at 2.4 GHz, 5.9dBi max gain at 5 GHz)
802.11ax, 802.11ac Wave 2 and 802.11n Capabilities	<ul style="list-style-type: none"> • DL-OFDMA**, UL-OFDMA**, TWT support**, BSS Coloring** • 2.4GHz: 2 x 2 multiple input, multiple output (MIMO) with two spatial streams • 5GHz: 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) • Up to 1024-QAM on both 2.4 GHz & 5 GHz bands • Packet aggregation
Power	<ul style="list-style-type: none"> • Power over Ethernet: 42.5 - 57 V (802.3at) or 37 - 57 V (802.3af) - low power mode ** • Alternative: 12 V DC input • Power consumption: 30W max (802.3at) or 15W max (802.3af) - low power mode ** • Power over Ethernet injector and DC adapter sold separately

	<div>  In low power mode, MR44 will do the following: <ol style="list-style-type: none"> 1. Downshift its Ethernet uplink speed from 2.5 Gbps to 1 Gbps 2. Transition from 4x4:4 to 2x2:2 in 5GHz 3. Disable its dedicated IoT (previously known as BLE) radio 4. Reduce the max Tx power </div> <div>  Warning: Please ensure that MR44 is connected to an 802.3at-capable (PoE+) switch/power injector during the initial installation OR ensure that the network MR44 is added to is set to MR 27.6 firmware (not yet available at the time of writing) or newer firmware. This is because the default MR44 firmware image has support for the low-power mode, however, MR 27.5/27.5.1 or lower firmware <u>does not</u> have low power mode support. Using 802.3af switch/power injector with MR44 set to 27.5/27.5.1 or lower firmware might result in unexpected behaviors including but not limited to reboots or degraded performance. Due to the reasons stated above, please <u>do not</u> downgrade the network with MR44 APs to 27.5/27.5.1 or lower firmware if they are being powered on by 802.3af (PoE) switch/power injector. </div>
Interfaces	<ul style="list-style-type: none"> • 1x 100/1000/2.5G BASE-T Ethernet (RJ45) • 1x DC power connector (5.5 mm x 2.5 mm, center positive)
Mounting	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Two security screw options (included) (13.5 mm long and 2.5 mm diameter and 5 mm head) • Kensington lock hard point • Concealed mount plate with anti-tamper cable bay
Environment	<ul style="list-style-type: none"> • Operating temperature: 32 °F to 104 °F (0 °C to 40 °C) • Humidity: 5 to 95% non-condensing
Physical Dimensions	<ul style="list-style-type: none"> • 12.05" × 5.06" × 1.74" (30.6 cm × 12.84 cm × 4.43 cm), not including desk mount feet or mount plate • Weight: 26.07 oz (739 g)

Security	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Advanced Power Save (U-APSD) • WMM Access Categories with DSCP and 802.1p support • Layer 7 application traffic identification and shaping
Mobility	<ul style="list-style-type: none"> • PMK, OKC, & 802.11r for fast Layer 2 roaming • Distributed or centralized layer 3 roaming
Analytics	<ul style="list-style-type: none"> • Embedded location analytics reporting and device tracking • Global L7 traffic analytics reporting per network, per device, & per application
LED Indicators	<ul style="list-style-type: none"> • 1 power/booting/firmware upgrade status
Regulatory	<ul style="list-style-type: none"> • RoHS • For additional country-specific regulatory information, please contact Meraki sales
Warranty	<ul style="list-style-type: none"> • Lifetime hardware warranty with advanced replacement included
Ordering Information	<ul style="list-style-type: none"> • MR44-HW: Meraki MR44 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.



** features can be enabled via future firmware updates

Compliance and Standards

Category	Standards
IEEE Standards	<ul style="list-style-type: none">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	<ul style="list-style-type: none">CSA and CB 60950 & 62368Conforms to UL 2043 (Plenum Rating)
Radio Approvals	<ul style="list-style-type: none">Czzanada: FCC Part 15C, 15E, RSS-247Europe: EN 300 328, EN 301 893Australia/NZ: AS/NZS 4268Mexico: IFT, NOM-208Taiwan: NCC LP0002For additional country-specific regulatory information, please contact Meraki Sales
EMI Approvals (Class B)	<ul style="list-style-type: none">Canada: FCC Part 15B, ICES-003Europe: EN 301 489-1-17, EN 55032, EN 55024Australia/NZ: CISPR 22Japan: VCCI
Exposure Approvals	<ul style="list-style-type: none">Canada: FCC Part 2, RSS-102Europe: EN 50385, EN 62311, EN 62479Australia/NZ: AS/NZS 2772



*** feature can be enabled for required networks

Context and Comparisons

802.11ax, 802.11ac Wave 2 and 802.11n Capabilities

MR36	MR44	MR46	MR56
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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**
2 x 2 multiple input, multiple output (MIMO) with two spatial streams	2.4GHz: 2 x 2 multiple input, multiple output (MIMO) with two spatial streams 5GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	4 x 4 multiple input, multiple output (MIMO) with four spatial streams	8 x 8 multiple input, multiple output (MIMO) with eight spatial streams on 5 GHz 4 x 4 multiple input, multiple output (MIMO) with eight spatial streams on 2.4 GHz
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
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 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 80MHz channels (802.11ax)
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 both 2.4 GHz & 5 GHz bands	Up to 1024-QAM on both 2.4 GHz & 5 GHz bands
Packet aggregation	Packet aggregation	Packet aggregation	Packet aggregation

Power

MR36	MR44	MR46	MR56
Power over Ethernet: 37 - 57 V (802.af compliant)	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 compliant)
Alternative: 12 V DC input	Alternative: 12 V DC input	Alternative: 12 V DC input	Alternative: 12 V DC input
Power consumption: 15W max (802.3af)	Power consumption: 30W max (802.3at) or 15W max (802.3af) - low power mode **	Power consumption: 30W max (802.3at required)	Power consumption: 30W max (802.3at required)

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 and DC adapter sold separately



** features can be enabled via future firmware updates

Interfaces

MR36	MR44	MR46	MR56
1x 10/100/1000 BASE-T Ethernet (RJ45)	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 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 (5.5 mm x 2.5 mm, center positive)	1x DC power connector (5.5 mm x 2.5 mm, center positive)

Physical Dimensions

MR36	MR44	MR46	MR56
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	12.05" x 5.06" x 1.74" (30.6 cm x 12.84 cm x 4.43 cm), not including desk mount feet or mount plate	12.05" x 5.06" x 1.74" (30.6 cm x 12.84 cm x 4.426 cm), not including desk mount feet or mount plate	12.83" x 5.54" x 1.76" (32.6 cm x 14.079 cm x 4.47 cm), not including desk mount feet or mount plate
Weight: 17.35 oz (492 g)	Weight: 26.07 oz (739 g)	Weight: 28.22 oz (800 g)	Weight: 35.27 oz (1 kg)

RF Performance Table

2.4 GHz

Operating Band	Operating Mode	Data Rate	TX Power (conducted)	RX Sensitivity
2.4 GHz	802.11b	1 Mb/s	18	-99.0
		2 Mb/s	18	-97.0
		5.5 Mb/s	18	-95.0
		11 Mb/s	18	-92.0
2.4 GHz	802.11g	6 Mb/s	18	-95.0
		9 Mb/s	18	-94.0
		12 Mb/s	18	-93.0
		18 Mb/s	18	-91.0
		24 Mb/s	16	-87.0
		36 Mb/s	16	-84.0
		48 Mb/s	16	-80.0
		54 Mb/s	16	-79.0
2.4 GHz	802.11n (HT20)	MCS0	18	-95.0
		MCS1	18	-92.0
		MCS2	18	-90.0
		MCS3	18	-87.0
		MCS4	18	-84.0
		MCS5	16	-79.0

Operating Band	Operating Mode	Data Rate	TX Power (conducted)	RX Sensitivity
2.4 GHz	802.11ac (VHT20)	MCS6	16	-78.0
		MCS7	16	-76.0
		MCS0	18	-95.0
		MCS1	18	-92.0
		MCS2	18	-90.0
		MCS3	18	-87.0
		MCS4	18	-84.0
		MCS5	16	-80.0
		MCS6	16	-78.0
		MCS7	16	-77.0
2.4 GHz	802.11ax (HE20)	MCS8	14	-72.0
		MCS0	18	-95.0
		MCS1	18	-93.0
		MCS2	18	-91.0
		MCS3	18	-88.0
		MCS4	18	-85.0
		MCS5	16	-80.0
		MCS6	16	-79.0

Operating Band	Operating Mode	Data Rate	TX Power (conducted)	RX Sensitivity
2.4 GHz	802.11ac (VHT40)	MCS7	16	-78.0
		MCS8	14	-73.0
		MCS9	14	-72.0
		MCS10	13	-68.0
		MCS11	13	-67.0
		MCS0	18	-93.0
		MCS1	18	-90.0
		MCS2	18	-88.0
		MCS3	18	-84.0
		MCS4	18	-81.0
		MCS5	16	-77.0
2.4 GHz	802.11ax (HE40)	MCS6	16	-76.0
		MCS7	16	-74.0
		MCS8	14	-69.0
		MCS9	14	-67.0
		MCS0	18	-93.0
		MCS1	18	-91.0
		MCS2	18	-89.0

Operating Band	Operating Mode	Data Rate	TX Power (conducted)	RX Sensitivity
		MCS3	18	-85.0
		MCS4	18	-82.0
		MCS5	16	-78.0
		MCS6	16	-77.0
		MCS7	16	-75.0
		MCS8	14	-71.0
		MCS9	14	-70.0
		MCS10	13	-66.0
		MCS11	13	-64.0

5 GHz

Operating Band	Operating Mode	Data Rate	TX Power (conducted)	RX Sensitivity
5 GHz	802.11a	6 Mb/s	18.0	-93.0
		9 Mb/s	18.0	-92.0
		12 Mb/s	18.0	-91.0
		18 Mb/s	18.0	-89.0
		24 Mb/s	16.0	-85.0

Operating Band	Operating Mode	Data Rate	TX Power (conducted)	RX Sensitivity
5 GHz	802.11n (HT20)	36 Mb/s	16.0	-82.0
		48 Mb/s	16.0	-78.0
		54 Mb/s	16.0	-77.0
		MCS0	18.0	-93.0
		MCS1	18.0	-91.0
		MCS2	18.0	-88.0
		MCS3	18.0	-85.0
		MCS4	18.0	-82.0
		MCS5	16.0	-78.0
		MCS6	16.0	-76.0
5 GHz	802.11n (HT40)	MCS7	16.0	-75.0
		MCS0	18.0	-91.0
		MCS1	18.0	-88.0
		MCS2	18.0	-86.0
		MCS3	18.0	-82.0
		MCS4	18.0	-79.0
		MCS5	16.0	-75.0
		MCS6	16.0	-74.0

Operating Band	Operating Mode	Data Rate	TX Power (conducted)	RX Sensitivity
5 GHz	802.11ac (VHT20)	MCS7	16.0	-73.0
		MCS0	18.0	-93.0
		MCS1	18.0	-91.0
		MCS2	18.0	-88.0
		MCS3	18.0	-85.0
		MCS4	18.0	-82.0
		MCS5	16.0	-78.0
		MCS6	16.0	-77.0
		MCS7	16.0	-75.0
		MCS8	14.0	-70.0
5 GHz	802.11ac (VHT40)	MCS0	18.0	-91.0
		MCS1	18.0	-88.0
		MCS2	18.0	-86.0
		MCS3	18.0	-83.0
		MCS4	18.0	-80.0
		MCS5	16.0	-76.0
		MCS6	16.0	-74.0
		MCS7	16.0	-73.0

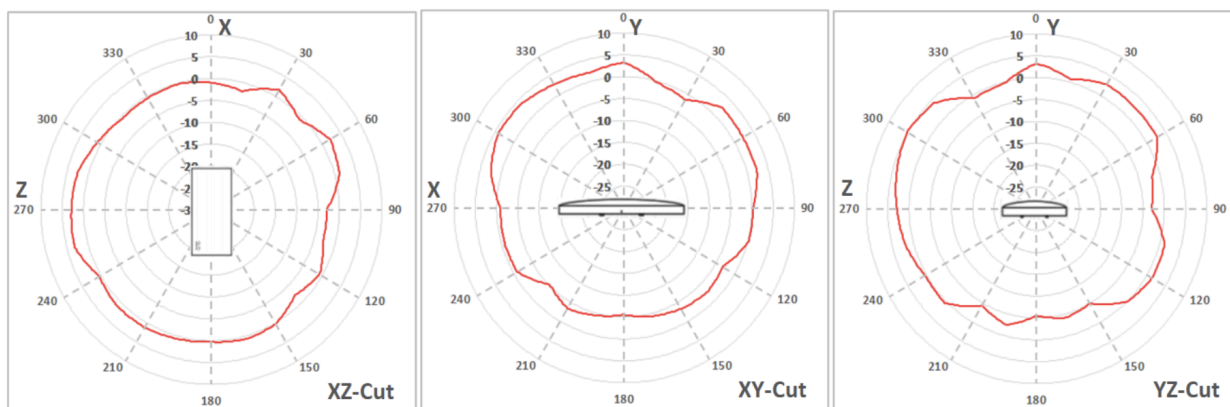
Operating Band	Operating Mode	Data Rate	TX Power (conducted)	RX Sensitivity
5 GHz	802.11ac (VHT80)	MCS8	14.0	-68.0
		MCS9	14.0	-67.0
		MCS0	18.0	-88.0
		MCS1	18.0	-85.0
		MCS2	18.0	-83.0
		MCS3	18.0	-79.0
		MCS4	18.0	-76.0
		MCS5	16.0	-72.0
		MCS6	16.0	-70.0
		MCS7	16.0	-69.0
		MCS8	14.0	-64.0
		MCS9	14.0	-63.0
		MCS0	18.0	-93.0
		MCS1	18.0	-92.0
5 GHz	802.11ax (HE20)	MCS2	18.0	-89.0
		MCS3	18.0	-86.0
		MCS4	18.0	-83.0
		MCS5	16.0	-78.0

Operating Band	Operating Mode	Data Rate	TX Power (conducted)	RX Sensitivity
5 GHz	802.11ax (HE40)	MCS6	16.0	-77.0
		MCS7	16.0	-76.0
		MCS8	14.0	-71.0
		MCS9	14.0	-70.0
		MCS10	13.0	-66.0
		MCS11	13.0	-64.0
		MCS0	18.0	-91.0
		MCS1	18.0	-89.0
		MCS2	18.0	-87.0
		MCS3	18.0	-84.0
		MCS4	18.0	-80.0
		MCS5	16.0	-76.0
		MCS6	16.0	-75.0
		MCS7	16.0	-74.0
		MCS8	14.0	-69.0
		MCS9	14.0	-68.0
		MCS10	13.0	-64.0
		MCS11	13.0	-62.0

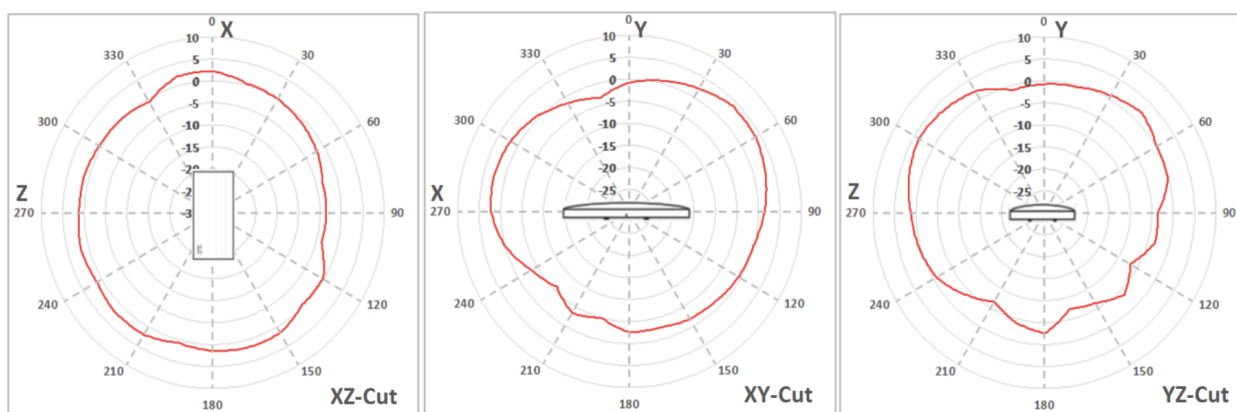
Operating Band	Operating Mode	Data Rate	TX Power (conducted)	RX Sensitivity
5 GHz	802.11ax (HE80)	MCS0	18.0	-89.0
		MCS1	18.0	-87.0
		MCS2	18.0	-84.0
		MCS3	18.0	-81.0
		MCS4	18.0	-78.0
		MCS5	16.0	-74.0
		MCS6	16.0	-73.0
		MCS7	16.0	-71.0
		MCS8	14.0	-67.0
		MCS9	14.0	-65.0
		MCS10	13.0	-61.0
		MCS11	13.0	-59.0

Signal Coverage Patterns

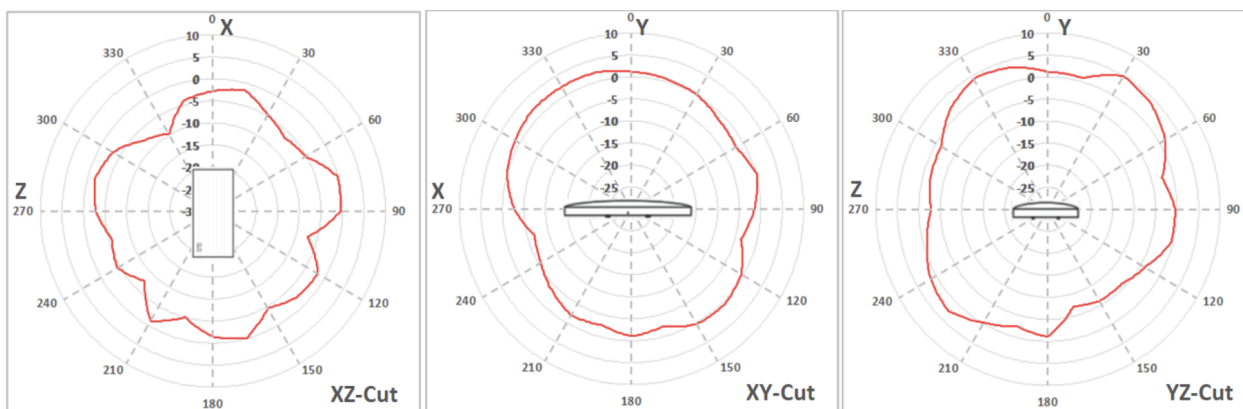
5 GHz - Wireless



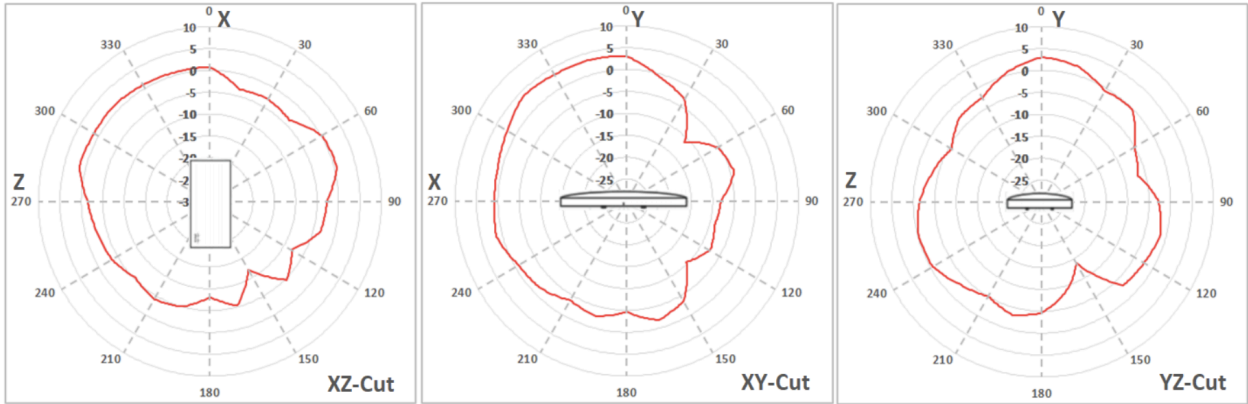
2.4 GHz - Wireless



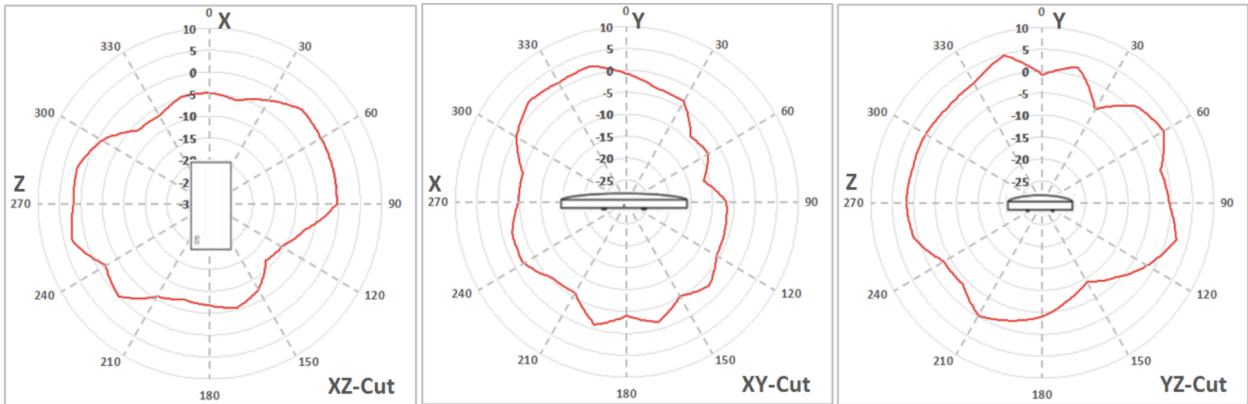
2.4 GHz - Bluetooth



2.4GHz - Scanning



5 GHz - Scanning



Installation Guide

For instructions on how to install and configure MR44 access points please refer to the [MR44 Installation Guide](#)

ThunderIT for the REMC SAVE Contract

ThunderIT offers products and services for REMC SAVE contract customers at a discounted price in accordance to the REMC price list.

Overview for the REMC SAVE contract

REMC SAVE provides large volume contracts for a variety of educational resources, including furniture, school and office supplies, software and digital services, and technology.

The program saves time and money by providing bids compliant with the Michigan Revised School Code that also provides local school districts with the authority to purchase using REMC contracts. The legislation that established REMCs (Michigan Compiled Laws Act 451 Section 380.671), and State Board of Education Rules, enables REMCs to bid on behalf of local school districts and also provide local school districts with the authority to purchase using REMC contracts. All items and vendors are awarded through a sealed bid process by the REMC SAVE Bid Project and approved by the REMC Association.

REMC SAVE is provided as a project of the REMC Association of Michigan for all Michigan schools. REMC SAVE provides large-volume contracts for a variety of educational resources. By using REMC SAVE contracts, Michigan schools have saved more than \$1 billion since 1990. Every dollar saved through REMC SAVE today is one more dollar to invest in instruction tomorrow.

ThunderIT services the following REMC districts; REMC 1, REMC 2N, REMC 2C, REMC 2S, REMC 3, REMC 4, REMC 5, REMC 6, REMC 7, REMC 8, REMC 9, REMC 10, REMC 11, REMC 12W, REMC 12E, REMC 13, REMC 14W, REMC 14E, REMC 15, REMC 16, REMC 17, REMC 18S, REMC 18N, REMC 19W, REMC 19E, REMC 20, REMC 21, REMC 22

ThunderIT services the following REMC customers; AKIVA HEBREW DAY SCHOOL, BIRNEY MIDDLE SCHOOL, BUSSEY CTR-EARLY CHILDHOOD DEV, DEVRY UNIVERSITY - SOUTHFIELD – CENTRAL, HAMILTON ACADEMY CENTRAL OFFICE, LEONHARD ELEMENTARY SCHOOL, MCINTYRE ELEMENTARY SCHOOL, OAKLAND INTERNATIONAL ACADEMY

Other REMC contract holders include: Inacomp Technical Services Group, Sentinel Technologies, Software Services Group, Insight Direct USA, Information Systems Intelligence, Netech, Secant Technologies, CDW Logistics Inc (CDWG)

ThunderIT offers a variety of Solutions & Services to meet your every need

Digital Workplace

Transform your digital workplace and empower employees to drive your business forward. We deliver flexible, tailored, end-to-end solutions to keep your workforce engaged and productive. With an innovative approach centered around exceptional user experiences.

Smart Spaces

We provide smart workspace solutions to help you deliver consistent network performance and give guests, employees and students an uninterrupted experience.

Secure Network Solutions

Our security solutions help protect your network and critical data from cybersecurity threats

Safe Environments

We believe that employee, student, and customer safety is paramount in any environment. That's why our solutions provide a cloud based platform to help you intuitively manage and monitor physical locations to ensure a safe experience for everyone.

Next Generation WiFi

Power new and improved user experiences with our managed wifi solutions, offering faster speeds for enhanced application experience and more capacity for high density indoor and outdoor environments.

Remote Work Solutions

With our remote work solutions, working away from the office is no big deal. Give employees a secure, optimized connection to your entire network from anywhere.

Hybrid Workforce

We provide a seamless hybrid workforce solution that embraces change and operational scale. Give your employees and customers unrivaled experiences with a cloud platform that unifies best-in-class technologies.

Free Network Evaluation & Demo

ThunderIT offers a FREE Network Evaluation and/or product Demo to help ensure you are well informed and confident when choosing the right Cisco Meraki solution for your needs. During our call we'll architect a custom built Cisco Meraki solution for your business or environment.

Migration & Deployment

ThunderIT offers Migration and Deployment Services for your Cisco Meraki solution. Our experienced team of IT Professionals can configure, deploy and support your products to meet your needs. Our custom solutions ensure maximum efficiency and provide a clear path for your business going forward.

Managed Security

ThunderIT offers the best and most cost-effective solution to lower your risk in a heightened threat environment. Our team of certified Cisco engineers are ready to ensure that your network is secure, and your firewall is optimally configured to defend your business.

Mobile device management (MDM) Services

Our Mobile Device Management (MDM) solution unifies management of thousands of endpoint devices in a secure cloud platform, driving your organization's mobility initiatives, while maintaining an environment of agility and security.

Support & Monitoring

ThunderIT offers network support and monitoring services that are designed to fit the needs of every customer.

FAQs for the REMC SAVE Contract

Q: Does REMC SAVE meet the legal requirement for competitive bidding? A: The legislation that established REMCs (Michigan Compiled Laws Act 451 Section 380.671), and State Board of Education Rules, enables REMCs to bid on behalf of local school districts and also provide local school districts with the authority to purchase using REMC contracts. All items are competitively bid by REMC SAVE and awarded by the REMC Association.

Q: Who can Use REMC SAVE contracts? A: The following agencies are eligible to purchase using REMC SAVE contracts: PreK-12 Public, Charter (PSA) and Non-Public Schools, Community Colleges, Universities and Colleges, Public Libraries, Museums, State, County, and Local Government Agencies, Educational Non-profit Organizations and Health Care Facilities. Personal purchases at awarded bid pricing are at the discretion of the vendors.

Q: What is REMC SAVE? A: REMC SAVE is a free service of the REMC Association for all Michigan schools. There are 3 staff of REMC SAVE, and they conduct all of the bids and maintain vendor contracts. You can ask your local REMC Center questions. Find your local REMC Center by scrolling down the REMC SAVE home screen to view the map for your region or look up by zip code.

Q: How do I provide feedback? A: Your local REMC SAVE contact will always listen to any feedback you wish to provide. If you have feedback about the product, scroll down the home screen at remcsave.org and click 'View All Vendors' and you can complete a vendor evaluation form.

Q: What if my company wishes to become an awarded vendor? A: Go to vendorcenter.remcbids.org and create an account by clicking Login or Register in the upper right corner. Follow the directions! The only requirement is that you need five Michigan K12 school references. Customers can send their vendor recommendations to their local REMC contact or email remcsave@remc.org

Q: How are the vendors and products selected? A: Products and Vendors are awarded through a competitive bid process. REMC SAVE staff analyzes all bids and make recommendations to the REMC SAVE Advisory Committee for award. Once the REMC SAVE Advisory Committee votes on the award recommendations, they are then voted on by the REMC Association Board of Directors for final award.

Q: Where do I send my order or contact an awarded vendor? To contact vendors, navigate to the vendor listing by scrolling down the home screen and click 'view all vendors,' or navigate to <https://www.remcsave.org/vendors>. Click on the vendor name to find their contact information.

Q: What do I need to include on my purchase order? Please make sure your purchase order is itemized and includes the REMC item number, the model number/name, the reseller product number (if available), the quantity of each item to be purchased, and the unit price. A quote may be attached, but the purchase order should still be itemized. Sometimes the item numbers for the warranties, accessories, and upgrades are located on the spec sheet, linked from the awarded item page – be sure to include on the Purchase Order.