

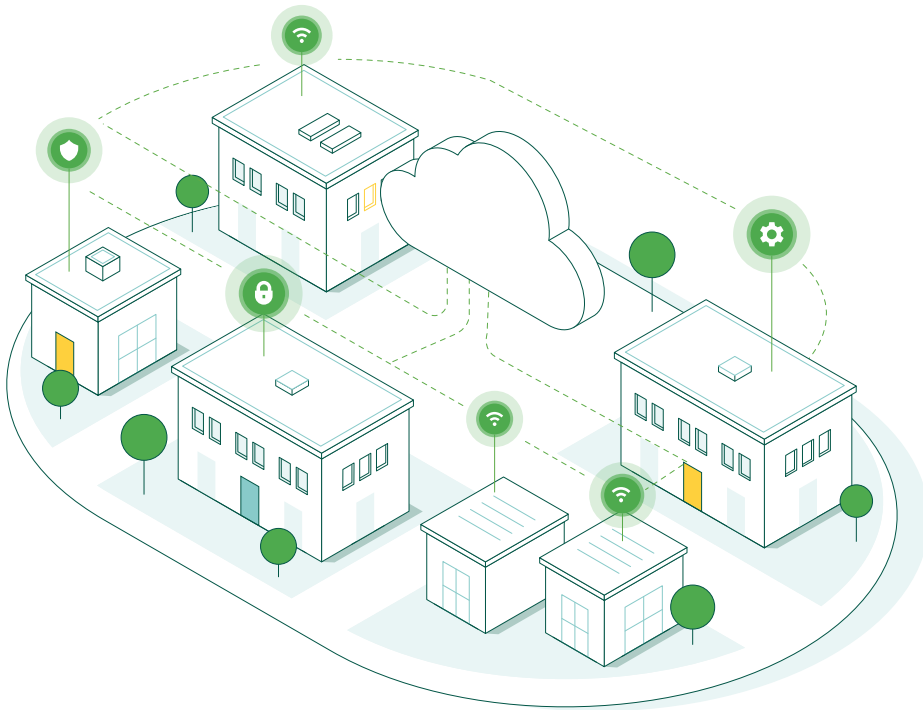


## FAMILY DATASHEET

# Meraki Wireless Cloud-Managed Access Points

## Overview

The Meraki cloud-managed wireless series is a line of enterprise-grade WLAN access points (APs) that leverage the award-winning Cisco Meraki cloud-managed architecture to provide powerful and intuitive centralized management, while eliminating the cost and complexity of traditional on-site wireless controllers. Meraki wireless APs are designed for challenging enterprise environments characterized by high-performance hardware, multiple radios, and advanced software features with proven scale and reliability (99.9 cloud SLA) to support the most demanding use cases.



## Centralized cloud management

The Meraki cloud-managed architecture allows users to seamlessly manage campus-wide Wi-Fi deployments and distributed multi-site networks with zero-touch access point provisioning, network-wide visibility and control, self-learning RF optimization, seamless firmware updates, and more. With an intuitive browser-based user interface, Meraki WLAN configures in minutes without training or dedicated staff, offering scalability with templates. 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 are self-provisioning, enabling large campus and multi-site deployments without on-site IT. Learning from billions of touchpoints, AI and data-powered Meraki Health empowers customers with the data they need to stay informed and the context they need to make decisions.

## Class-leading enterprise features

Meraki MR wireless access points come equipped with industry-leading features that make them ideal for demanding enterprise deployments:

- Self-configuring plug-and-play deployment
- 802.11be MU-MIMO with up to sixteen spatial streams built for voice and video
- Dedicated radio for security and RF optimization with integrated spectrum analysis (indoor models)
- Advanced security to protect against malware, ransomware, and C2 callbacks
- Integrated intrusion detection and prevention system (WIDS/WIPS)
- Intelligent firmware upgrades that minimize downtime
- AI/ML-powered analytics for root cause analysis and Wi-Fi troubleshooting
- Advanced application visibility with Cisco Network-Based Application Recognition (NBAR)
- Flexible group policy engine for creating and applying application-aware policies by network, device type, and end user
- Wi-Fi personal network (WPN) on any shared network (dorms, senior living, hotel rooms, etc.)
- Integrated Bluetooth® IoT radio
- IoT ready (ESL integration)
- Self-healing, zero-configuration mesh
- Intelligent firmware upgrades that minimize client downtime
- Role-based administration and automatic, scheduled firmware upgrades delivered over the web
- Email and text message alerts upon power loss, downtime, or configuration changes
- FIPS-140-3 compliant, IPv6 compatible, WFA-certified APs

## 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 on-site, eliminating costly field visits. Each device downloads its configuration via the Meraki cloud, applying your network and security policies automatically so you don't have to provision them on-site.

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## High-performance RF design

Every Meraki access point continuously and automatically monitors its surroundings to maximize Wi-Fi performance. By measuring channel utilization, signal strength, throughput, signals from non-Meraki APs, and non-Wi-Fi interference, Meraki APs automatically optimize Wi-Fi 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 Mbps 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.

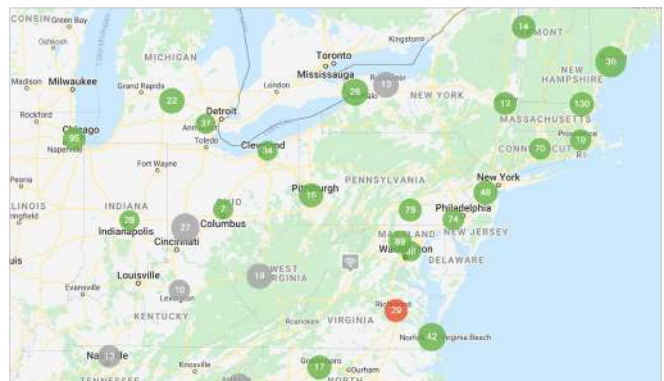
By measuring utilization from neighboring APs, detecting Wi-Fi signals from non-Meraki APs, and identifying non-Wi-Fi interference, Meraki APs continuously stay on top of changing and challenging conditions. Tools such as real-time spectrum analysis and live channel utilization deliver immediate information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

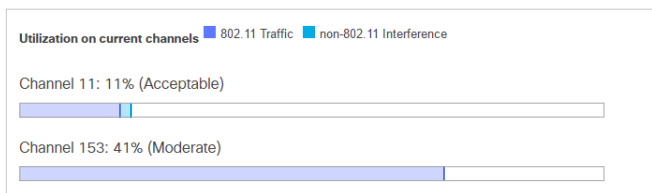
Mesh networking, included in every Meraki AP, extends coverage to hard-to-wire areas and creates a self-healing network that is resilient to cable and switch failures, continuing to operate despite failures or configuration changes in the rest of the network without the need for manual configuration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



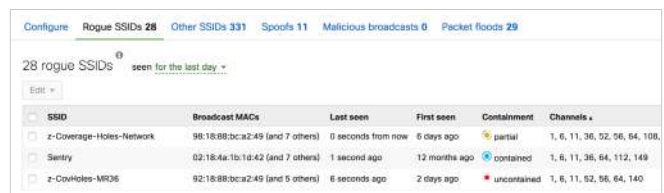
USER ANALYTICS AND TRAFFIC SHAPING



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 layer 3/layer 7 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 Wi-Fi in just one click. Integrated network access control (NAC) provides end-user antivirus 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's 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.

Meraki MR APs integrate with Cisco Umbrella™ (formerly OpenDNS), offering a cloud-delivered first line of defense against security threats like malware, ransomware, and phishing. Cisco Umbrella, the industry's first secure internet gateway, protects client devices at the DNS layer. The integration ensures DNS blind spots are proactively monitored and not exposed to malicious security threats.

Cisco ISE with change of authorization (CoA) provides secure access for authorized guests, oversight on guest onboarding, and identifies potential BYOD security threats.

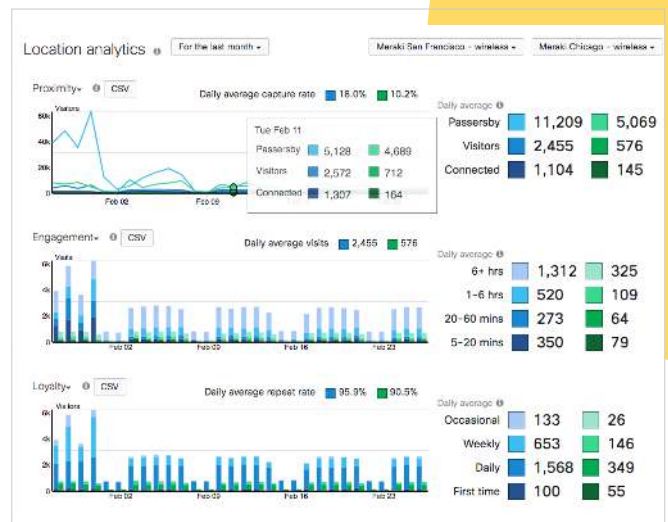
Combine Meraki MR access points and Meraki MS switches to eliminate manual per-access-port configurations and reduce installation costs with SecurePort, which automatically authorizes the MR access point and deploys security profiles.

## 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 code generation, and splash bypass 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 the Meraki cloud for analytics; information is then calculated and presented in the Meraki dashboard to display metrics such as user dwell time, repeat visits, and capture rate (people passing by vs. engaging with a site). This information can be used by retail, hospitality, and enterprise customers to understand foot traffic and visitor behavior across sites in order to facilitate optimization of opening hours, marketing campaigns, 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 devices—without extra appliances, licenses, or complex VLAN configurations. Using integrated layer 7 fingerprinting, client devices are automatically identified and classified, letting you distinguish between iPads and iPhones, device operation systems, and even manufacturers. 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.

Combine Meraki MR access points with Meraki cloud-based mobile device management (MDM)—called Meraki Systems Manager—to 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. Meraki SM provides secure and seamless client onboarding by encouraging devices connecting to corporate Wi-Fi to enroll in Systems Manager and encrypting network traffic between a user's device and the access point.



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%	26.85 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

## 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 multistep key permission 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 with WAN optimization and content filtering (using a Meraki MX security appliance)
  - Secure roaming: Layer 2 and layer 3 roaming for large campus environments
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## 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.

## Cloud-managed network assurance

### Meraki Health

A unified network infrastructure platform allows IT organizations to achieve faster issue remediation, maximize uptime, and optimize performance. By ingesting data from a complete network infrastructure platform, the Meraki Health heuristics engine rapidly identifies anomalies impacting wireless end users' experiences across every stage of client connectivity—association, authentication, IP addressing, and DNS availability—for rapid root-cause analysis and response.



### Global scalability

Using Meraki Health, immediate visibility is provided to identify problematic APs and clients, gain actionable insights to pinpoint stages of failure, and determine if users are able to access the network. Remotely identify problematic devices anywhere across a campus or thousands of separate geographical sites and access built-in live troubleshooting tools. Globally apply network data collection to extract insights and make configuration changes at scale to optimize Wi-Fi performance.



### Analytics

Rich analytics ensure performance levels with color-coded historical metrics—signal quality, client count, wireless latency, channel utilization, and data rates—allowing for time-based correlation to significant events. Real-time analytics are provided for specific access points as well as individual wireless clients. Client timelines include automated root-cause identification and suggested remediation for client connectivity failures.





## Network-wide visibility

Visibility and status of the entire network is provided when combining Meraki access points with Meraki switches and routers. The end-to-end network infrastructure snapshot shows client connectivity failures and metrics that would dictate the health of a connection or device along the path to the network's layer 3 gateway. With a reduction in reactive troubleshooting and an increase in proactive and predictive network management, client, application, and service performance can be assured.

## Wi-Fi 7: Wireless for the future

New Cisco Wi-Fi 7 access points deliver seamless, secure, and resilient connectivity anywhere. Effortlessly build a future-proof network and harness AI to streamline management, reduce errors, and cut operational costs. Transform user experiences and reimagine interactions with smart spaces, offering real-time insights and actions such as indoor navigation, personalized retail experiences, and granular asset tracking, all part of the future of wireless experiences.

The new Cisco Networking Subscription, available with Wi-Fi 7 access points, streamlines purchasing and utilizing Cisco software, hardware, services, and platforms. This licensing model offers flexibility to manage your network on premises, in the cloud, or hybrid, using the same unified licenses, product support, and hardware. Cisco Networking Subscription provides flexible management options, supporting your network investment today and protecting it for the future.



### Key features of Cisco Wi-Fi 7 access points

- Up to four client-serving radios operating in 2.4 GHz, 5 GHz, and 6 GHz, offering up to an approximate aggregate data rate of up to 18 Gbps
- WPA3 security
- IoT ready with Bluetooth® Low Energy and USB support
- Ultra-wideband support for location services and asset tracking

## Global use access point: Cisco Wireless 9178 and 9176 Series

Cisco's next-generation Wi-Fi 7 access point platforms offer a versatile solution for wireless deployment, simplifying and protecting your investments. Unlike previous generations that may have required costly hardware replacements when migrating between on-premises Catalyst Wireless stacks and cloud-based Meraki wireless stacks, the new Wi-Fi 7 series introduces common access point hardware that seamlessly operates in either mode. This innovation began with Wi-Fi 6E access points and has been refined with Wi-Fi 7, reducing the requirement for purchase of similar but separate hardware products and eliminating the need for stack-specific and regulatory domain-specific models.

Cisco Wi-Fi 7 access points feature an intelligent management mode discovery process, ensuring smooth deployment whether starting fresh or migrating between stacks. Additionally, a straightforward migration path from the Meraki cloud to the Catalyst 9800 WLC underscores Cisco's commitment to flexible, future-proof solutions, consolidating hardware and streamlining management processes for modern wireless networks.



## Product options: Wi-Fi 7 indoor models



	CW9176I/D1	CW9178I
<b>Usage</b>	High-performance Wi-Fi 7 AP	Ultra-high-performance Wi-Fi 7 AP
<b>Radio specification</b>	Tri-band (2.4 GHz, 5 GHz & 6 GHz)	
<b>Spatial streams</b>	12 spatial streams 4×4: 4 MU-MIMO across 3 radios, 3 bands (2.4 GHz, 5 GHz, 6 GHz)	16 spatial streams 4×4: 4 MU-MIMO across 4 radios, 3 bands (2.4 GHz, 5 GHz, 5 GHz, 6 GHz)
<b>WIDS/WIPS</b>	Tri-band	
<b>Bluetooth® Low Energy/ IoT Radio</b>	✓	
<b>Aggregate frame rate</b>	18 Gbps	24 Gbps (in quad radio)
<b>Interface</b>	Single multigigabit 10 Gbps interface	Dual multigigabit 10 Gbps interface
<b>UWB</b>	Yes	
<b>USB 2.0</b>	9W	
<b>Management</b>	Cloud-managed with Meraki cloud Managed on premises with Cisco Catalyst Center	
<b>Power</b>	802.3at/bt PoE+ and UPoE compliant	
<b>Performance features</b>	UL/DL-OFDMA, TWT support, BSS coloring, SU-MIMO, UL/DL MU-MIMO support Maximal ratio combining (MRC) and beamforming 20 and 40 MHz channels (802.11n); 20, 40, 80 MHz channels (802.11ac wave 2); 20, 40, 80, and 160 MHz channels (802.11ax); 20, 40, 80, 160, and 320 MHz channels (802.11be) Up to 4K-QAM packet aggregation	
<b>Dimensions</b>	242.3 mm x 242.25 mm x 52.8 mm	251.5 mm x 251.5 mm x 50.8 mm
<b>Weight</b>	1.56 kg (9176I), 1.53 kg (9176D1)	1.87 kg

## Product options: Wi-Fi 7 indoor models



9172H



9172I

	9172H	9172I
<b>Usage</b>	Hospitality, multi-dwelling units	Branch office, small/home office, SMB, retail
<b>Radio specification</b>	802.11be, Wi-Fi 7	802.11be, Wi-Fi 7
<b>Spatial streams</b>	2.4 GHz: 2×2:2 5 GHz: 2×2:2 6 GHz: 2×2:2	2.4 GHz: 2×2:2 5 GHz: 2×2:2 (with 6 GHz radio enabled), 4×4:4 (with 6 GHz radio disabled) 6 GHz: 2×2:2
<b>WIDS/WIPS</b>		✓
<b>Bluetooth® Low Energy/ IoT Radio</b>		✓
<b>Aggregate frame rate</b>	9000 Mbps	up to 9000 Mbps
<b>Interface</b>	1× 2.5 Gbps uplink 3× 1 Gbps LAN ports (with 1 port PoE out) 1x passthrough port 1x RJ45 console port	1× 2.5 Gbps uplink 1x RJ45 console port
<b>USB 2.0</b>	No	Yes
<b>Management</b>	On premises or cloud	On premises or cloud
<b>Power</b>	30W for full radio operation 45W to enable PoE out	30W for full radio operation 45W to enable USB port
<b>Performance features</b>	Tri-radio 6 spatial stream Wi-Fi 7 802.11be on all three radios 2.4 GHz + 5 GHz + 6 GHz (all 2×2:2) 1× 2.5 Gbps 3× 1 Gbps 1x passthrough Ethernet port Dedicated scan/auxiliary radio, IoT radio (BLE, 802.15.4) Compatible with existing C9105AXW (AIR-AP-BRACKET-W4) and MR36H (MA-MNT-MR-H1A) mounts	Tri-radio or dual radio 6 spatial stream Wi-Fi 7 802.11be on all radios 2.4 GHz + 5 GHz + 6 GHz (all 2×2:2) or 2.4 GHz (2×2:2) + 5 GHz (4×4:4) 1× 2.5 Gbps Dedicated scan/auxiliary radio IoT radio (BLE, 802.15.4) USB 2.0 port DC power jack
<b>Dimensions</b>	5 in x 7 in x 1 in (127 mm x 178 mm x 25 mm)	8 in x 8 in x 1.8 in (203 mm x 203 mm x 46 mm)
<b>Weight</b>	1 lb 5 oz (595 g)	1 lb 15 oz (879 g)

## Wi-Fi 6E: A premium Wi-Fi experience

Wi-Fi 6 (802.11ax) introduced a number of enhancements over previous generations of Wi-Fi, including higher throughput and lower latency, as well as more efficient traffic management to address higher-density applications. Wi-Fi 6E takes wireless connectivity into the 6 GHz band, representing 1200 MHz of spectrum between 5.925 GHz to 7.125 GHz—more than twice the available capacity of the 2.4 GHz and 5 GHz bands combined. This allows for wider channels (80 MHz and 160 MHz) enabling a range of higher bandwidth and latency-sensitive applications. Additionally, this spectrum will help ease congestion, contention, and degradation issues in the legacy 2.4 GHz and 5 GHz bands.

Wi-Fi 6E helps you scale your mission-critical network infrastructure to meet the needs of hybrid work, remote work, and smarter workspaces.

### Key features of Meraki Wi-Fi 6E access points

- 6 GHz band offers interference-free spectrum, lower latency, and jitter
- Three client-serving radios operating in 2.4 GHz, 5 GHz, and 6 GHz, offering up to 7.8 Gbps of throughput
- 7 times more 80 MHz channels (14) compared to 5 GHz (2)\*
- WPA3 security
- IoT ready with Bluetooth® Low Energy and USB support

\*For regions enabling 1200 MHz of spectrum in 6 GHz band



## Flex (XOR) radio

The MR57 and CW9166 access points support a software-defined flex radio which can be operated in either 5 GHz or 6 GHz mode. This provides an option to operate the AP in either a dual 5 GHz configuration or a true tri-band configuration. Tri-band configuration unlocks the use of the new spectrum in the 6 GHz frequency range, which provides additional channels to increase throughput and reduce interference and noise from legacy devices.

## High availability/resilience

The flagship MR57 features dual configurable Ethernet ports that can support 1, 2.5, or 5 Gbps, with link aggregation between both network ports for redundancy and high availability.



MR57

## Flexible deployment options: Catalyst 9100 Access Points

The Catalyst 9100 Access Points bring the same reliability and security of Cisco's enterprise-class products with the flexibility to choose between Catalyst and Meraki management.

Pairing the Cisco Catalyst 9160 access points with the Meraki cloud platform gives organizations a unified IT experience for network monitoring and management. Take advantage of Cisco's innovative platform, built for scale and simplicity and enhanced by AI, so you can network your way.



## Product options: Wi-Fi 6E indoor models

	CW9162*	CW9164*	CW9166*	CW9166D1*	MR57
<b>Usage</b>	General purpose Wi-Fi 6E AP	High-performance Wi-Fi 6E AP	Ultra-high-performance Wi-Fi 6E AP	Ultra-high-performance Wi-Fi 6E AP with integrated directional antenna	Ultra-high-performance Wi-Fi 6E AP
<b>Radio specification</b>	Tri-band (2.4 GHz, 5 GHz & 6 GHz)				
<b>Spatial streams</b>	2x 2:2 MU-MIMO	2x 2:2 MU-MIMO (2.4 GHz) Four 4x4 MU-MIMO (5 GHz & 6 GHz)	4x 4:4 MU-MIMO	4x 4:4 MU-MIMO	4x 4:4 MU-MIMO
<b>WIDS/WIPS</b>	Tri-band	Tri-band	Tri-band	Tri-band	Tri-band
<b>Bluetooth® Low Energy/ IoT Radio</b>	✓	✓	✓	✓	✓
<b>Aggregate frame rate</b>	3.9 Gbps	7.49 Gbps	7.78 Gbps	7.78 Gbps	7.78 Gbps
<b>Interface</b>	One multigigabit 2.5G	One multigigabit 2.5G	One multigigabit 5G	One multigigabit 5G	Dual multigigabit 5G
<b>USB 2.0</b>	4.5W	4.5W	4.5W	4.5W	9.0W
<b>Management</b>	Cloud-managed with Meraki cloud; managed on premises with Cisco Catalyst Center	Cloud-managed with Meraki cloud; managed on premises with Cisco Catalyst Center	Cloud-managed with Meraki cloud; managed on premises with Cisco Catalyst Center	Cloud-managed with Meraki cloud; managed on premises with Cisco Catalyst Center	Cloud-managed with Meraki cloud
<b>Power<sup>1</sup></b>	802.3at/bt PoE+ and UPoE compliant or DC power adapter				
<b>Performance features</b>	UL/DL-OFDMA, TWT support, BSS coloring SU-MIMO, UL/DL MU-MIMO support Maximal ratio combining (MRC) and beamforming 20 and 40 MHz channels (802.11n); 20, 40, 80 MHz channels (802.11ac wave 2); 20, 40, 80, and 160 MHz channels (802.11ax) Up to 1024-QAM on all three: 2.4 GHz, 5 GHz, and 6 GHz bands Packet aggregation				
<b>Dimensions</b>	7.8 in x 7.8 in x 1.7 in (200 mm x 200 mm x 43 mm)	9.5 in x 9.5 in x 2.2 in (241.3 mm x 241.3 mm x 56.9 mm)	9.5 in x 9.5 in x 2.2 in (241.3 mm x 241.3 mm x 56.9 mm)	9.5 in x 9.5 in x 2.28 in (241.3 mm x 241.3 mm x 57.9 mm)	260 mm x 260 mm x 56 mm, including desk-mount feet or mount plate
<b>Weight</b>	2.05 lb (0.93 kg)	3.54 lb (1.60 kg)	3.54 lb (1.60 kg)	3.50 lb (1.59 kg)	3.75 lb (1.7 kg)

\* Unified hardware models for Catalyst and Meraki



<sup>1</sup>DC power adapter sold separately

## Product options: Indoor Wi-Fi 6

	MR28	MR36
		
<b>Usage</b>	Entry-level high-performance Wi-Fi 6 AP designed for basic, medium-density deployments with Bluetooth® Low Energy included.	Next-generation entry-level high-performance Wi-Fi 6 AP with security-scanning radio and Bluetooth® Low Energy included
<b>Radio specification</b>	<ul style="list-style-type: none"> <li>1× 2.4 GHz 802.11b/g/n/ax</li> <li>1× 5 GHz 802.11a/n/ac/ax</li> <li>1× Bluetooth® radio</li> <li>1.5 Gbps max rate</li> <li>2× 2:2 MU-MIMO with beamforming</li> </ul>	<ul style="list-style-type: none"> <li>1× 2.4 GHz 802.11b/g/n/ax</li> <li>1× 5 GHz 802.11a/n/ac/ax</li> <li>1× WIDS/WIPS</li> <li>1× Bluetooth® radio</li> <li>1.5 Gbps max rate</li> <li>2× 2:2 MU-MIMO with beamforming</li> </ul>
<b>Interface</b>	1× Gigabit Ethernet port	1× Gigabit Ethernet port
<b>Power</b>	802.3af PoE or AC power adapter MA-PWR-30W-XX only	802.3af PoE or DC power adapter
<b>Performance features</b>	<ul style="list-style-type: none"> <li>2× 2:2 MU-MIMO and OFDMA</li> <li>Unscheduled Automatic Power Save (U-APSD)</li> </ul>	<ul style="list-style-type: none"> <li>2× 2:2 MU-MIMO and OFDMA</li> <li>160 MHz channels<sup>1</sup></li> <li>Priority voice, power save (802.11e/WMM)</li> <li>Hardware-accelerated encryption</li> <li>Band steering</li> </ul>
<b>Dimensions</b>	7.95 in x 4.88 in x 1.02 in (20.2 cm × 12.4 cm × 2.58 cm)	9.84 in x 4.72 in x 1.42 in (25 cm x 12 cm x 3.6 cm)
<b>Weight</b>	9.6 oz (272 g)	17.35 oz (0.5 kg)


<sup>1</sup> Hardware capable

## Product options: Indoor Wi-Fi 6

	MR36H	MR44
		
<b>Usage</b>	Next-generation in-room hotel or dormitory deployments that service IP-enabled devices using high-performance Wi-Fi 6 AP.	Next-generation AP with Wi-Fi 6 technology. Ideal for medium-density locations with security scanning and Bluetooth® Low Energy included.
<b>Radio specification</b>	<ul style="list-style-type: none"> <li>1× 802.11b/g/n</li> <li>1× 802.11a/n/ac</li> <li>1× WIDS/WIPS</li> <li>1× Bluetooth® radio</li> <li>1.5 Gbps max rate</li> <li>2× 2:2 MU-MIMO with beamforming</li> </ul>	<ul style="list-style-type: none"> <li>1× 2.4 GHz 802.11b/g/n/ax</li> <li>1× 5 GHz 802.11a/n/ac/ax</li> <li>1× WIDS/WIPS</li> <li>1× Bluetooth® radio</li> <li>2.7 Gbps max rate</li> <li>2× 2:2 + 4× 4:4 MU-MIMO with beamforming</li> </ul>
<b>Interface</b>	<ul style="list-style-type: none"> <li>1× Gigabit Ethernet passthrough port</li> <li>1× Gigabit Ethernet LAN port with 802.3af PoE</li> <li>2× Gigabit Ethernet LAN ports</li> </ul>	1× 2.5 Multigigabit Ethernet port
<b>Power</b>	<ul style="list-style-type: none"> <li>802.3at power w/ 802.3af PoE out/802.3af compatible w/o PoE out</li> </ul>	802.3af/at PoE or DC power adapter
<b>Performance features</b>	<ul style="list-style-type: none"> <li>2× 2:2 MU-MIMO and OFDMA</li> <li>Priority voice, power save (802.11e/WMM)</li> <li>Hardware-accelerated encryption</li> <li>Band steering</li> </ul>	<ul style="list-style-type: none"> <li>2× 2:2 + 4× 4:4 UL/DL MU-MIMO and OFDMA</li> <li>160 MHz channels<sup>1</sup></li> <li>Priority voice, power save (802.11e/WMM)</li> <li>Hardware-accelerated encryption</li> <li>Band steering</li> </ul>
<b>Dimensions</b>	6.1 in x 4.3 in x 0.9 in (15.5 cm x 11.0 cm x 2.3 cm)	12.05 in × 5.06 in × 1.74 in (30.6 cm × 12.84 cm × 4.43 cm)
<b>Weight</b>	17.35 oz (0.5 kg)	26.07 oz (0.74 kg)



<sup>1</sup> Hardware capable

## Product options: Indoor Wi-Fi 6



	MR46 / MR46E	MR56
		
<b>Usage</b>	Next-generation AP with Wi-Fi 6 technology. Ideal for high-density locations or focused wireless coverage with security scanning, Bluetooth® Low Energy, and external antenna option.	Next-generation AP with Wi-Fi 6 technology. Ideal for ultra-high-density and performance deployments. Security radio and Bluetooth® Low Energy included.
<b>Radio specification</b>	<ul style="list-style-type: none"> <li>1× 2.4 GHz 802.11b/g/n/ax</li> <li>1× 5 GHz 802.11a/n/ac/ax</li> <li>1x WIDS/WIPS</li> <li>1x Bluetooth® radio</li> <li>3.0 Gbps max rate</li> <li>4× 4:4 MU-MIMO with beamforming</li> </ul>	<ul style="list-style-type: none"> <li>1× 2.4 GHz 802.11b/g/n/ax</li> <li>1× 5 GHz 802.11a/n/ac/ax</li> <li>1x WIDS/WIPS</li> <li>1x Bluetooth® radio</li> <li>5.4 Gbps max rate</li> <li>8× 8:8 MU-MIMO with beamforming</li> </ul>
<b>Interface</b>	1× 2.5 Multigigabit Ethernet port	1× 5 Gbps Multigigabit Ethernet port
<b>Power</b>	802.3at PoE or DC power adapter	802.3at PoE or DC power adapter
<b>Performance features</b>	<ul style="list-style-type: none"> <li>4× 4:4 UL/DL MU-MIMO and OFDMA</li> <li>160 MHz channels<sup>1</sup></li> <li>Priority voice, power save (802.11e/WMM)</li> <li>Hardware-accelerated encryption</li> <li>Band steering</li> <li>Removable antennas (MR46E)</li> </ul>	<ul style="list-style-type: none"> <li>8× 8:8 UL/DL MU-MIMO and OFDMA</li> <li>160 MHz channels<sup>1</sup></li> <li>Priority voice, power save (802.11e/WMM)</li> <li>Hardware-accelerated encryption</li> <li>Band steering</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>12.05 in × 5.06 in × 1.74 in</li> <li>(30.6 cm × 12.84 cm × 4.43 cm) (MR46)</li> <li>9.84 in × 4.72 in × 1.42 in</li> <li>(30.72 cm × 15.62 cm × 3.49 cm) (MR46E)</li> </ul>	<ul style="list-style-type: none"> <li>12.83 in × 5.54 in × 1.76 in</li> <li>(32.6 cm × 14.08 cm × 4.47 cm)</li> </ul>
<b>Weight</b>	<ul style="list-style-type: none"> <li>28.21 oz (0.8 kg) (MR46)</li> <li>29.98 oz (0.85 kg) (MR46E)</li> </ul>	35.27 oz (1 kg)

<sup>1</sup> Hardware capable

## Product options: Outdoor Wi-Fi 6/6E

	MR76	MR78
		
<b>Usage</b>	Rugged/outdoor high-performance Wi-Fi 6 wireless for outdoor campuses, industrial, point-to-point links, and outdoor location services.	Rugged/outdoor entry-level Wi-Fi 6 wireless for medium-density, basic outdoor deployments.
<b>Radio specification</b>	<ul style="list-style-type: none"> <li>1× 802.11b/g/n/ax</li> <li>1× 802.11a/n/ac/ax</li> <li>1× WIDS/WIPS</li> <li>1× Bluetooth® radio</li> <li>1.5 Gbps max rate</li> <li>2×2:2 MU-MIMO and OFDMA with beamforming</li> </ul>	<ul style="list-style-type: none"> <li>1× 802.11b/g/n/ax</li> <li>1× 802.11a/n/ac/ax</li> <li>1× Bluetooth® radio</li> <li>1.5 Gbps max rate</li> <li>2×2:2 MU-MIMO and OFDMA with beamforming</li> </ul>
<b>Interface</b>	<ul style="list-style-type: none"> <li>1× Gigabit Ethernet port</li> <li>4× External N-type connectors (antennas sold separately)</li> </ul>	1× Gigabit Ethernet port
<b>Power</b>	802.3af PoE	802.3af PoE
<b>Physical design</b>	<ul style="list-style-type: none"> <li>Rugged industrial design</li> <li>Water and dust sealed (IP67 rated)</li> <li>Vibration and shock tested</li> </ul>	<ul style="list-style-type: none"> <li>Rugged industrial design</li> <li>Water and dust sealed (IP67 rated)</li> <li>Vibration and shock tested</li> </ul>
<b>Performance features</b>	<ul style="list-style-type: none"> <li>Third radio dedicated to security and RF management</li> <li>Priority voice, power save (802.11e/WMM)</li> <li>Hardware-accelerated encryption</li> <li>Band steering</li> <li>Bluetooth® Low Energy radio for beacon and scanning</li> </ul>	<ul style="list-style-type: none"> <li>Internal antenna</li> <li>Priority voice, power save (802.11e/WMM)</li> <li>Hardware-accelerated encryption</li> <li>Band steering</li> <li>Bluetooth® Low Energy radio for beacon and scanning</li> </ul>
<b>Dimensions</b>	11.81 in × 6.02 in × 2.16 in (30.0 cm × 15.3 cm × 5.5 cm)	9.65 in × 4.53 in × 1.18 in (24.5 cm × 11.5 cm × 3.0 cm)
<b>Weight</b>	47.27 oz (1.34 kg)	15.87 oz (0.45 kg)

## Product options: Outdoor Wi-Fi 6/6E

	MR86	CW9163E
		
<b>Usage</b>	Rugged/outdoor highest-performance Wi-Fi 6 with multigigabit for tough RF and high-density environments.	Outdoor high-performance on-prem or cloud-managed Wi-Fi 6E access point for small and medium-density deployments.
<b>Radio specification</b>	<ul style="list-style-type: none"> <li>1× 802.11b/g/n/ax</li> <li>1× 802.11a/n/ac/ax</li> <li>1× WIDS/WIPS</li> <li>1× Bluetooth® radio</li> <li>3.0 Gbps max rate</li> <li>4× 4:4 MU-MIMO and OFDMA with beamforming</li> </ul>	<ul style="list-style-type: none"> <li>1× 2.4 GHz 802.11b/g/n/ax</li> <li>1× 5 GHz 802.11a/n/ac/ax</li> <li>1× 6 GHz 802.11ax</li> <li>1× 2.4 GHz, 5 GHz, and 6 GHz tri-band Air Marshal WIDS/WIPS, spectrum analysis, &amp; location analytics radio</li> <li>1× 2.4 GHz Bluetooth® Low Energy (BLE) radio</li> <li>3.9 Gbps max rate</li> <li>2×2:2 MU-MIMO and OFDMA with beamforming</li> </ul>
<b>Interface</b>	<ul style="list-style-type: none"> <li>1× 2.5 Gbps Multigigabit Ethernet port</li> <li>4× External N-type connectors (antennas sold separately)</li> </ul>	<ul style="list-style-type: none"> <li>1× 2.5 Gbps Multigigabit Ethernet port</li> <li>4× External N-type connectors (omni and directional antennas sold separately)</li> <li>RP-SMA active GPS/GNSS antenna connector</li> </ul>
<b>Power</b>	802.3at PoE	802.3af POE and 802.3at UPOE or DC power adapter
<b>Physical design</b>	<ul style="list-style-type: none"> <li>Rugged industrial design</li> <li>Water and dust sealed (IP67 rated)</li> <li>Vibration and shock tested</li> </ul>	<ul style="list-style-type: none"> <li>Weatherized outdoor design</li> <li>Water and dust sealed (IP67 rated)</li> <li>Vibration and shock tested</li> </ul>
<b>Performance features</b>	<ul style="list-style-type: none"> <li>Third radio dedicated to security and RF management</li> <li>Priority voice, power save (802.11e/WMM)</li> <li>Hardware-accelerated encryption</li> <li>Band steering</li> <li>High-density support</li> <li>Bluetooth® Low Energy radio for beacon and scanning</li> </ul>	<ul style="list-style-type: none"> <li>Scanning radio dedicated to security and RF management</li> <li>Built-in GPS</li> <li>Deploy on premises or in the cloud</li> <li>Bluetooth® Low Energy radio for beacon and scanning</li> </ul>
<b>Dimensions</b>	11.81 in × 6.02 in × 2.16 in (30.0 cm × 15.3 cm × 5.5 cm)	9.64 in × 9.64 in × 2.5 in (24.5 cm × 24.5 cm × 6.35 cm)
<b>Weight</b>	52.91 oz (1.5 kg)	52.8 oz (1.50 kg)

# Licensing

	License	License Type	Description
<b>All Cisco Meraki MR access points</b>	LIC-MR-A	Subscription	Cisco Meraki MR Subscription License - Advantage
	LIC-MR-E	Subscription	Cisco Meraki MR Subscription License - Essentials
	LIC-ENT-1YR	Co-term	Cisco Meraki MR Enterprise License and Support, 1 Year
	LIC-ENT-3YR	Co-term	Cisco Meraki MR Enterprise License and Support, 3 Year
	LIC-ENT-5YR	Co-term	Cisco Meraki MR Enterprise License and Support, 5 Year
	LIC-ENT-7YR	Co-term	Cisco Meraki MR Enterprise License and Support, 7 Year
	LIC-ENT-10YR	Co-term	Cisco Meraki MR Enterprise License and Support, 10 Year
	LIC-MR-ADV-1Y	Co-term	Cisco Meraki MR Advanced License and Support, 1 Year
	LIC-MR-ADV-3Y	Co-term	Cisco Meraki MR Advanced License and Support, 3 Year
	LIC-MR-ADV-5Y	Co-term	Cisco Meraki MR Advanced License and Support, 5 Year
	LIC-MR-UPGR-1Y	Co-term	Cisco Meraki MR ENT to ADV Upgrade License, 1 Year
	LIC-MR-UPGR-3Y	Co-term	Cisco Meraki MR ENT to ADV Upgrade License, 3 Year
	LIC-MR-UPGR-5Y	Co-term	Cisco Meraki MR ENT to ADV Upgrade License, 5 Year
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