

Cisco Meraki MR46-HW

High-Performance Cloud-Managed Wi-Fi 6 (802.11ax) Access Point

DATASHEET

Product Overview: The Cisco Meraki MR46-HW is a high-density, cloud-managed 4-radio 802.11ax (Wi-Fi 6) access point designed for demanding enterprise environments, university lecture halls, and high-traffic offices. Equipped with concurrent 4x4:4 MU-MIMO radios on both 2.4 GHz and 5 GHz bands, a 2.5 Gbps Multigigabit uplink, full-time WIDS/WIPS security scanning, and integrated Bluetooth Low Energy (BLE), it delivers up to 2.98 Gbps aggregate frame rate.

2.98 Gbps

AGGREGATE MAX
THROUGHPUT

2.5 GbE

MULTIGIG UPLINK PORT

4 Radios

2.4G / 5G / SCANNING /
BLE

4x4:4 Dual

MU-MIMO STREAMS

RADIO & WIRELESS SPECIFICATIONS

Radio Parameter	Specification Details
Access Radios	5 GHz 4x4:4 MU-MIMO 802.11ax 2.4 GHz 4x4:4 MU-MIMO 802.11ax
Security & Spectrum Radio	2.4 GHz & 5 GHz dual-band real-time WIDS/WIPS, spectrum analysis & location analytics
IoT / Bluetooth Radio	2.4 GHz Bluetooth Low Energy (BLE) radio with Beacon and BLE scanning capabilities
Peak Data Rates	5 GHz: 2,402 Mbps 2.4 GHz: 574 Mbps (Combined 2.98 Gbps aggregate frame rate)
Antenna Elements	Integrated omni-directional antennas (5.4 dBi @ 2.4 GHz, 6.0 dBi @ 5 GHz)

WI-FI 6 (802.11AX) & ADVANCED CAPABILITIES

OFDMA & Modulation	DL/UL OFDMA, Target Wake Time (TWT), BSS Coloring, 1024-QAM on both bands
MIMO & Beamforming	SU-MIMO & DL/UL MU-MIMO, Maximal Ratio Combining (MRC), Transmit Beamforming
Channel Widths	20 / 40 MHz (2.4 GHz & 5 GHz), 80 MHz (5 GHz 802.11ac/ax)
High-Density Capacity	Engineered for ultra-dense deployments (supports 100+ active client devices simultaneously)

INTERFACES & POWER REQUIREMENTS

Network Uplink Interface	1× 100/1000/2.5G BASE-T Ethernet RJ45 with PoE (802.3at compliant)
Power Options	802.3at PoE+ (Full functionality) 12V DC external power input
Power Consumption	30W Max power draw (Power injector / DC adapter sold separately)

KEY SOFTWARE & ENTERPRISE CAPABILITIES

Air Marshal WIDS / WIPS

Full-time, dedicated 3rd radio scans 24x7 for rogue APs, spoofing attacks, security threats, and automatically mitigates RF interference.

[Air Marshal](#)[Rogue AP Shield](#)

Auto-RF & Spectrum Analytics

Automated cloud radio management continuously evaluates channel utilization and adjusts power levels to optimize performance.

[Auto-RF](#)[Spectrum View](#)

Enterprise Security & Guest Portal

802.1X RADIUS, WPA3-Enterprise, Active Directory integration, customized splash guest portals, and isolated guest VLANs.

[WPA3-Enterprise](#)[Splash Portal](#)

Layer 7 Traffic Control & QoS

Integrated Stateful Layer 7 firewall, deep packet inspection (DPI), dynamic QoS for business-critical apps, and client bandwidth limits.

[Layer 7 DPI](#)[VoIP QoS](#)

SECURITY & WIRELESS STANDARDS

Category	Standards & Features Supported
Encryption & Wireless Security	WPA3-Personal, WPA3-Enterprise, WPA2-Enterprise, WPA3-Enhanced Open (OWE), TKIP, AES
Fast Roaming Protocols	802.11r Fast BSS Transition, 802.11k Neighbor Reports, 802.11v BSS Transition Management
Compliance & IEEE Standards	IEEE 802.11a/b/g/n/ac/ax, 802.1X, 802.11e QoS, 802.11i Security, 802.1Q VLAN Tagging
Location & BLE Analytics	High-density location tracking, BLE beaconing, Asset tracking via Meraki Dashboard APIs

ORDERING INFORMATION & ACCESSORIES

Part Number	Description
MR46-HW	Cisco Meraki MR46 Cloud-Managed High-Density Wi-Fi 6 AP
LIC-ENT-1YR	Cisco Meraki Enterprise Cloud Controller License & Support (1 Year)
LIC-ENT-3YR	Cisco Meraki Enterprise Cloud Controller License & Support (3 Years)
MA-INJ-5-US	Cisco Meraki Multigigabit 802.3at Power over Ethernet Injector
MA-PWR-30W-US	Meraki AC Adapter for MR Access Points (12V DC)

Warranty & Cloud Support: The MR46-HW comes with Cisco Meraki's standard limited lifetime hardware warranty with Advanced Next Business Day (NBD) replacement, alongside 24x7 enterprise technical support and continuous automated firmware updates provided with an active subscription license.