Omada by tp-link

Datasheet



Omada 300Mbps Wireless N Outdoor Access Point

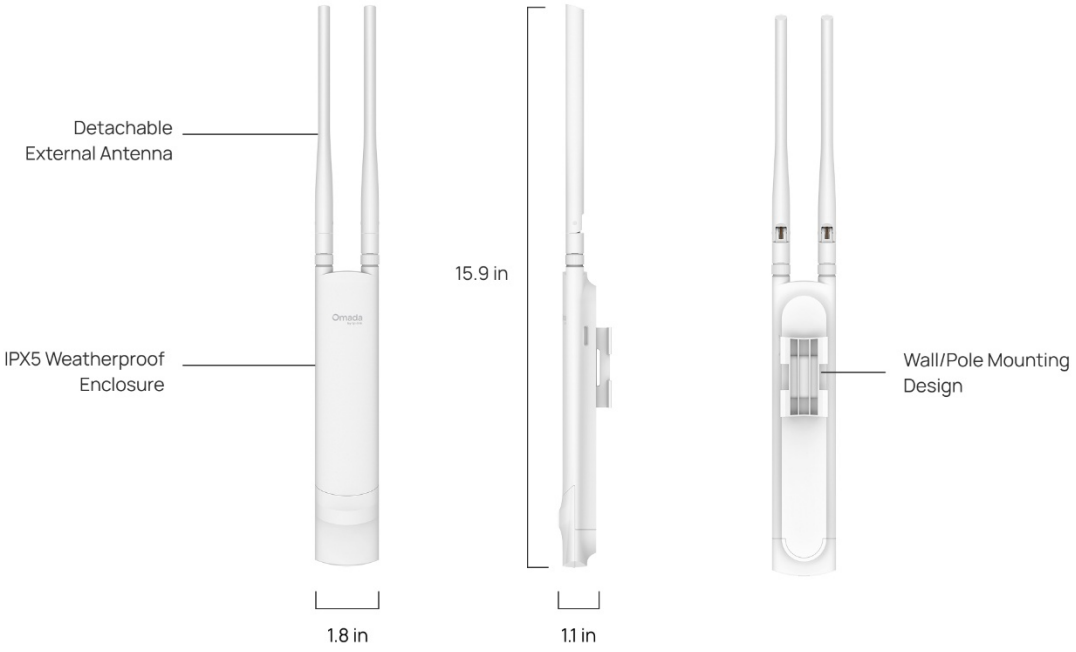
Model: EAP110-Outdoor(PH)

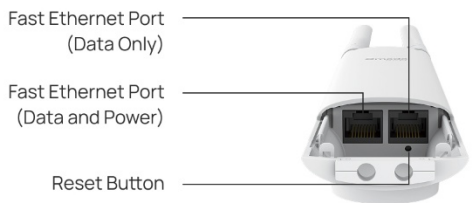
Product Overview

EAP110-Outdoor is an Omada 300 Mbps Wireless N Outdoor Access Point that provides fast, stable outdoor network connections. It is suitable for outdoor scenarios such as yards, swimming pools, and parks.

- **Smooth Wi-Fi 4:** Up to 300 Mbps Wi-Fi with 2×2 MIMO.†
- **Long-Range Omnidirectional Coverage:** Delivers stable wireless coverage up to 656 ft (200 m).‡
- **Outdoor-Ready Durability:** Features an IPX5-rated weatherproof enclosure and 6kV lightning protection.
- **2× Fast Ethernet Port:** Provide a reliable wired connection for standard network access, with one port supporting Passive PoE for flexible installation and simplified cabling.
- **Quick and Easy Setup:** Features wall/pole mounting with Omada SDN for one-click setup.
- **Advanced Features:** Centralized management and seamless roaming.Δ

Product Appearance





Feature Descriptions

Omada Wi-Fi 4 Technology

Wi-Fi 4 (802.11n) provides a dependable and stable wireless experience using MIMO, scheduling, and QoS. MIMO technology enhances throughput for faster downloads and smoother browsing. Scheduling boosts overall throughput by bundling data packets, reducing overhead and making data transmission far more efficient. Meanwhile, QoS ensures essential applications get the priority they need, maintaining network quality even during busy periods.

Long-Range Omnidirectional Coverage

With high transmission power and two high-gain omnidirectional antennas, EAP110-Outdoor provides stable wireless coverage up to 200 meters* in outdoor settings.[‡]

Outdoor-Ready Design for Harsh Conditions

EAP110-Outdoor withstands heavy rain and water splashes. It supports IPX5 weatherproof and 6kV lightning protection, with an extended temperature tolerance range of -30 °C to 70 °C. Perfect for various challenging outdoor environments.

Fast Ethernet Port for Stable Wired Performance

Establish a stable wired connection via two 10/100 Mbps Ethernet ports to deliver reliable throughput for core network services. Compatibility with Passive PoE on one port is ideal for flexible deployment.

Quick and Easy Setup

Flexible installation options, including wall and pole mounts, enable quick deployment in diverse settings. Integration with Omada SDN allows for one-click adoption and automatic device discovery, streamlining the setup process.

Cloud-Based Centralized Management

As part of Omada's unified SDN ecosystem, EAP110-Outdoor works with Omada switches, gateways, and controllers. Businesses gain end-to-end visibility, automated optimization, zero-touch provisioning, and batch configuration—all managed from a single cloud interface.

Seamless Connectivity with Mesh and Roaming

Ensures customers enjoy uninterrupted streaming when moving around by automatically switching clients to the access points with the optimal signal.

Specifications

Hardware Specifications

Item	Description	
Wi-Fi Standards	2.4 GHz: IEEE 802.11b/g/n	
802.11n	Spatial Streams	• 2.4 GHz: 2×2 MIMO with 2 spatial streams
	Frequency Bands	2.400 to 2.4835 GHz ISM
	Bandwidth	20 MHz/40 MHz
	Wireless Data Rate	• 2.4 GHz: 8.6 Mbps to 300 Mbps (MCS0-MCS7, NSS=1 to 2, HT20/40)
	Radio Technology	OFDM (Orthogonal Frequency-Division Multiplexing)
	Modulation Type	64-QAM, 16-QAM, QPSK, BPSK
	Frame Aggregation	• A-MPDU (Aggregate MAC Protocol Data Unit) for Tx/Rx • A-MSDU (Aggregate MAC Service Data Unit) for Tx/Rx
	Others	• MRC (Maximal Ratio Combining) • TxBF (Transmit Beamforming) • CDD (Cycle Delay Diversity) • CSD (Cycle Shift Diversity) • STBC (Space-Time Block Coding) • LDPC (Low-Density Parity-Check)
Antenna	Wi-Fi	2.4 GHz: • 2 × 3dBi (peak gain), external omnidirectional antennas Note: The gains above are the single-antenna peak gains.
Interfaces	• 1 x 10M/100Mbps Ethernet Port (RJ45); PoE in • 1 x 10M/100Mbps Ethernet Port (RJ45)	
Memory	• Flash: 64 Mbit • DRAM: 512 Mbit	
Button	1 × Reset button: Press the button for longer than 5 seconds to make the device restore to factory settings.	
Indicator	1 × multi-color system LED indicates on the side: • Power-on status • Firmware initialization or upgrade status • Uplink service status • Error status	
Power Supply	Input	12 V ⎓ 1 A Passive PoE
	Output	/
Power Consumption	Maximum power is 2.55 W	

Item	Description	
Surge/Lightning Protection	±6kV	
ESD/EMP Protection	4kV (Contact) / 8kV (Air)	
Tx Power	Maximum transmit power	CE (EIRP) • 2.4 GHz: 20 dBm FCC (Conducted Power) 2.4 GHz: 22 dBm
	Minimum transmit power	CE (EIRP) • 2.4 GHz: 7 dBm FCC (Conducted Power) 2.4 GHz: 4 dBm
	Adjustable power increment	1 dBm
Environment	Temperature	• Operating: -30℃ to +70℃ (-22℉ to +158℉) • Storage: -40℃ to +70℃ (-40℉ to +158℉)
	Humidity	• Operating: 10% to 90% (non-condensing) • Storage: 5% to 90% (non-condensing)
	Altitude	• Storage: up to + 2000 m (6561 feet) • Operating: up to + 2000 m (6561 feet)
	Windproof	/
	Weatherproof Enclosure	IPX5
Unit	Dimensions (W×D×H)	• Main Unit: 214.9 × 46 × 26.7 mm (8.5 × 1.8 × 1.1 in.) (without antenna & mounting kit) • Shipping Unit: 270 × 140 × 100 mm (10.6 × 5.5 × 3.9 in.)
	Weight	• Main Unit: 0.15 kg (0.330 lb) • Mounting Bracket: 0.016kg (0.035 lb) • Shipping Unit: 0.6kg (1.32 lb)
	Mounting	• Pole Mount (Kits included) • Wall Mount (Kits included)

Software Specifications

Item	Description	
Wireless Functions	Maximum number of BSSIDs	8 (8 on each band)
	Maximum number of associated STAs	100
	Guest Network	Yes
	ACS (Automatic Channel Selection)	Yes
	Airtime Fairness	Yes
	Band Steering	No
	802.11 Rate Control	Yes
	Rogue AP Detection	Yes
	URL Filtering	Yes
	WLAN Optimization	Yes
	Lock to AP	No
	Rate Limit	• Client Rate Limit
	Load Balance	• Maximum Associated Clients • RSSI Threshold
	Roaming	• 802.11r Note: Only support Layer 2 Roaming currently.
	QoS (Quality of Service)	• U-APSD (Unscheduled Automatic Power Save Delivery)
Security and Authentication	ACL	
	MAC-Based Authentication	
	• None • WPA/WPA2 -Personal • WPA/WPA2 -Enterprise	
	Radius Accounting	
	• PPSK without Radius • PPSK with Radius (Generic Radius with bound MAC)	
	Captive Portal	• No Authentication • Simple Password • Hotspot (Voucher / Local User / SMS / RADIUS / Form Auth) • RADIUS Server • External Portal Server • Pre-Authentication Access • Authentication-Free Client

Item	Description	
	EAP Types	• EAP-TLS • EAP-TTLS • EAP-PEAP • EAP-CHAP • EAP-SIM • EAP-AKA • EAP-GTC • EAP-FAST • EAP-PEAP • EAP-MD5 • EAP-MSCHAPv2 • PEAPv0 • PEAPv1
Management Methods	Omada Controller	• Omada Controller V6.2 and above
	App	Omada App V5.1 and above
	Standalone Management	Yes
	SSH	Yes
	SNMP	v1, v2c, v3
Operating Modes	AP	Yes
	Repeater	Yes
	Mesh	No
System Feature	System Log	Yes
	Reboot Schedule	Yes
	WLAN Schedule	Yes
	NTP (Network Time Protocol)	Yes
	Email Alerts	No
	Firmware Upgrade	Yes
	Restore & Backup	Yes
	LED Control	Yes
Network Features	VLAN	• SSID VLAN • Management VLAN • Port VLAN
	Static IP / DHCP Client	Yes
	IPv4/IPv6	Yes/No
	LLDP (Link Layer Discovery Protocol)	No
	mDNS	No
	Tools	No

Standards Compliance and Certifications

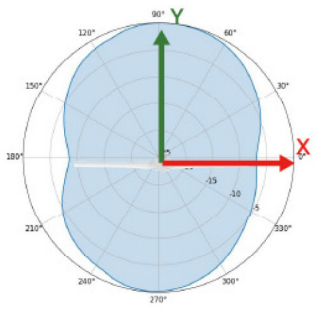
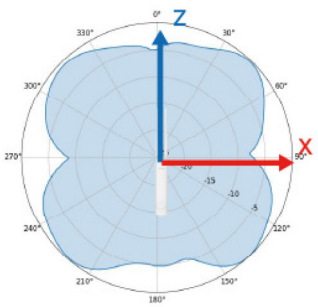
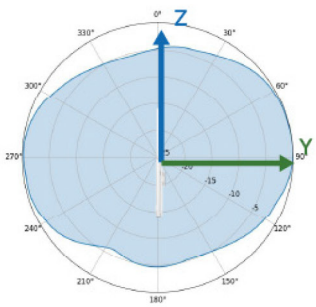
Item	Category	Description
Standards Compliance	IEEE Standards	• IEEE 802.11a/n • IEEE 802.11r • IEEE 802.1q • IEEE 802.3x
	Radio Standards	• RSS-247, RSS-Gen • ETSI EN 301 893, EN 62311& EN 50665 • FCC Part 15E, FCC Part 15C
	EMC Standards	• EN 55032 • EN 55035 • ICES-003 • EN 301489-1 • EN 301489-17 • FCC Part 15B
	Safety Standards	• EN IEC 62368-1 • IEC 60950-22
	RoHS	• Directive 2011/65/EU, Directive (EU) 2015/863 • EN IEC 63000: 2018
Certifications	• FCC/CE/ISED	

RF Performance

Frequency Band	Wi-Fi Protocol & Bandwidth	MCS Index / Data Rate	EU/US Maximum Transmit Power (dBm) per transmit chain	Receiver Sensitivity (dBm) per receive chain
2.4 GHz	802.11n, HT20	MCS0	16/19	-91.0
		MCS7	14/14	-64.0
	802.11n, HT40	MCS0	16/17	-88.0
		MCS7	13/13	-61.0

Antenna Radiation Patterns

2.4 GHz

XY Plane	XZ Plane	YZ Plane
		

Package Contents

Item	Quantity
EAP110-Outdoor	1
Antenna	2
Passive PoE Injector	1
Power Adapter	1
Waterproof Rubber Insert	2
Mounting Kit	1
Installation Guide	1

Support Services

We are committed to providing you with comprehensive and reliable support services to ensure seamless experience with Omada products.

- Contact Support: https://support.omadanetworks.com/#contact-us
- Warranty Services: https://www.omadanetworks.com/support/replacement-warranty/

Revision History

Version	Date	Description
V1.0	2026-11-03	Initial release.

†Maximum wireless signal rates are the physical rates derived from IEEE Standard 802.11 specifications. Actual wireless data throughput, wireless coverage, and connected devices are not guaranteed and will vary as a result of internet service provider factors, network conditions, client limitations, and environmental factors, including building materials, obstacles, volume and density of traffic, and client location.

‡Coverage value is calculated based on laboratory testing. Actual coverage is not guaranteed and will vary as a result of client limitations and environmental factors.

ΔOmada Mesh, seamless roaming, captive portal, and cloud access require the use of an Omada controller. Please refer to the User Guides of Omada controllers for configuration methods.

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