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tp-link | Omada

AX1800 Ceiling Mount Wi-Fi 6 Access Point

Model: EAP610

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Omada by tp-link

Datasheet

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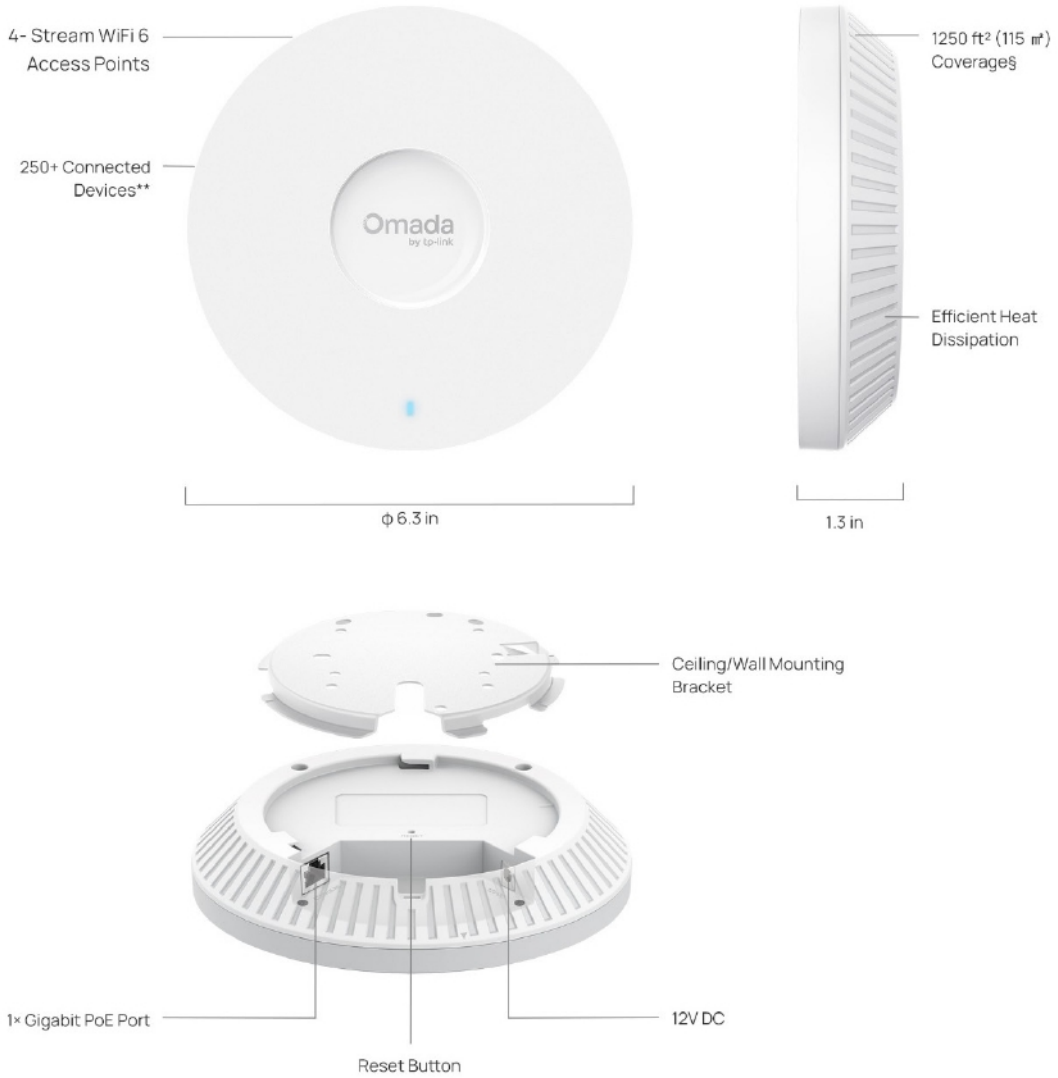
Product Overview

The Omada AX1800 4-Stream Dual-Band Ceiling Mount Access Point EAP610 is the ideal choice for an entry-level Wi-Fi 6 solution, delivering a fast, reliable, and secure dual-band Wi-Fi 6 experience.

- **4-Stream Dual-Band Wi-Fi 6:** 1201 Mbps on 5 GHz and 574 Mbps on 2.4 GHz.†
- **1× Gigabit Port:** Ensures fast connectivity throughout the network.
- **Low Latency and Interference:** MU-MIMO, OFDMA, and 1024-QAM ensure high performance for your network.‡
- **Flexible Deployment and Easy Setup:** Supports 802.3af PoE, Passive PoE, and DC power (adapter included) for versatile installation with one-click setup via Omada SDN.
- **Advanced Features:** Supports centralized management, Mesh, and Seamless Roaming.△
- **More Connections, Wider Coverage:** Supports 250+ concurrent clients** and covers up to 1,250 ft² (115 ㎡)* for reliable and extensive wireless connectivity.

Product Appearance



**The actual capacity depends on the wireless environment and client traffic and is generally less than the maximum number of client connections.
§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.

Feature Descriptions

Omada Wi-Fi 6 Technology

Wi-Fi 6 (802.11ax) supports up to 8×8 UL/DL MU-MIMO, OFDMA, and 1024-QAM, making it an ideal choice for high-performance wireless networks. OFDMA allows multiple devices to share channels efficiently, reducing latency and improving performance in dense environments. MU-MIMO supports more simultaneous device connections, enhancing overall network capacity. 1024-QAM increases data transmission rates, delivering 25% faster speeds compared to Wi-Fi 5.

Higher Efficiency with OFDMA

More Simultaneous Connections with MU-MIMO

Gigabit PoE Port for Optimized Wired Performance

Boost overall network efficiency with a high-performance Gigabit PoE port, delivering blazing-fast data speeds. Compatibility with 802.3af PoE and Passive PoE is ideal for flexible deployment.

Easy Setup

Push up and rotate to lock for easy installation. Benefit from convenient setup and on-the-go network management via the Omada app or web interface.

Boosted Network Security

EAP610 offers advanced security features, including a secure guest network with up to 16 SSIDs, SMS login for enhanced business authentication, WPA3 encryption for worry-free open public access, and rogue AP detection, ensuring safer and more reliable network experiences for both guests and business operations.

Cloud-Based Centralized Management

As part of Omada's unified SDN ecosystem, EAP610 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.

Specifications

Hardware Specifications

Item	Description	
Wi-Fi Standards	5 GHz: IEEE 802.11a/n/ac/ax 2.4 GHz: IEEE 802.11b/g/n/ax	
802.11ax	Spatial Streams	• 2.4 GHz: 2×2 Uplink/Downlink MU-MIMO with 2 spatial streams • 5 GHz: 2×2 Uplink/Downlink MU-MIMO with 2 spatial streams
	Frequency Bands	2.400 to 2.4835 GHz ISM 5.150 to 5.250 GHz U-NII-1 5.250 to 5.350 GHz U-NII-2A 5.470 to 5.725 GHz U-NII-2C 5.725 to 5.850 GHz U-NII-3/ISM *Note: Country-Specific Restriction Apply
	Bandwidth	2.4 GHz: 20 MHz/40 MHz 5 GHz: 20 MHz/40 MHz/80 MHz *Note: Country-Specific Restriction Apply
	Wireless Data Rate	• 2.4 GHz: 8.6 Mbps to 574 Mbps (MCS0-MCS11, NSS=1 to 2, HE20/40) • 5 GHz: 8.6 Mbps to 1201 Mbps (MCS0-MCS11, NSS=1 to 2, HE20/40/80) *Note: Country-Specific Restriction Apply
	Radio Technology	Uplink/downlink OFDMA (Orthogonal Frequency-Division Multiple Access)
	Modulation Type	1024-QAM, 256-QAM. 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) • WPA3 (Wi-Fi Protect Access 3) • DFS (Dynamic Frequency Selection) • CDD (Cycle Delay Diversity) • CSD (Cycle Shift Diversity) • STBC (Space-Time Block Coding) • LDPC (Low-Density Parity-Check)
802.11ac	Spatial Streams	• 5 GHz: 2×2 Downlink MU-MIMO with 2 spatial streams
	Frequency Bands	5.150 to 5.250 GHz U-NII-1 5.250 to 5.350 GHz U-NII-2A 5.470 to 5.725 GHz U-NII-2C 5.725 to 5.850 GHz U-NII-3/ISM *Note: Country-Specific Restriction Apply
	Bandwidth	5 GHz: 20 MHz/40 MHz/80 MHz

Item	Description	
	Wireless Data Rate	• 5 GHz: 6.5Mbps to 867Mbps (MCS0-MCS9, NSS=1 to 2, VHT20/40/80)
	Radio Technology	OFDM (Orthogonal Frequency-Division Multiplexing)
	Modulation Type	256-QAM. 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) • WPA3 (Wi-Fi Protect Access 3) • DFS (Dynamic Frequency Selection) • CDD (Cycle Delay Diversity) • CSD (Cycle Shift Diversity) • STBC (Space-Time Block Coding) • LDPC (Low-Density Parity-Check)
802.11n	Spatial Streams	• 2.4 GHz: 2×2 MIMO with 2 spatial streams • 5 GHz: 2×2 MIMO with 2 spatial streams
	Frequency Bands	2.400 to 2.4835 GHz ISM 5.150 to 5.250 GHz U-NII-1 5.250 to 5.350 GHz U-NII-2A 5.470 to 5.725 GHz U-NII-2C 5.725 to 5.850 GHz U-NII-3/ISM *Note: Country-Specific Restriction Apply
	Bandwidth	20 MHz/40 MHz
	Wireless Data Rate	• 2.4 GHz: 6.5Mbps to 300 Mbps (MCS0-MCS7, NSS=1 to 2, HT20/40) • 5 GHz: 6.5Mbps 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) • WPA3 (Wi-Fi Protect Access 3) • DFS (Dynamic Frequency Selection) • CDD (Cycle Delay Diversity) • CSD (Cycle Shift Diversity) • STBC (Space-Time Block Coding) • LDPC (Low-Density Parity-Check)

Item	Description	
Antenna	Wi-Fi	• 2.4 GHz: 2 × 4 dBi (peak gain), internal omnidirectional antennas • 5 GHz: 2 × 5 dBi (peak gain), internal omnidirectional antennas • The down tilt angle for maximum gain: 2.4G:30° to 45°; 5G:15° to 30° *Note: The gains above are the single-antenna peak gains.
Interfaces	• 1 x 10M/100M/1000M Multigigabit Ethernet Port (RJ45); PoE in • 1 x DC power interface: 12VDC	
Memory	• Flash: 128Mbit • DRAM: 2Gbit	
Button	1 × Reset button: Press the button for longer than 5 seconds to make the device restore to factory settings.	
Indicator	1 × single-color system LED indicates on the front: • Power-on status • Firmware initialization or upgrade status • Uplink service status • Error status	
Reliability	MTBF (Mean Time between Failure)	EU:1110227 hours at the operating temperature of 25°C (77°F) ; US: 676566 hours at the operating temperature of 25°C (77°F)
Power Supply	Input	802.3af PoE: 36 - 57 V=0.36A; 12 V/1 A DC
	Output	/
Power Consumption	• 802.3af (PoE): 10.9w, 2.4GHz radio 2×2, 5GHz radio 2×2. • Idle mode: 4.3W(PoE); 3.6W(DC)	
Surge/Lightning Protection	Ethernet Ports: ±2 kV	
ESD/EMP Protection	• Air discharge: ±8 kV • Contact discharge: ±4 kV *Note: ESD/EMP Protection means Electrostatic Discharge/Electromagnetic Pulse Protection independently.	
Tx Power	Maximum transmit power	CE (ERIP) • 2.4 GHz: 20 dBm • 5 GHz: 23 dBm in U-NII-1, 23 dBm in U-NII-2A, 27 dBm in U-NII-2C FCC (Conducted Power) • 2.4 GHz: 24 dBm • 5 GHz: 24 dBm in U-NII-1, 24 dBm in U-NII-3 *Note: MIMO combined power, excluding antenna gains. The actual transmit power depends on local laws and regulations.
	Minimum transmit power	CE (ERIP) • 2.4 GHz: 7 dBm • 5 GHz: 7 dBm in U-NII-1, 7 dBm in U-NII-2A, 7 dBm in U-NII-2C FCC (Conducted Power) • 2.4 GHz: 4 dBm • 5 GHz: 4 dBm in U-NII-1 *Note: MIMO combined power, excluding antenna gains. The actual transmit power depends on local laws and regulations.

Item	Description	
	Adjustable power increment	1 dB
Environment	Temperature	• Operating: 0°C to +40°C (32°F to +104°F) • Storage: -40°C to +70°C (-40°F to +158°F)
	Humidity	• Operating: 10% to 90% (non-condensing) • Storage: 5% to 90% (non-condensing)
	Altitude	• Storage: up to + 2000 m (6561feet) • Operating: up to + 2000 m (6561feet)
Unit	Dimensions (W×D×H)	• Main Unit: 160 × 160 × 33.6 mm (6.3 × 6.3 × 1.3 in.) • Shipping Unit: 245 × 228 × 65 mm (9.7 × 9.0 × 2.6 in.)
	Weight	• Main Unit: 0.385 kg (0.85 lb) • Mounting Bracket: 0.05 kg (0.11 lb) • Shipping Unit: 0.792 kg (1.75 lb)
	Mounting	• Ceiling /Wall Mounting (Kits included) • Junction Box Mounting (Kits included) • T-Bar Mounting (Kits included)

Software Specifications

Item	Description	
Wireless Functions	Maximum number of BSSIDs	16 (8 on each band)
	Maximum number of associated STAs	256
	Guest Network	Yes
	ACS (Automatic Channel Selection)	Yes
	Airtime Fairness	Yes
	Band Steering	Yes
	802.11 Rate Control	Yes
	Rogue AP Detection	Yes
	URL Filtering	Yes
	RF Scan	No
	WLAN Optimization	Yes
	WIDS/WIPS	No
	Lock to AP	Yes
	Rate Limit	• SSID Rate Limit • Client Rate Limit
	Load Balance	• Maximum Associated Clients • RSSI Threshold
	Roaming	• 802.11 k • 802.11v • 802.11r • Non-Stick Roaming • Ping-Pong Roaming Suppression • AI Roaming *Note: Only support Layer 2 Roaming currently.
	Multicast/Broadcast Management	• Multicast-to-Unicast Conversion • ARP-to-Unicast Conversation • Multicast Filtering • Multicast/Broadcast Rate Limit
	QoS (Quality of Service)	• WMM (Wi-Fi Multimedia) • DSCP (Differentiated Services Code Point) • U-APSD (Unscheduled Automatic Power Save Delivery)
Security and Authentication	ACL	
	MAC Filter	

Item	Description	
	802.1X Authentication	
	MAC-Based Authentication	
	• None • Enhanced Open • WPA/WPA2/WPA3-Personal • WPA/WPA2/WPA3-Enterprise	
	Radius Accounting	
	• PPSK without Radius • PPSK with Radius (Generic Radius with bound MAC/EKMS/Generic Radius with unbound 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
	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 V5.15.24 and above • Omada Essential V5.15.24 and above
	App	Omada App V4.24 and above
	Standalone Management	Yes
	Standalone Mesh	Yes
	SSH	Yes
	SNMP	v1, v2c, v3
Operating Modes	AP	Yes
	Repeater	No
	Mesh	Yes

Item	Description	
System Feature	System Log	Yes
	Reboot Schedule	Yes
	WLAN Schedule	Yes
	NTP (Network Time Protocol)	Yes
	Email Alerts	Yes
	Firmware Upgrade	Yes
	Restore & Backup	Yes
	LED Control	Yes
Network Features	VLAN	• SSID VLAN • Dynamic VLAN • Management VLAN
	Static IP / DHCP Client	Yes
	IPv4/IPv6	Yes
	LLDP (Link Layer Discovery Protocol)	Yes
	mDNS	Yes
	Tools	• Ping / Traceroute / DNSLookup / ARP Table • Packet Capture • Terminal

Standards Compliance and Certifications

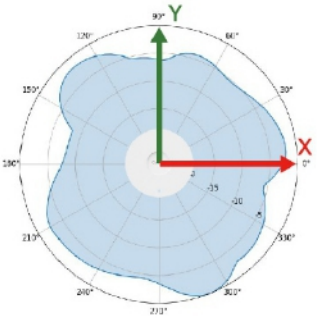
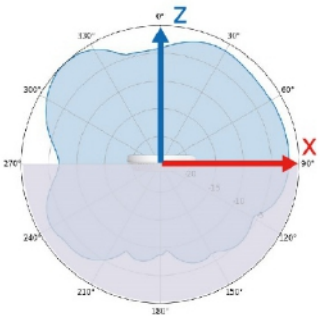
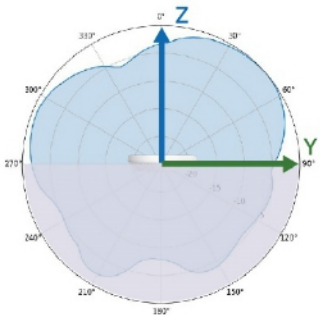
Item	Category	Description
Standards compliance	IEEE Standards	• IEEE 802.11a/b/g/n/ac/ax • IEEE 802.11e/i/k/v/r • IEEE 802.1x/q • IEEE 802.3af • IEEE 802.3ab • IEEE 802.3x
	Radio Standards	• ETSI EN 300 328 • ETSI EN 301 893 • EN50665 EN IEC 62311 • FCC Part 15E • RSS-247, RSS-GEN • LP0002
	EMC standards	• EN 55032 • EN 55035 • EN 301489-1 • EN 301489-17 • FCC Part 15C • ICES-003 issue7 • CNS 15936
	Safety Standards	• EN 62368-1 • IEC 62368-1 • CNS 15598-1
	Security Standards	• WPA-Personal/Enterprise • WPA2-Personal/Enterprise • WPA3-Personal/Enterprise • OWE
	RoHS	• Directive 2011/65/EU, Directive (EU) 2015/863 • EN IEC 63000: 2018
	Others	• Equipment Radio Regulations: 2008 (including amendments) • VCCI-CISPR 32
Certifications	• FCC/CE/NCC/VCCI/JRF/BSMI	

RF Performance

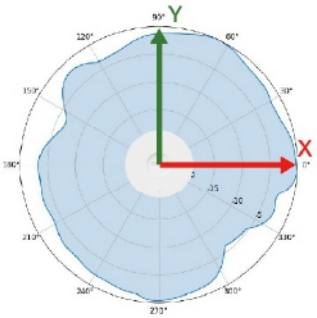
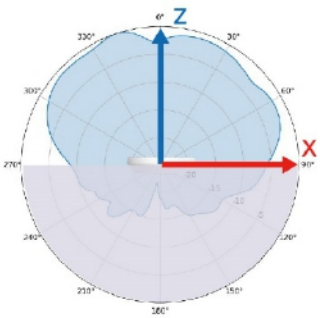
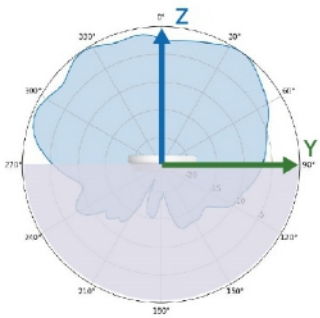
Frequency Band	Wi-Fi Protocol & Bandwidth	MCS Index / Data Rate	EU/US Maximum Transmit Power (dBm) per transmit chain	Receiver Sensitivity (dBm) per receive chain
2.4 GHz	802.11n, HT20	MCS0	14/20.5	-96
		MCS7	14/17	-77
	802.11n, HT40	MCS0	14/19	-93
		MCS7	14/17.5	-74
	802.11ax, HE20	MCS0	14/20.5	-97
		MCS11	14/16	-67
	802.11ax, HE40	MCS0	14/19	-94
		MCS11	14/16	-64
5 GHz	802.11n, HT20	MCS0	20.5/20.5	-94
		MCS7	17.5/17.5	-75
	802.11n, HT40	MCS0	20.5/20.5	-91
		MCS7	17.5/17.5	-71.5
	802.11ac, HT20	MCS0	20.5/20.5	-94
		MCS8	16.5/16.5	-75
	802.11ac, HT40	MCS0	20.5/20.5	-91
		MCS9	16.5/16.5	-66
	802.11ac, HT80	MCS0	20.5/20.5	-87.5
		MCS9	16.5/16.5	-62
	802.11ax, HE20	MCS0	20.5/20.5	-94.5
		MCS11	16/16	-64.5
	802.11ax, HE40	MCS0	20.5/20.5	-91.5
		MCS11	16/16	-61
	802.11ax, HE80	MCS0	20.5/20.5	-89
		MCS11	16/16	-59

Antenna Radiation Patterns

2.4 GHz

XY Plane	XZ Plane	YZ Plane
		

5 GHz

XY Plane	XZ Plane	YZ Plane
		

Package Contents

Item	Quantity
EAP610	1
Installation Guide	1
Power Adapter	1
Mounting Kit	1

Support Services

We are committed to providing you with comprehensive and reliable support services to ensure seamless experience with TP-Link Business products.

- Email Contact: https://support.omadanetworks.com/email-feedback/
- Online Chat Contact: https://support.omadanetworks.com/contact-support/
- Warranty Services: https://www.omadanetworks.com/support/replacement-warranty/

Revision History

Version	Date	Description
V1.0	2025-06-13	Initial release.

† Maximum wireless signal rates are the physical rates derived from IEEE Standard 802.11 specifications. Actual wireless data throughput and wireless coverage are not guaranteed and will vary as a result of 1) environmental factors, including building materials, physical objects, and obstacles, 2) network conditions, including local interference, volume and density of traffic, product location, network complexity, and network overhead, and 3) client limitations, including rated performance, location, connection, quality, and client condition.

‡ Use of Wi-Fi 6 (802.11ax), and features including OFDMA, MU-MIMO, and 1024-QAM requires clients to also support the corresponding features.

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

** The actual capacity depends on the wireless environment and client traffic and is generally less than the maximum number of client connections.

△ Omada 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.

Some models featured in this guide may be unavailable in your country or region. Visit TP-Link website for local sales information: **https://www.omadanetworks.com**. Specifications are subject to change without notice.