Omada by tp-link

Access Points

Indoor and Outdoor EAP Datasheet

Highlighted Models:

- EAP620 HD
- EAP660 HD
- EAP650
- EAP772-Outdoor
- EAP668-Outdoor
- EAP650-Outdoor



Omada by tp-link

Datasheet

EAP620 HD

AX1800 Wireless Dual Band
Ceiling Mount Access Point



Product Overview

EAP620 HD is Omada's AX1800 Dual-Band Four-Stream Wi-Fi 6 Ceiling Mount Access Point, designed to deliver high-speed, reliable wireless connectivity in high-density business environments. With combined wireless speeds of up to 1,775 Mbps across the 2.4 GHz and 5 GHz bands, it ensures smooth and efficient network performance.

Featuring OFDMA and MU-MIMO technologies, the EAP620 HD delivers up to 4× increased network capacity, enabling more devices to connect simultaneously. With seamless roaming, centralized cloud management through Omada SDN, and convenient PoE+ installation, it provides reliable Wi-Fi connectivity for hotels, restaurants, shopping malls, offices, meeting rooms, and other high-traffic indoor environments.

Ultra-Fast Wi-Fi 6 Speeds:
Simultaneous 574 Mbps on 2.4 GHz and 1201 Mbps on 5 GHz totals 1775 Mbps Wi-Fi speeds

High-Density Connectivity:
4× increased capacity to connect more devices simultaneously

Integrated into Omada SDN:
Zero-Touch Provisioning (ZTP), Centralized Cloud Management, and Intelligent Monitoring.

Centralized Management:
Cloud access and Omada app for ultra convenience and easy management.

Seamless Roaming:
Even video streams and voice calls are unaffected as users move between locations

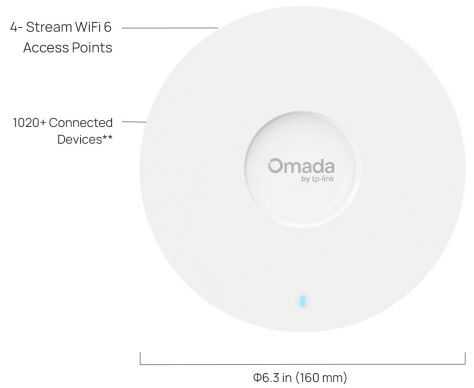
PoE+ Support:
Supports Power over Ethernet (802.3at) for convenient deployment and installation.

Secure Guest Network:
Along with multiple authentication options (SMS/ Facebook Wi-Fi/ Voucher, etc.) and abundant wireless security technologies.

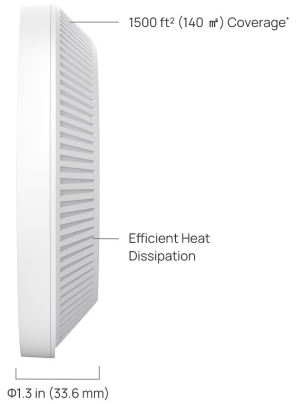
IP41 Weatherproofing

Learn more about Omada Wi-Fi 6>
https://www.omadanetworks.com/ph/omada-wifi6/

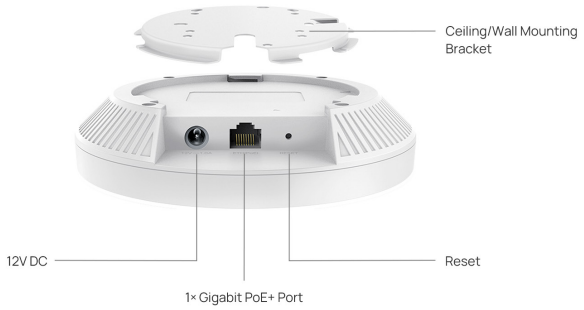
Front View



Side View



Bottom View



Back View



Specifications

Hardware Specifications

Item	Description	
Main Design	LAN Interfaces	1x Gigabit Ethernet Port
	Wi-Fi Standards	IEEE 802.11 a/b/g/n/ac/ax
	Maximum Data Rate	574 Mbps (2.4 GHz) + 1201 Mbps (5 GHz)
	Wireless Client Capacity	1000+
	Antennas	• 2.4 GHz: 2x 4 dBi • 5 GHz: 2x 5 dBi
	Transmit Power	• CE: < 20 dBm (2.4GHz, EIRP); < 23dBm (5 GHz, band1&band 2, EIRP); < 30 dBm (5 GHz,band 3, EIRP); • FCC: < 25 dBm (2.4 GHz); < 25 dBm (5 GHz)
Centralized Management	Omada Software Controller	Yes
	Omada Hardware Controller	Yes
	Omada App	Yes
Security	Captive Portal Authentication	Yes
	Access Control	Yes
	Maximum number of MAC Filter	4000
	Wireless Isolation between Clients	Yes
	VLAN	Yes
	Rogue AP Detection	Yes
	Wireless Encryption	• WPA-Personal/Enterprise • WPA2-Personal/Enterprise • WPA3-Personal/Enterprise
	802.1X Support	Yes

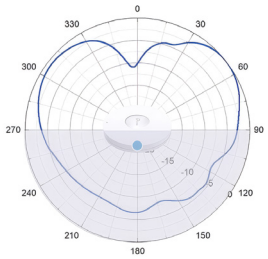
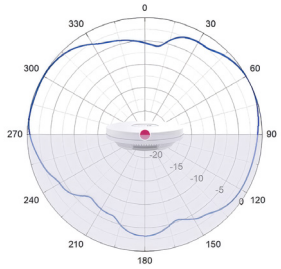
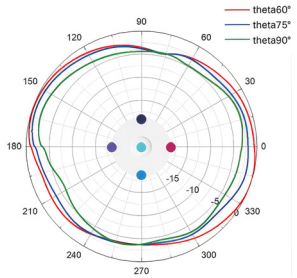
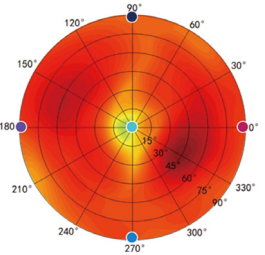
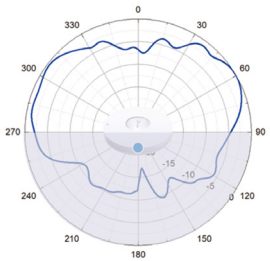
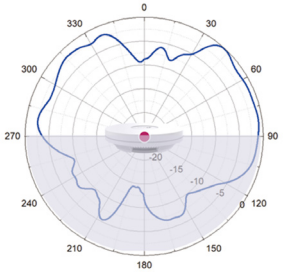
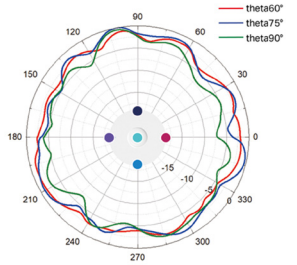
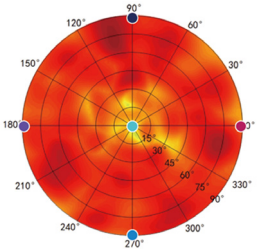
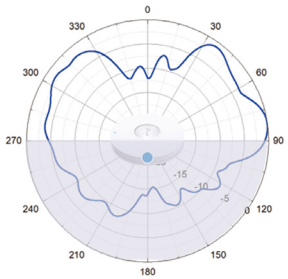
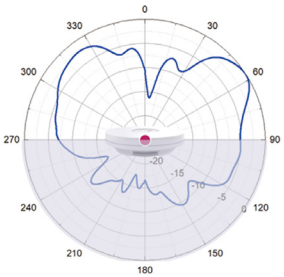
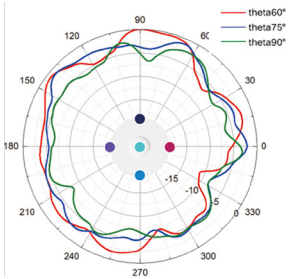
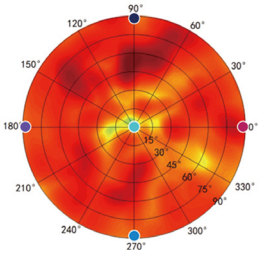
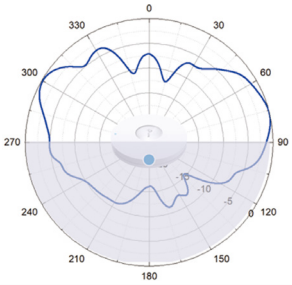
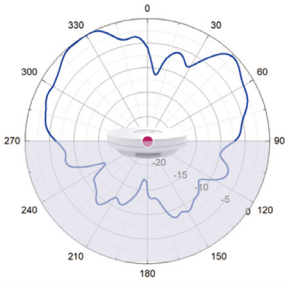
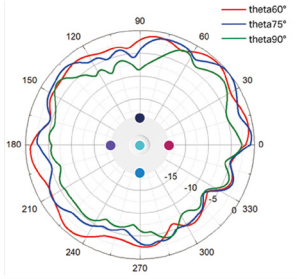
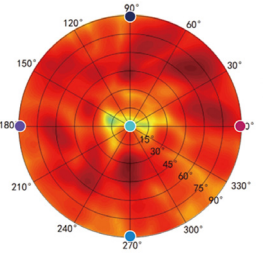
Item	Description	
Wireless Function	Multiple SSIDs	16 (8 on each band)
	Enable/Disable Wireless Radio	Yes
	Enable/Disable SSID Broadcast	Yes
	Guest Network	Yes
	Automatic Channel Assignment	Yes
	Transmit Power Control	Adjust transmit Power on dBm
	QoS (WMM)	Yes
	Seamless Roaming	Yes
	Mesh	Yes
	Beamforming	Yes
	MU-MIMO	Yes
	Rate Limit	Based on SSID/Client
	Load Balance	Yes
	Airtime Fairness	Yes
	Band Steering	Yes
	RADIUS Accounting	Yes
	MAC Authentication	Yes
	Reboot Schedule	Yes
	Wireless Schedule	Yes
	Wireless Statistics	Yes
	Static IP/Dynamic IP	Yes

Item	Description	
Support Data Rate	802.11ax	8 Mbps to 1201 Mbps (MCS0-MCS11, NSS = 1 to 2 HE20/40/80)
	802.11ac	6.5 Mbps to 1083.3 Mbps (MCS0-MCS11, NSS = 1 to 2 VHT20/40/80)
	802.11n	6.5 Mbps to 300 Mbps (MCS0-MCS15, HT20/40)
	802.11g	6, 9, 12, 18, 24, 36, 48 ,54 Mbps
	802.11b	1, 2, 5.5, 11 Mbps
	802.11a	6, 9, 12, 18, 24, 36, 48 ,54 Mbps
Management	LED ON/OFF Control	Yes
	Management MAC Access Control	Yes
	Web-based Management	Yes
	SNMP	• v1 • v2c • v3
	SSH	Yes
	Restore & Backup	Yes
	Firmware Update via Web	Yes
	NTP	Yes
	System Log	Yes
	Email Alerts	Yes

Item	Description	
Physical & Environment	Power Supply	• V2: 48V Passive PoE or 802.3at PoE or 12V/1A DC • V3: 48V Passive PoE or 802.3at PoE or 12V/1.5A DC
	Maximum Power Consumption	V2: • EU: 12.8 W (For PoE); 10.8 W (for DC) • US: 13.9 W (For PoE); 11.8 W (for DC) V3: • EU: 14.4 W (For PoE); 13.1 W (for DC) • US: 14.9 W (For PoE); 13.4 W (for DC)
	Reset	Yes
	Mounting	Ceiling / Wall mouting (Kits included) / Junction Box mouting
Certifications		• CE • FCC • RoHS • IC
Dimensions (W x D x H)		160 x 160 x 33.6 mm
Environment		• Operating Temperature: 0 °C–40 °C (32 °F–104 °F); • Storage Temperature: -40 °C–70 °C (-40 °F–158 °F); • Operating Humidity: 10%–90% non-condensing; • Storage Humidity: 5%–90% non-condensing;
Others	Hotspot 2.0	Yes

Antenna Radiation Patterns

Ceiling Mount AP - EAP620 HD

	Elevation-0°	Elevation-90°	Azimuth	Mapped 3D
2.45 GHz				
5.25 GHz				
5.5 GHz				
5.75 GHz				

Disclaimers

* Maximum wireless transmission rates are the physical rates derived from IEEE Standard 802.11 specifications. Range, coverage, and maximum quantity of connected devices are based on test results under normal usage conditions. Actual wireless data throughput, wireless coverage, and quantity of connected devices 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.

* Wireless client capacity specifications were defined according to test results under normal usage conditions. Actual wireless client capacity is 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.

* Actual network speed may be limited by the rate of the product's Ethernet WAN or LAN port, the rate supported by the network cable, Internet service provider factors and other environmental conditions.

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

* MU-MIMO capability requires client devices that also support MU-MIMO (Only for certain devices)

* Seamless roaming requires both the access point and client devices to support 802.11k and 802.11v protocols.

* Protection against lightning and electro-static discharge may be achieved through proper product setup, grounding and cable shielding. Refer to the instruction manual and consult an IT professional to assist with setting up this product.

* PoE budget calculations are based on laboratory testing.
Actual PoE power budget is not guaranteed and will vary as a result of client limitations and environmental factors.

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Datasheet

EAP660 HD

AX3600 Wireless Dual Band Multi-Gigabit Ceiling Mount Access Point



Product Overview

EAP660 HD is Omada's AX3600 Dual-Band Eight-Stream Wi-Fi 6 Ceiling Mount Access Point, designed to deliver ultra-fast, reliable wireless connectivity in high-density business environments. With combined wireless speeds of up to 3,550 Mbps across the 2.4 GHz and 5 GHz bands, it ensures seamless connectivity and exceptional network performance.

Featuring OFDMA and MU-MIMO technologies, the EAP660 HD delivers up to 4× increased network capacity, supporting over 1,000 concurrent clients. Equipped with a 2.5 Gbps Ethernet port, seamless roaming, centralized cloud management through Omada SDN, and convenient PoE+ installation, it provides powerful and stable Wi-Fi connectivity for hotels, restaurants, shopping malls, offices, meeting rooms, railway stations, and other high-traffic indoor environments.

8-Stream Dual-Band Wi-Fi 6:
2,402 Mbps on 5 GHz and 1,148 Mbps on 2.4 GHz

High-Density Connectivity:
Up to 1,020+ Concurrent connections in crowded network environments.*

1× 2.5G Port:
Ensures fast connectivity throughout the network

Low Latency and Interference:
MU-MIMO, OFDMA, and 1024-QAM ensure high performance for your network.‡

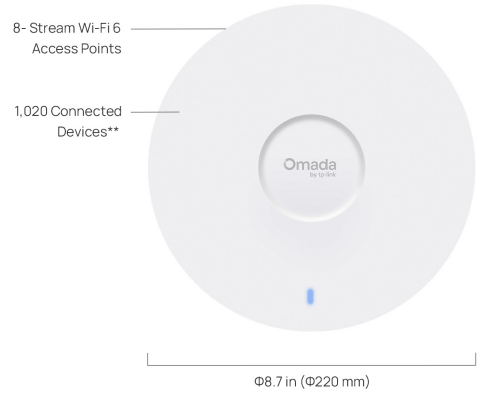
Flexible Deployment and Easy Setup:
Supports both 802.3at PoE and DC Power supply for flexible installation. Omada SDN for one-click setup.

Advanced Features:
Supports centralized cloud management, mesh, and seamless roaming.

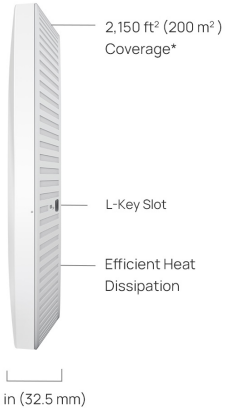
Wider Coverage:
Covers up to 2150 ft² (200 M²) for reliable and extensive wireless connectivity.

Learn more about Omada Wi-Fi 6>
https://www.omadanetworks.com/ph/omada-wifi6/

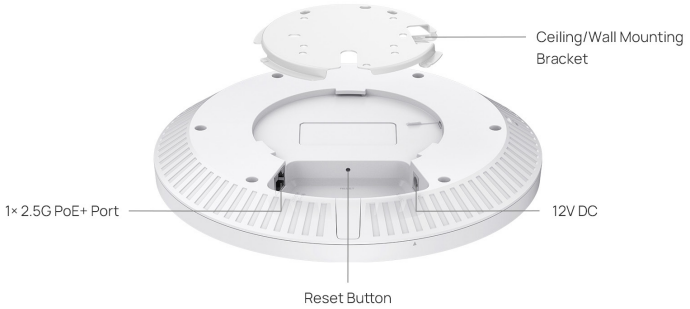
Front View



Side View



Bottom View



Back View



Specifications

Hardware Specifications

Item		Description	
Main Design	LAN Interfaces	1x 2.5Gbps Ethernet Port	
	Wi-Fi Standards	IEEE 802.11 a/b/g/n/ac/ax	
	Maximum Data Rate	1148 Mbps (2.4 GHz) + 2402 Mbps (5 GHz)	
	Wireless Client Capacity	1000+	
	Antennas	• 2.4 GHz: 2x 4 dBi • 5 GHz: 2x 5 dBi	
	Transmit Power	• CE: < 20 dBm (2.4GHz, EIRP); < 23dBm (5 GHz, band1&band 2, EIRP); < 30 dBm (5 GHz,band 3, EIRP); • FCC: < 25 dBm (2.4 GHz); < 25 dBm (5 GHz)	
	Reception Sensitivity	2.4GHz: • 11AX 20MHz MCS0: -95 • 11AX 20MHz MCS11: -66 • 11AX 40MHz MCS0: -94 • 11AX 40MHz MCS11: -63	5GHz: • 11AX 20MHz MCS0: -94 • 11AX 20MHz MCS11: -64.5 • 11AX 40MHz MCS0: -90.5 • 11AX 40MHz MCS11: -63 • 11AX 80MHz MCS0: -88.5 • 11AX 80MHz MCS11: -60.5
Centralized Management	Omada Software Controller	Yes	
	Omada Hardware Controller	Yes	
	Omada App	Yes	
Security	Captive Portal Authentication	Yes	
	Access Control	Yes	
	Maximum number of MAC Filter	4000	
	Wireless Isolation between Clients	Yes	
	VLAN	Yes	
	Rogue AP Detection	Yes	
	Wireless Encryption	• WPA-Personal/Enterprise • WPA2-Personal/Enterprise • WPA3-Personal/Enterprise	
	802.1X Support	Yes	

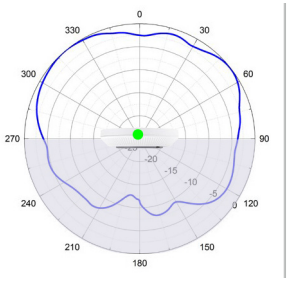
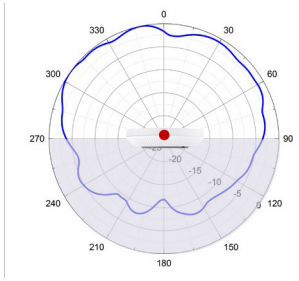
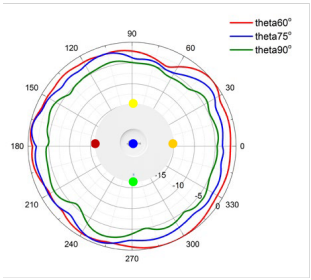
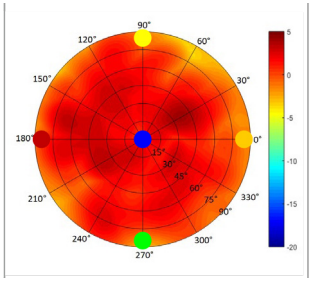
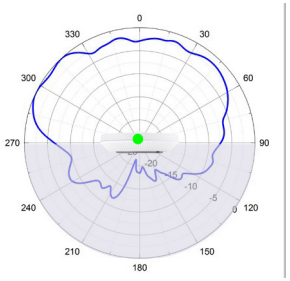
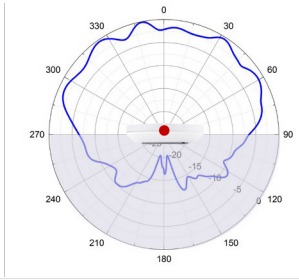
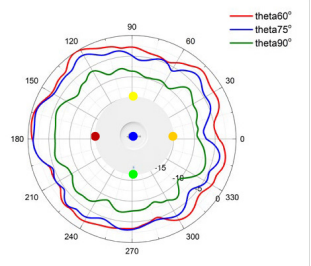
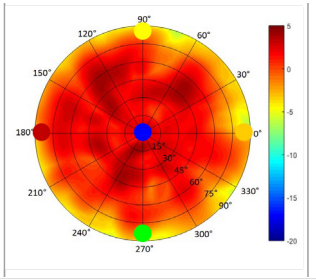
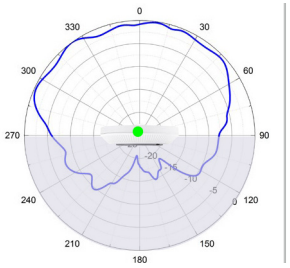
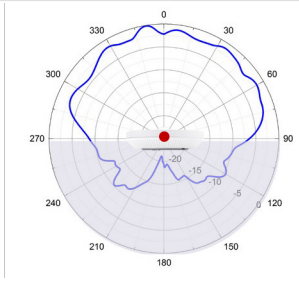
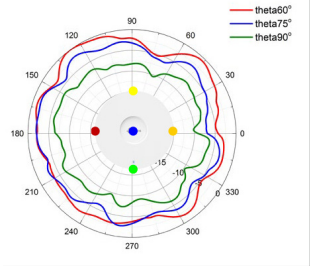
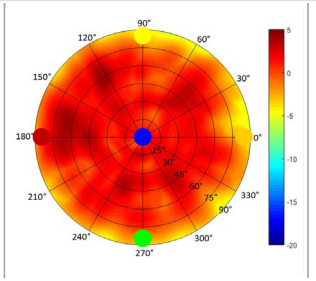
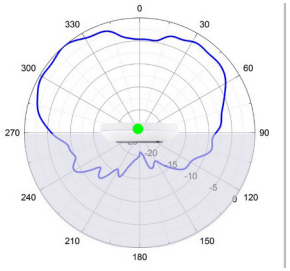
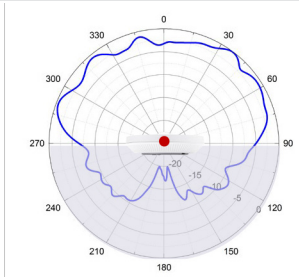
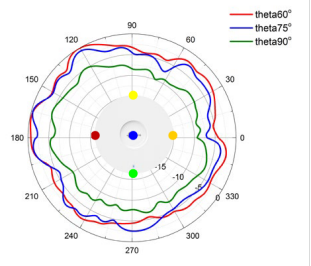
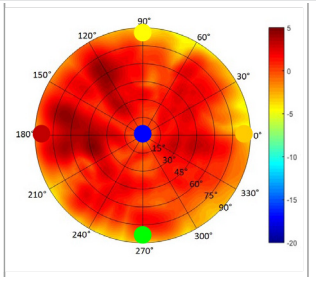
Item	Description	
Wireless Function	Multiple SSIDs	16 (8 on each band)
	Channel	US: 2G:1 - 11; 5G: 36,40,44,48,149,153,157,161,165 EU: 2G:1 - 13; 5G: 36,40,44,48,52,56,60,64,100,104,108,112,116,120,124,128,132,136,140
	Enable/Disable Wireless Radio	Yes
	Enable/Disable SSID Broadcast	Yesv
	Guest Network	Yes
	Automatic Channel Assignment	Yes
	Transmit Power Control	Adjust transmit Power on dBm
	QoS (WMM)	Yes
	Seamless Roaming	Yes
	Mesh	Yes
	Beamforming	Yes
	MU-MIMO	Yes
	Rate Limit	Based on SSID/Client
	Load Balance	Yes
	Airtime Fairness	Yes
	Band Steering	Yes
	RADIUS Accounting	Yes
	MAC Authentication	Yes
	Reboot Schedule	Yes
	Wireless Schedule	Yes
	Wireless Statistics	Yes
	Static IP/Dynamic IP	Yes

Item	Description	
Support Data Rate	802.11ax	8 Mbps to 2402 Mbps (MCS0-MCS11, NSS = 1 to 4 HE20/40/80)
	802.11ac	6.5 Mbps to 2166.7 Mbps (MCS0-MCS11, NSS = 1 to 4 VHT20/40/80)
	802.11n	6.5 Mbps to 300 Mbps (MCS0-MCS15, HT20/40)
	802.11g	6, 9, 12, 18, 24, 36, 48 ,54 Mbps
	802.11b	1, 2, 5.5, 11 Mbps
	802.11a	6, 9, 12, 18, 24, 36, 48 ,54 Mbps
Management	LED ON/OFF Control	Yes
	Management MAC Access Control	Yes
	Web-based Management	Yes
	SNMP	• v1 • v2c • v3
	SSH	Yes
	Restore & Backup	Yes
	Firmware Update via Web	Yes
	NTP	Yes
	System Log	Yes
	Email Alerts	Yes

Item		Description
Physical & Environment	Power Supply	• 802.3at PoE • 12V/2A DC
	Maximum Power Consumption	V2: • EU: 22.3W (for PoE); 20.3W (for DC) • US: 25.5W (for PoE); 22.5W (for DC) V3: • EU: 18.5 W (For PoE); 15 W (for DC) • US: 22.5 W (For PoE); 18 W (for DC)
	Reset	Yes
	Mounting	Ceiling / Wall mouting (Kits included)
Certifications		• CE • FCC • RoHS • IC
Dimensions (W x D x H)		V2: 220*220*32.5 mm V1: 243 x 243 x 64 mm
Net Weight		V2: 738g V1: 880g
Enclosure Material / Rack Material		• Top cover: PC • Bottom shell: aluminum alloy • Mounting rack: stainless steel • IP41 Rating
Lightning Protection		• Air discharge: ±8kV • Contact discharge: ±4kV • Common mode 10/700: ±4kV
Environment		• Operating Temperature: 0 °C–40 °C (32 °F–104 °F); • Storage Temperature: -40 °C–70 °C (-40 °F–158 °F); • Operating Humidity: 10%–90% non-condensing; • Storage Humidity: 5%–90% non-condensing;
Others	Hotspot 2.0	Yes

Antenna Radiation Patterns

Ceiling Mount AP - EAP660 HD V2

	Elevation-0°	Elevation-90°	Azimuth	Mapped 3D
2.45 GHz				
5.25 GHz				
5.5 GHz				
5.75 GHz				

Antenna Radiation Patterns

Ceiling Mount AP - EAP660 HD V1

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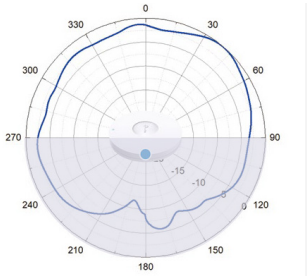
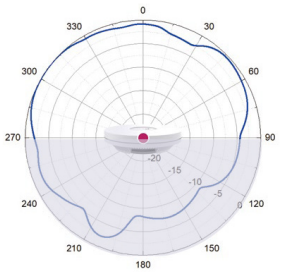
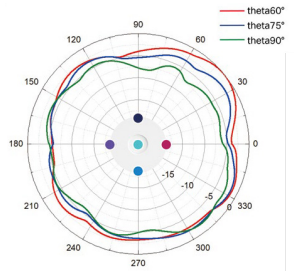
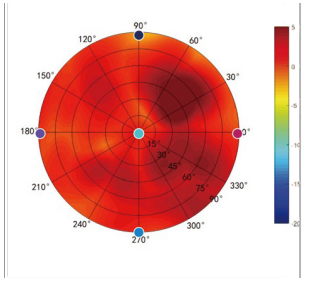
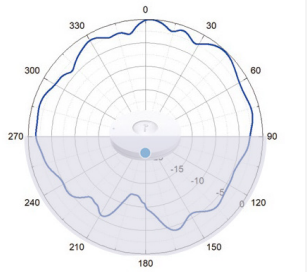
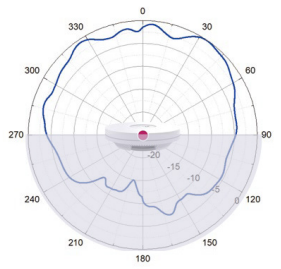
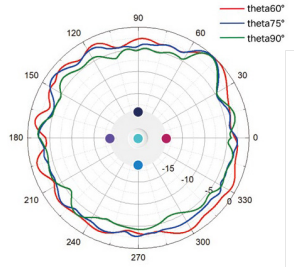
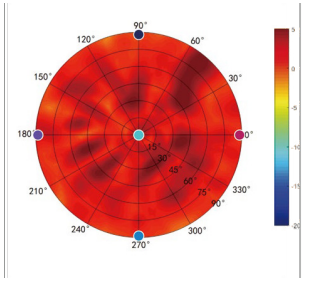
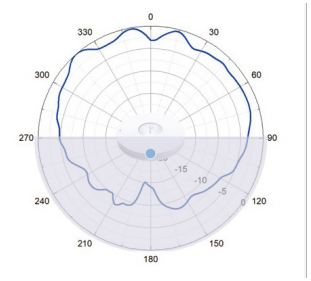
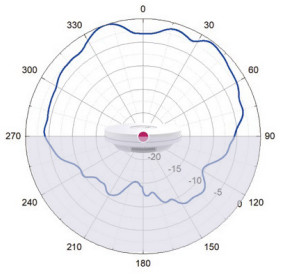
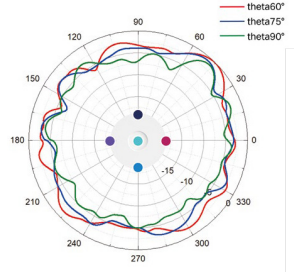
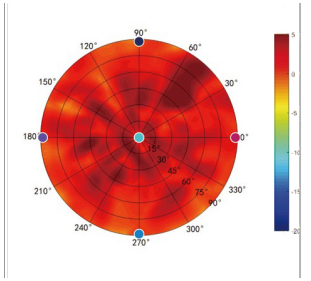
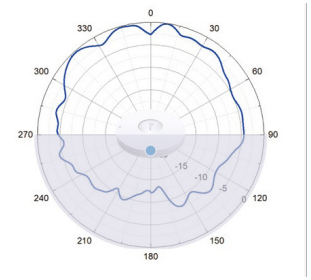
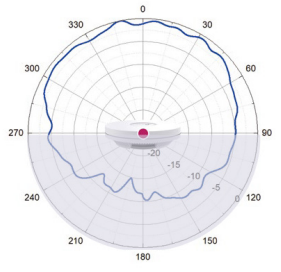
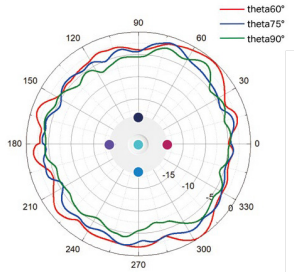
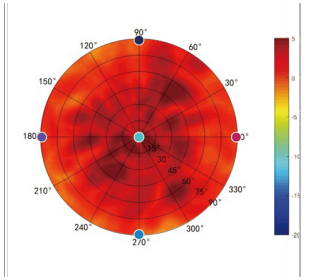
2.45 GHz				
5.25 GHz				
5.5 GHz				
5.75 GHz				

Disclaimers

* 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.
* Wireless client capacity specifications were defined according to test results under normal usage conditions. Actual wireless client capacity is 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 value 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.

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Datasheet

EAP650

AX3000 Ceiling Mount Wi-Fi 6 Access Point



Product Overview

EAP650 is Omada's AX3000 Dual-Band Four-Stream Wi-Fi 6 Ceiling Mount Access Point, designed to deliver fast, reliable wireless connectivity for modern business environments. With combined wireless speeds of up to 2,976 Mbps across the 2.4 GHz and 5 GHz bands, it ensures smooth network performance and efficient connectivity for multiple devices.

Featuring OFDMA, MU-MIMO, and 160 MHz channel bandwidth, the EAP650 supports over 250 concurrent clients and provides wireless coverage of up to 140 m² (1,500 ft²). Equipped with a Gigabit Ethernet port, seamless roaming, Omada Mesh, centralized cloud management through Omada SDN, and flexible PoE+ installation, it delivers stable and efficient Wi-Fi connectivity for offices, hotels, restaurants, retail stores, meeting rooms, and other indoor business environments.

Dual-Band Wi-Fi 6:
2,402 Mbps on 5 GHz, and 574 Mbps on 2.4 GHz

1× Gigabit Port:
Ensures fast connectivity throughout the network.

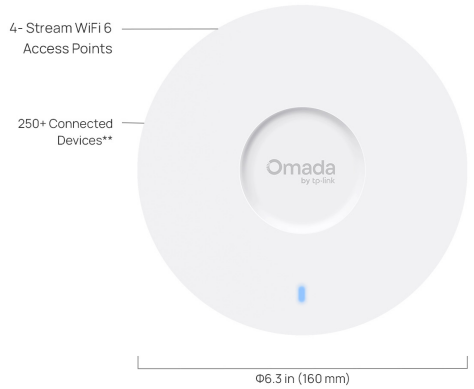
Low Latency and Interference:
MU-MIMO, OFDMA, and 1024-QAM ensure high performance for your network.

Flexible Deployment and Easy Setup:
Supports both 802.3at PoE and DC Power supply for flexible installation. Omada SDN for one-click setup.

Advanced Features:
Supports centralized cloud management, Mesh, and Seamless Roaming

More Connections and Wider Coverage:
Supports 250+ concurrent clients and covers up to 1500 ft² (140 m)* for reliable and extensive wireless connectivity.

Front View



Side View



Bottom View



Back View



Learn more about Omada Cloud SDN›
https://www.omadanetworks.com/en/omada-sdn/

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 • 2.4GHz: 8.6 Mbps to 574 Mbps (MCS0—MCS11,NSS=1 to 2, HE20/40) • 5 GHz: 8.6 Mbps to 2402 Mbps (MCS0—MCS11,NSS=1 to 2, HE20/40/80/160) Note: Country-Specific Restriction Apply	
	Wireless Data Rate	• 2.4 GHz: 20 MHz/40 MHz • 5GHz: 20 MHz/40 MHz/80MHz/160MHz 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)
		Hotspot 2.0	Yes

Item	Description	
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/160 MHz
	Wireless Data Rate	5 GHz: 6.5 Mbps to 1732 Mbps (MCS0-MCS9, NSS=1 to 2, VHT20/40/80/160)
	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	• 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	• 2.4GHz: 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

Item	Description	
802.11n	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)
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:45°; 5G:30° to 45° 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
	IoT	BLE5.2,1 Mbps
	Memory	• Flash: 1Gbit • DRAM: 4Gbit
	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: 363844 hours at the operating temperature of 25°C (77°F); US: 326205 hours at the operating temperature of 25°C (77°F)
Power Supply	Input	• 48V Passive POE or 802.3at POE • DC: 12V/1A(EU), 12V/1.5A(US)
	Output	No
	Power Consumption	• 802.3at (PoE+): EU: 13.7W, 2.4GHz radio 2×2, 5GHz radio 2×2 US: 15.5W, 2.4GHz radio 2×2, 5GHz radio 2×2 • DC: EU: 11.4W, 2.4GHz radio 2×2, 5GHz radio 2×2 US: 13.2W, 2.4GHz radio 2×2, 5GHz radio 2×2 • Idle mode: 6.16W(PoE) or 4.95W(DC) Note: Actual power consumption may vary depending on the AP usage

Item	Description	
Surge/Lightning Protection	Ethernet Ports: ±4 kV	
ESD/EMP Protection	• Air discharge: ±8 kV • Contact discharge: ±4 kV Note: ESD/EMP Protection means Electrostatic Discharge / Electromagnetic Pulse Protection independently.	
Other	Hotspot 2.0	Yes
Tx Power	Maximum Transmit Power	CE (EIRP) • 2.4GHz: 20 dBm • 5GHz: 22 dBm in U-NII-1, 22 dBm in U-NII-2A, 27 dBm in U-NII-2C FCC (conducted power) • 2.4GHz: 26dBm • 5GHz: 24 dBm in U-NII-1, 25 dBm in U-NII-2A, 25 dBm in U-NII-2C, 25 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 (EIRP) • 2.4GHz: 7 dBm • 5GHz: 6 dBm in U-NII-1, 6 dBm in U-NII-2A, 6 dBm in U-NII-2C FCC (conducted power) • 2.4GHz: 4 dBm • 5GHz: 4 dBm in U-NII-1, 4 dBm in U-NII-2A, 4 dBm in U-NII-2C, 4dBm in U-NII-3 Note: MIMO combined power, excluding antenna gains. The actual transmit power depends on local laws and regulations.
	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: 0.38 kg (0.838 lb) • Mounting Bracket: 0.054 kg (0.119 lb) • Shipping Unit: 0.85 kg (1.87 lb)
	Mounting	• Ceiling / Wall / Junction Box / T-Bar Mounting (Kits included)

Specifications

Software Specifications

Item	Description	
Wireless Functions	Maximum number of BSSIDs	16 (8 on each band)
	Maximum number of Associated STAs	250+
	Guest Network Yes	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
	MLO	No
	Roaming	• 802.11k • 802.11v • 802.11r • Non-Stick Roaming • Ping-Pong Roaming Suppression • AI Roaming Note: Only support Layer 2 Roaming currently

Item	Description	
Wireless Functions	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	
	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 LDAP 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

Item	Description	
Management Methods	Omada Controller	• Omada Local Controller V6.1 and above • Omada CBC V6.1 and above
	App	Omada App V5.0 and above
	Standalone Management	Yes
	Standalone Mesh	Yes
	SSH	Yes
	SNMP	• v1 • v2c • v3
Operating Modes	AP	Yes
	Mesh	Yes
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
Others	Hotspot 2.0	Yes

Item	Description	
Network Features	VLAN	• SSID VLAN • Dynamic VLAN • Management VLAN
	Static IP / DHCP Client	Omada App V5.0 and above
	IPv4/IPv6	Yes
	LLDP (Link Layer Discovery Protocol)	Yes
	mDNS	Yes
	Tools	• Ping / Traceroute / DNSLookup • Packet Capture (Wired and Wireless / Over-the-air Packet Capture) • Terminal • Remote Speed Test

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 802.3at • IEEE 802.3ab • IEEE 802.3x
	Radio Standards	• ETSI EN 300 328 • ETSI EN 301 893 • FCC Part 15E • FCC Part15C • RSS-247 Issue 3, RSS-GEN Issue 5 • EN 62311 • EN 50665

Item	Category	Description
Standards Compliance	EMC standards	• EN 55032 • EN 55035 • EN 301489-1 • EN 301489-17 • EN 61000-3-3 • EN IEC 61000-3-2 • EN 60601-1-2:2015+A1:2021 • FCC Part 15B • ICES-003 Issue 7 • VCCI-CISPR 32:2016
	Safety Standards	• EN 62368-1 • IEC 62368-1No
	Safety Standards	No
	RoHS	• Directive 2011/65/EU, Directive (EU) 2015/863 • EN IEC 63000: 2018
	Others	Equipment Radio Regulations: 2008 (including amendments)
Certifications	FCC/CE/MIC,VCCI,ISED	

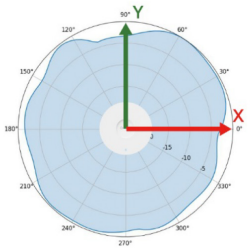
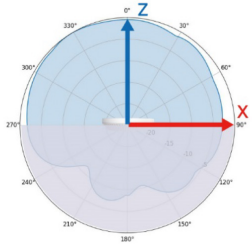
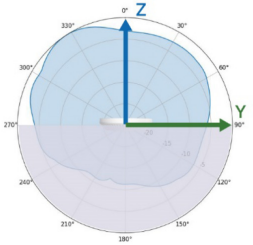
RF Performance

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	14/22	- 95
		MCS7	14/20	- 76.5
	802.11n, HT40	MCS0	14/20	- 92.5
		MCS7	14/20	- 74
	802.11ax, HE20	MCS0	14/22	- 96
		MCS11	14/18	- 66.5
	802.11ax, HE40	MCS0	14/20	- 93.5
		MCS11	14/18	- 63.5

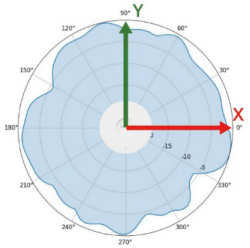
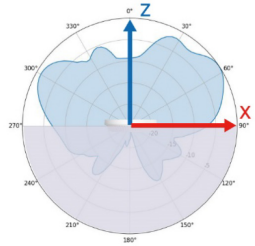
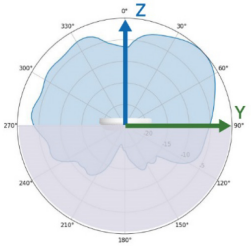
Frequency Band	Wi-Fi Protocol & Bandwidth	MCS Index / Data Rate	EU/US Maximum Transmit Power (dBm) per transmit chain	Receiver Sensitivity (dBm) per receive chain
5 GHz	802.11n, HT20	MCS0	22/22	- 95
		MCS7	20/20	- 76.5
	802.11n, HT40	MCS0	22/22	- 92.5
		MCS7	20/20	- 73.5
	802.11ac, HT20	MCS0	22/22	- 96
		MCS8	19.5/19.5	- 74.5
	802.11ac, HT40	MCS0	22/22	- 92.5
		MCS9	19/19	- 70.5
	802.11ac, HT80	MCS0	22/22	- 89.5
		MCS9	19/19	- 67
	802.11ac, HT160	MCS0	22/19	- 87
		MCS9	19/19	- 63
	802.11ax, HE20	MCS0	22/22	- 96
		MCS11	18/18	- 66
	802.11ax, HE40	MCS0	22/22	- 93
		MCS11	18/18	- 63
	802.11ax, HE80	MCS0	22/22	- 90.5
		MCS11	18/18	- 61
	802.11ax, HE160	MCS0	22/19	- 86
		MCS11	18/18	- 58.5

Antenna Radiation Patterns

2.4 GHz

XY Plane	XZ Plane	YZ Plane
		

5 GHz

XY Plane	XZ Plane	YZ Plane
		

Disclaimers

* 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.

* Use of Wi-Fi 6 (802.11ax), and features including 160 MHz Bandwidth, OFDMA, MU-MIMO, and 1024-QAM requires clients to also support the corresponding features. The 160 MHz bandwidth is only available on 5 GHz band and may be unavailable in some regions/countries due to regulatory restrictions

* 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

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

* These features require the use of an Omada controller.

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Datasheet

EAP772-Outdoor

Tri-Band Omnidirectional BE11000 Indoor/Outdoor WiFi 7 Access Point



Product Overview

EAP772-Outdoor is Omada's-Band Six-Stream Omnidirectional BE11000 (US) / BE9300 (EU) Outdoor Access Point. With its 6 GHz band unlocked by AFC, EAP772-Outdoor achieves true tri-band omnidirectional coverage.

An impressive 300 m² (3,200 ft²) recommended omnidirectional coverage, ensuring stable connectivity across outdoor areas, and an IP68-rated rugged design, the highest industry standard for dust and water resistance, the EAP772-Outdoor delivers robust outdoor Wi-Fi for hotels, business parks, yards, farms, and other business outbuildings.

Tri-Band Six-Stream Outdoor Wi-Fi 7:
Up to 11 Gbps for US and up to 9.3 Gbps for EU

6 GHz Band Unlocked by AFC:
AFC enables 6 GHz band outdoor uses*

True Tri-Band Omnidirectional Coverage:
300 m² (3,200 ft²) recommended coverage

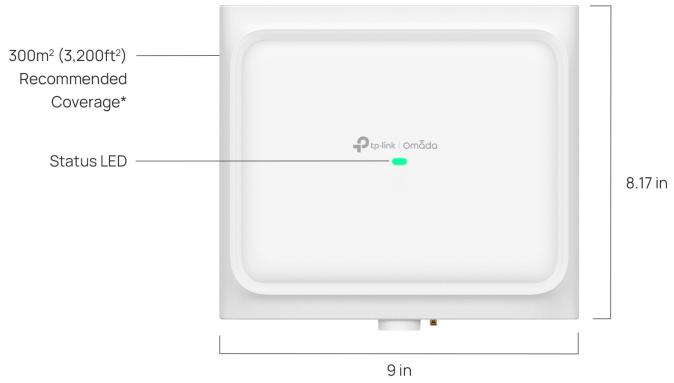
Professional Hardware Design:
Industry-leading IP68-rated, 1× 2.5G PoE+ port, 2.4 GHz dualpolarized antennas

Easy and Quick Setup:
Wall/pole mounting; Omada SDN for one-click setup

Advanced Features:
Centralized management, mesh, and seamless roaming

* AFC availability varies by region or country. For the supported areas, please refer to:
https://www.omadanetworks.com/support/faq/4373/

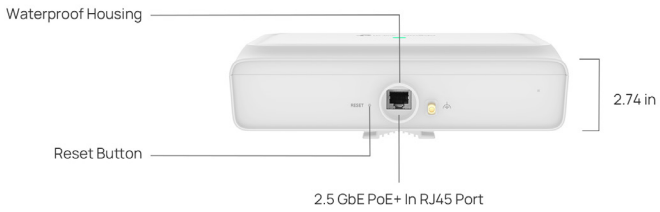
Front View



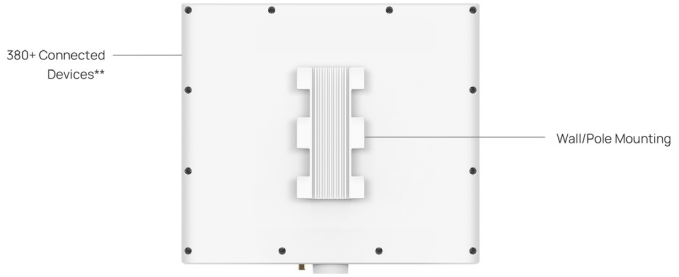
Side View



Bottom View



Back View

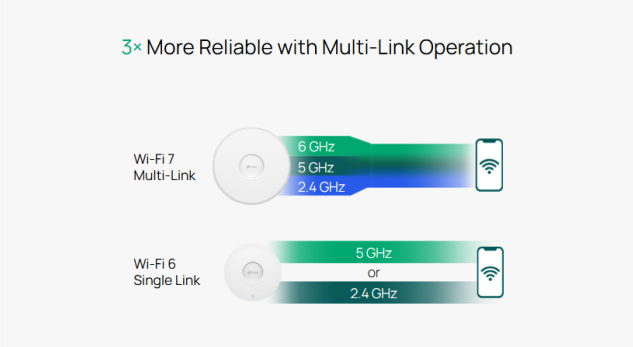


Feature Descriptions

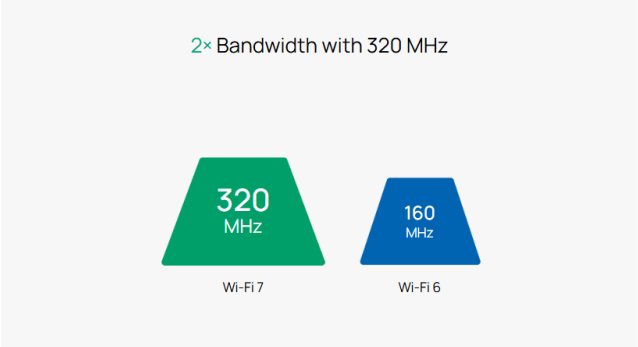
Omada Wi-Fi 7 Technology: A significant Upgrade from Wi-Fi 6

Wi-Fi 7, also referred to as IEEE 802.11be or extremely high throughput (EHT), is the next-generation Wi-Fi standard.

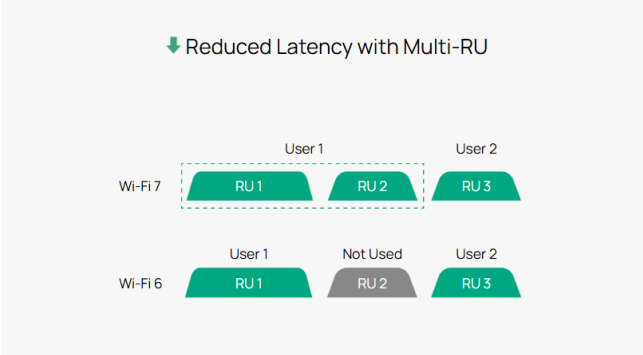
Building on Wi-Fi 6, Wi-Fi 7 incorporates advancements such as 320 MHz bandwidth, 4096-QAM, multi-resource unit (RU), multi-link operation (MLO), enhanced MU-MIMO, and more. These innovations enable Wi-Fi 7 to achieve higher speed, larger bandwidth, and lower latency compared to Wi-Fi 6. Wi-Fi 7 is projected to support speeds up to 30 Gbps, roughly three times faster than Wi-Fi 6.



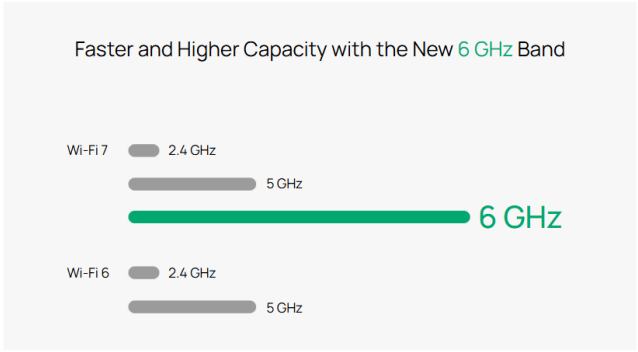
Wi-Fi 6 devices primarily rely on a single link for data transmission. In contrast, Wi-Fi 7 introduces Multi-Link Operation (MLO), enabling devices to utilize multiple links simultaneously, thereby achieving higher throughput, lower latency, and improved reliability.



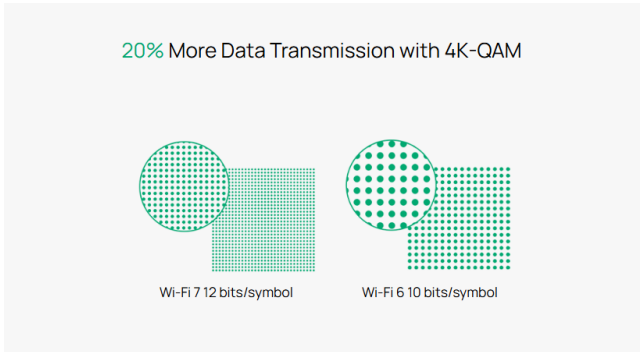
With 320 MHz ultra-wide channels, Wi-Fi 7 doubles the bandwidth of Wi-Fi 6's 160 MHz and the number of subcarriers, delivering dramatically higher data transfer rates.



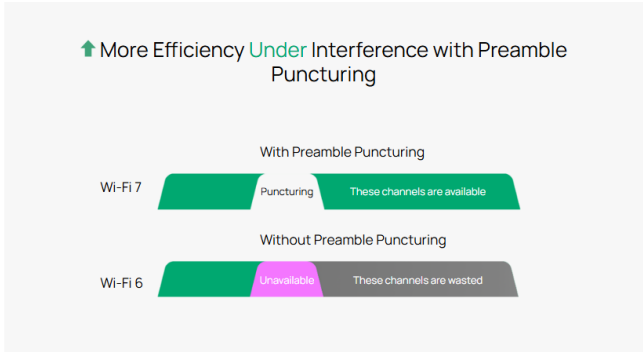
Wi-Fi 6 restricts each user to a single resource unit (RU), limiting spectrum flexibility. Wi-Fi 7 overcomes this limitation by allowing multiple RUs to be allocated to a single user and enabling RU aggregation, improving data throughput and spectral efficiency.



The new 6 GHz band offers a larger spectrum and cleaner channels compared to traditional bands, delivering higher capacity, faster connectivity, and less interference.



4096-QAM enables each symbol to carry 12 bits instead of 10, increasing theoretical transmission rates by 20% compared to Wi-Fi 6's 1024-QAM. This higher transmission rate boosts data throughput, delivering enhanced speeds and improved network reliability.



Preamble puncturing identifies and excludes interference-affected subcarriers, reducing spectral waste and boosting efficiency in challenging wireless conditions.

True Tri-Band Omnidirectional Coverage, 6G Band First Unlocked by AFC

The 6 GHz band, enabled by AFC compliance, provides cleaner spectrum resources and reduced signal interference, allowing the EAP772-Outdoor to deliver true tri-band omnidirectional coverage, critical for reliable connectivity in crowded outdoor settings. Users can enjoy uninterrupted outdoor connectivity, even using bandwidth-intensive applications like 4K/8K gaming, live streaming, and real-time data transfers.

For more details on AFC, please visit: https://www.omadanetworks.com/support/faq/4373/

Industry-Leading IP68 Weatherproof Design for Extreme Conditions

The IP68-rated enclosure offers complete dustproof protection and effectively prevents damage from water immersion in water deeper than five feet for more than 30 minutes, allowing it to withstand harsh environments such as heavy rain, strong winds, and humid conditions. Additionally, an extended temperature tolerance of -30°C to 70°C makes it ideal for extremely hot and cold environments.

Professional Hardware Architecture

The EAP772-Outdoor features a 2.5G port for greater bandwidth, supporting high-HD video streaming and online gaming. With 802.3at PoE support, there's no need for more wiring. Plug it into the existing Ethernet cables, and you're ready.

Dual-Polarized 2.4 GHz Antennas, Better Anti-Interference Performance

Equipped with dual-polarized 2.4 GHz antennas, the EAP772-Outdoor brings enhanced anti-interference capabilities. Users can easily switch between vertical and horizontal antenna polarization to avoid interference in different outdoor scenarios through the Omada controllers. This design maximizes signal stability in complex outdoor layouts, even in urban areas with strong base station interference.

GPS—Know Your Devices Anywhere

See at a glance the location of access points in outdoor scenarios on a GPS map via the Omada controllers*, enabling easy management visualization.
* Omada Cloud Standard and on-premises Omada controllers version 5.15.24 and above support the GPS Map.

Easy and Quick 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, the EAP772-Outdoor works harmoniously 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	6 GHz: IEEE 802.11ax/be, 5 GHz: IEEE 802.11a/n/ac/ax/be, 2.4 GHz: IEEE 802.11b/g/n/ax/be		
802.11be	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 • 6 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 6.105 to 6.425 GHz U-NII-5 6.525 to 6.875 GHz U-NII-7 *Note: Country-Specific Restriction Apply
	Bandwidth	2.4 GHz: 20 MHz/40 MHz 5 GHz: 20 MHz/40 MHz/80 MHz/160 MHz 6 GHz: 20 MHz/40 MHz/80 MHz/160 MHz *Note: Country-Specific Restriction Apply	
	Wireless Data Rate	2.4 GHz + 5 GHz + 6 GHz:10777 Mbps • 2.4 GHz: 8.6 Mbps to 688 Mbps (MCS0-MCS13, NSS=1 to 2, EHT20/40) • 5 GHz: 8.6 Mbps to 4324 Mbps (MCS0-MCS13, NSS=1 to 2, EHT20/40/80/160/240) • 6 GHz: 8.6 Mbps to 5765 Mbps (MCS0-MCS13, NSS=1 to 2, EHT20/40/80/160/320)	
	Radio Technology	Uplink/downlink OFDMA (Orthogonal Frequency-Division Multiple Access)	
	Modulation Type	4096-QAM, 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	• Preamble Puncturing • BSS Coloring • Multi-Link Operation (MLO) • Maximal Ratio Combining (MRC) • Wi-Fi Protect Access 3 (WPA3)	• Dynamic Frequency Selection (DFS) • Cycle Delay Diversity (CDD) • Cycle Shift Diversity (CSD) • Space-Time Block Coding (STBC) • Low-Density Parity Check (LDPC)
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 • 6 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 5.925 to 6.425 GHz U-NII-5 6.525 to 6.875 GHz U-NII-7 *Note: Country-Specific Restriction Apply

Item	Description		
Bandwidth	2.4 GHz: 20 MHz/40 MHz 5 GHz: 20 MHz/40 MHz/80 MHz/160 MHz 6 GHz: 20 MHz/40 MHz/80 MHz/160 MHz *Note: Country-Specific Restriction Apply		
802.11ac	Wireless Data Rate	• 2.4 GHz: 8.6 Mbps to 573 Mbps (MCS0-MCS11, NSS=1 to 2, HE20/40) • 5 GHz: 8.6 Mbps to 2402 Mbps (MCS0-MCS11, NSS=1 to 2, HE20/40/80/160) • 6 GHz: 8.6 Mbps to 2402 Mbps (MCS0-MCS11, NSS=1 to 2, HE20/40/80/160) *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	• TWT (Target Wake Time) • MRC (Maximal Ratio Combining) • TxBF (Transmit Beamforming) • WPA3 (Wi-Fi Protect Access 3)	• Dynamic Frequency Selection (DFS) • Cycle Delay Diversity (CDD) • Cycle Shift Diversity (CSD) • STBC (Space-Time Block Coding) • LDPC (Low-Density Parity Check)
	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/80/160 MHz	
	Wireless Data	• 5 GHz: 8.6Mbps to 160 M Mbps (MCS0-MCS9, NSS=1 to 2, VHT20/40/80/160)	
	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)	• Cycle Delay Diversity (CDD) • Cycle Shift Diversity (CSD) • STBC (Space-Time Block Coding) • LDPC (Low-Density Parity Check)
		Hotspot 2.0	Yes

Item	Description		
802.11n	Spatial Streams	• 5 GHz: 2×2 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	20 MHz/40 MHz	
	Wireless Data	• 2.4 GHz: 8.6Mbps to 300 Mbps (MCS0-MCS7, NSS=1 to 2, HT20/40) • 5 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, 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) • DFS (Dynamic Frequency Selection)	• Cycle Delay Diversity (CDD) • Cycle Shift Diversity (CSD) • STBC (Space-Time Block Coding) • LDPC (Low-Density Parity Check)
Antenna	Wi-Fi	• 2.4 GHz: 2 × 4 dBi (peak gain), internal omnidirectional antennas • 5 GHz: 2 × 6 dBi (peak gain), internal omnidirectional antennas • 6 GHz: 2 × 6 dBi (peak gain), internal omnidirectional antennas *Note: The gains above are the single-antenna peak gains.	
	IoT	• Bluetooth: 1 × 3 dBi (peak gain), internal omnidirectional antennas	
	GNSS	1 × 3dBi (peak gain), integrated omnidirectional antennas	
Interface	• 1 x 10M/100M/1000M/2.5Gbps Multigigabit Ethernet Port (RJ45): PoE in • 1 x Grounding Terminal		
IoT	BLE 5.2, 1Mbps		
GNSS	GPS (L1: 1574.2MHz), Galileo, GLOANASS, BDS (B1)		
Concurrent Clients	256		
Memory	Flash: 128Mbit DRAM: 8192Mbit		

Item	Description	
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 front: • Power-on Status • Firmware initialization or upgrade status • Uplink service status • Error status	
Reliability	MTBF (Mean Time between Failure)	- hours at the operating temperature of 25 °C (77 °F)
Power Supply	Input	802.3at PoE+: 42.5 - 57 V=0.6A
	Output	No
Power Consumption	• 802.3at (PoE+): 23w, 2.4GHz radio 2×2, 5GHz radio 2×2, 6GHz radio 2×2, wired link rate can be up to 2.5 Gbps, etc. • Idle mode: 8W(PoE)	
Surge/Lightning Protection	Ethernet Ports: ±6 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 transit Power	CE (EIRP) • 2.4 GHz: 20 dBm • 5 GHz: 23 dBm in U-NII-1, 23 dBm in U-NII-2A, 28 dBm in U-NII-2C, • 6 GHz: 23 dBm FCC (Conducted Power) • 2.4 GHz: 25 dBm • 5 GHz: 25 dBm in U-NII-1, 25 dBm in U-NII-2A, 25 dBm in U-NII-2C, 25 dBm in U-NII-3 • 6 GHz: 25 dBm *Note: MIMO combined power, excluding antenna gains. The actual transmit power depends on local laws and regulations.
	Minimum transit Power	CE (EIRP) • 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, 7 dBm in U-NII-3 • 6 GHz: 23 dBm FCC (Conducted Power) • 2.4 GHz: 4 dBm • 5 GHz: 4 dBm in U-NII-1, 4 dBm in U-NII-2A, 4 dBm in U-NII-2C, 4 dBm in U-NII-3 • 6 GHz: 4 dBm *Note: MIMO combined power, excluding antenna gains. The actual transmit power depends on local laws and regulations.
	Adjustable power increment	1 dBM

Item	Description	
Environment	Temperature	• Operating: -40°C to 70°C (-40°F to 158°F) • Storage: -30°C to 70°C (-22°F to 158°F)
	Humidity	• Operating: 10% to 90% (non-condensing) • Storage: 5% to 90% (non-condensing)
	Altitude	• Storage: up to + 2000m (6561feet) • Operating: up to 90% 2000m (6561feet)
	Windproof	Class 16
	Weatherproof Enclosure	IP68
Unit	Dimensions (W×D×H)	• Main Unit: 230×207.5×69.7 mm (9.06 in. x 8.17 in. x 2.74 in.) • Shipping Unit: 324×104×245 mm (12.76 in. x 4.09 in. x 9.65 in.)
	Weight	• Main Unit: 1.41 kg (3.11 lbs) • Mounting Bracket: 0.048 kg (0.11 lbs) • Shipping Unit: 1.83 kg (4.1 lbs)
	Mounting	• Pole Mount (Kits included) • Wall Mount (Kits included)

Software Specifications

Item	Description	
Wireless Functions	Maximum number of BSSIDs	24 (8 on each band)
	Maximum number of associated STAs	380+
	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	Yes
	WLAN Optimization	Yes

Item	Description	
Wireless Functions	WIDS/WIPS	No
	Lock to AP	Yes
	Rate Limit	• SSID Rate Limit • Client Rame Limit
	Load Balance	• Maximum Associated Clients • RSSI Threshold
	MLO	• 2.4 GHz+5 GHz • 2.4 GHz+6 GHz • 5 GHz+6 GHz • 2.4 GHz+5 GHz+6 GHz
	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	
	802.1X Authentication	
	MAC-Based Authentication	
	• None • Enhanced Open • WPA/WPA2/WPA3-Personal • WPA/WPA2/WPA3-Enterprise	

Item	Description	
Security and Authentication	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 LDAP 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
	Omada Controller	• Omada Controller V5.15.24 and above • Omada Essential V5.15.24 and above
	App	Omada App V4.20 and above
	Standalone Management	Yes
	Standalone Mesh	No
	SSH	Yes
	SNMP	v1, v2c, v3
Operating Modes	AP	Yes
	Repeater	Yes
	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	
	Tool	• Ping / Traceroute / DNSLookup / ARP Table • Packet Capture • Terminal	
	IEEE Standards	• IEEE 802.11a/b/g/n/ac/ax/be • IEEE 802.11e/i/k/v/r • IEEE 802.1x/q	• IEEE 802.3at • IEEE 802.3ab • IEEE 802.3bz • IEEE 802.3x

Standards Compliance and Certifications

Item	Description		
	IEEE Standards	• IEEE 802.11a/b/g/n/ac/ax/be • IEEE 802.11e/i/k/v/r • IEEE 802.1x/q	• IEEE 802.3at • IEEE 802.3ab • IEEE 802.3bz • IEEE 802.3x
Standards compliance	Radio Standards	• ETSI EN 300 328 • ETSI EN 301 893 • EN 303 413 • EN 303 687	• EN 50385 E50665 EN IEC 62311 • FCC Part 15E • RSS-247, RSS-GEN • LP0002
	EMC Standards	• EN 55032 • EN 55035 • EN 301489-1 • EN 301489-17	• EN 301489-19 • 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	
	Others	• Preamble Puncturing • BSS Coloring • Multi-Link Operation (MLO) • Maximal Ratio Combining (MRC) • Wi-Fi Protect Access 3 (WPA3)	• Dynamic Frequency Selection (DFS) • Cycle Delay Diversity (CDD) • Cycle Shift Diversity (CSD) • Space-Time Block Coding (STBC) • Low-Density Parity Check (LDPC)
Certifications	• Wi-Fi Alliance: Wi-Fi 7 (R1), Wi-Fi 6 (R2), Wi-Fi 6E, WPA3-R3, WPA3-Suite B, Enhanced Open Security • FCC/CE/NCC/VCCI/JRF/BSMI		

RF Performance

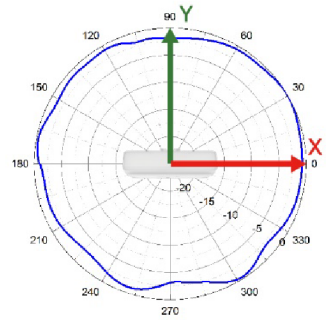
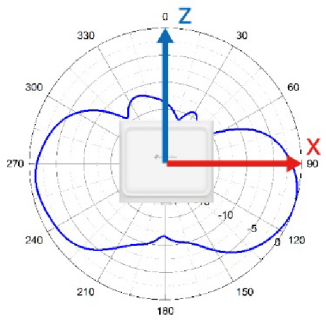
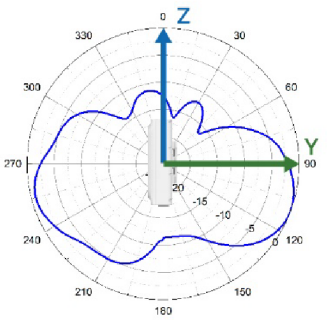
Frequency Band	Wi-Fi Protocol & Bandwidth	MCS Index / Data Rate	EU/US Maximum Transmit Power (dBm) per transmit chain	Receiver Sensitivity (dBm) per receive chain
2.4 GHz	802.11n, HT20	MCS0	15/22	-96
		MCS7	15/22	-78
	802.11n, HT40	MCS0	15/22	-93
		MCS7	15/22	-75
	802.11ax, HE20	MCS0	15/22	-96
		MCS11	15/20	-66
	802.11ax, HE40	MCS0	15/22	-93.0
		MCS11	15/20	-66.0
	802.11be, EHT20	MCS0	15/22	-96.0
		MCS13	15/19	NA
	802.11be, EHT40	MCS0	15/22	-93
		MCS13	15/19	NA
5 GHz	802.11n, HT20	MCS0	22/22	-95
		MCS7	20/20	-75.5
	802.11n, HT40	MCS0	22/22	-91.5
		MCS7	20/20	-72
	802.11ac, HT20	MCS0	22/22	-95.5
		MCS7	19/19	-76
	802.11ac, HT40	MCS0	22/22	-92.5
		MCS9	19/19	-67
	802.11ac, HT80	MCS0	22/22	-89.5
		MCS9	19/19	-64

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
5 GHz	802.11ax, HE20	MCS0	22/22	-95
		MCS11	18/18	-66
	802.11ax, HE40	MCS0	22/22	-92.5
		MCS11	18/18	-64.5
	802.11ax, HE80	MCS0	22/22	-89
		MCS11	18/18	-61
	802.11ax, HE160	MCS0	22/22	-88
		MCS11	18/18	-61
	802.11be, EHT20	MCS0	22/22	-96
		MCS13	18/18	-61
	802.11be, EHT40	MCS0	22/22	-93
		MCS13	18/18	-57
	802.11be, EHT80	MCS0	22/22	-89
		MCS13	18/18	-55
	802.11be, EHT160	MCS0	22/22	-87
		MCS13	18/18	-55
6 GHz	802.11ax, HE20	MCS0	17/22	-95
		MCS11	17/18	-65
	802.11ax, HE40	MCS0	17/22	-92
		MCS11	17/18	-64.5
	802.11ax, HE80	MCS0	17/22	-89
		MCS11	17/18	-60.5

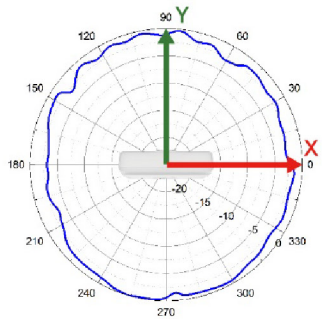
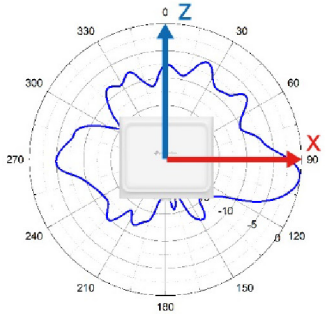
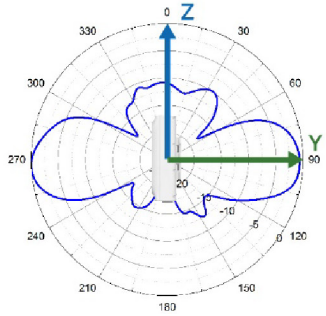
Frequency Band	Wi-Fi Protocol & Bandwidth	MCS Index / Data Rate	EU/US Maximum Transmit Power (dBm) per transmit chain	Receiver Sensitivity (dBm) per receive chain
6 GHz	802.11ax, HE160	MCS0	17/22	-87
		MCS11	17/18	-61
	802.11be, EHT20	MCS0	17/22	-95.0
		MCS13	17/18	-60.5
	802.11be, EHT40	MCS0	17/22	-91.5
		MCS11	17/18	-57
	802.11be, EHT80	MCS0	17/22	-89
		MCS11	17/18	-54
	802.11be, EHT160	MCS0	17/22	-86.5
		MCS11	17/17	-53.5
	802.11be, EHT320	MCS0	17/22	-82.5
		MCS11	16/16	-53.5

Antenna Radiation Patterns

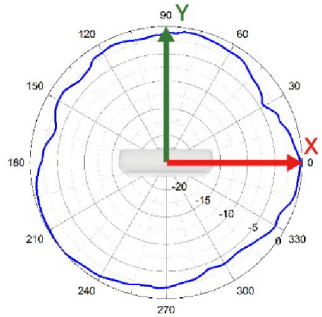
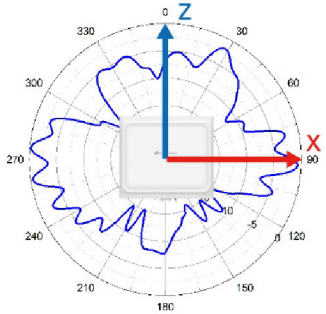
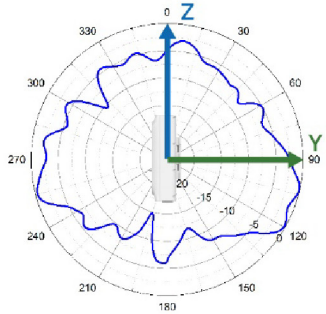
2.4 GHz

XY Plane	XZ Plane	YZ Plane
		

5 GHz

XY Plane	XZ Plane	YZ Plane
		

6 GHz

XY Plane	XZ Plane	YZ Plane
		

Package Contents

Item	Quantity
EAP772-Outdoor	1
Waterproof Kit	1 (See the picture below for details)
Mounting Kit	1 (See the picture below for details)
Installation Guide	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	2025-04-24	Initial release.

* Maximum wireless signal rates are the physical rates derived from IEEE Standard 802.11 specifications. The 320MHz bandwidth is only available on the 6 GHz band. Simultaneously, the 160 MHz and 240 MHz bandwidths or the 320 MHz bandwidth might not be available on the 5 GHz band or the 6 GHz band, respectively, in some regions/countries due to regulatory restrictions. 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.

* Use of Wi-Fi 7 (802.11be), Wi-Fi 6 (802.11ax), and features including Multi-Link Operation (MLO), 320 MHz Bandwidth, 4K-QAM, Multi-RUs, OFDMA, and MU-MIMO requires clients to also support the corresponding features.

* Omada Mesh, Seamless Roaming, Cloud Access, and Captive Portal require the use of Omada controllers. Go to the Omada Mesh Product List to find all the models supported by Omada mesh technology and refer to the User Guides of Omada Controllers for configuration methods.

* 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.

* Zero-Touch Provisioning requires the use of the Omada Cloud-Based Controller. The Omada Cloud-Based Controller offers the Essentials version of cloud services for free, while the Standard version, which includes advanced features, requires a license.

* PoE budget calculations are based on laboratory testing. Actual PoE power budget is not guaranteed and will vary as a result of client limitations and environmental factors.

* Protection against lightning and electro-static discharge may be achieved through proper product setup, grounding and cable shielding. Refer to the instruction manual and consult an IT professional to assist with setting up this product.

* 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.

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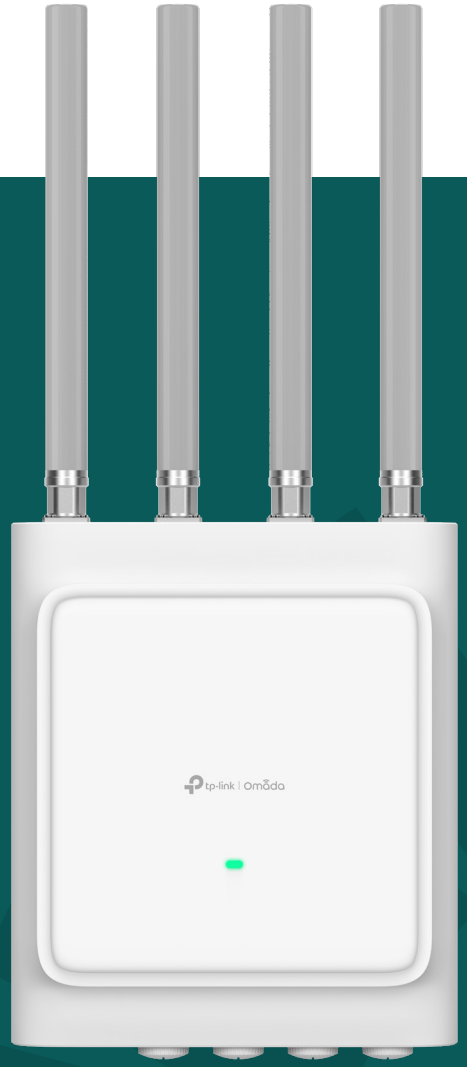
Omada by tp-link

Datasheet



EAP668-Outdoor

AX3600 Indoor/Outdoor
Wi-Fi 6 Access Point

Product Overview

Ultra-Fast 3.6 Gbps Wi-Fi 6 Speeds:
1148 Mbps on 2.4 GHz and 2402 Mbps on 5 GHz.*

High-Density Connectivity:
Supports up to 1,024 devices.*

Multiple Ports for Flexible Network Solutions:
1× 10G SFP+ slot, 1× 2.5G PoE-In port, and 1× Gigabit PoE-Out port.

PoE+/PoE++ Powered and PoE+ Out:
Supports 802.3at/bt PoE input and 802.3at PoE output.*

Ideal for Outdoor Environments:
IP68-rated weatherproof enclosure, ±4kV lightning protection, and a reliable operating range of -40 °C to +70 °C.

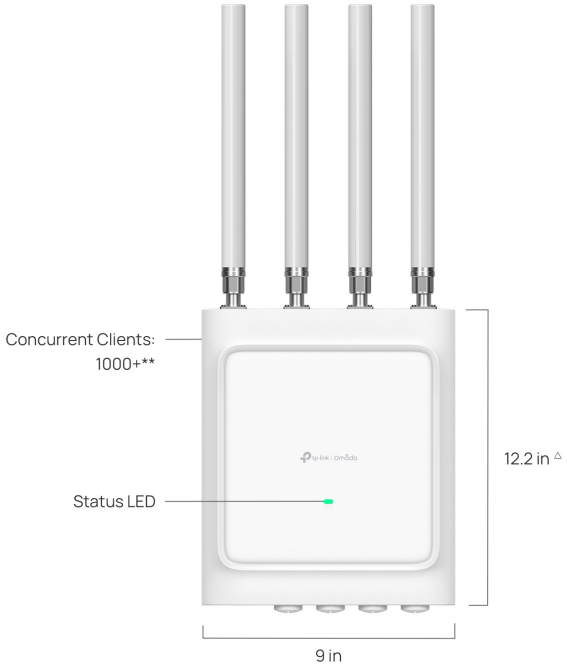
Advanced Features:
Omada Mesh, Seamless Roaming, Bluetooth, and Centralized Cloud Management.*

*Actual coverage is not guaranteed and will vary as a result of the performance of the equipped antennas, 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.

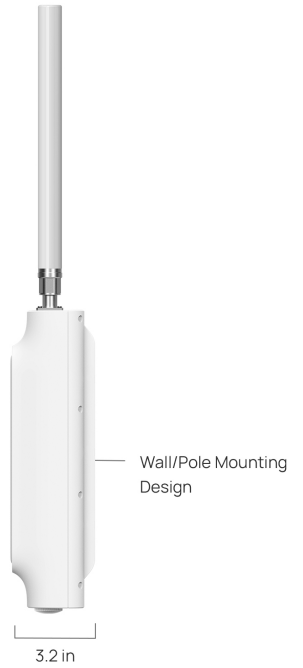
△Length does not include antenna, waterproof kit and mounting kit.

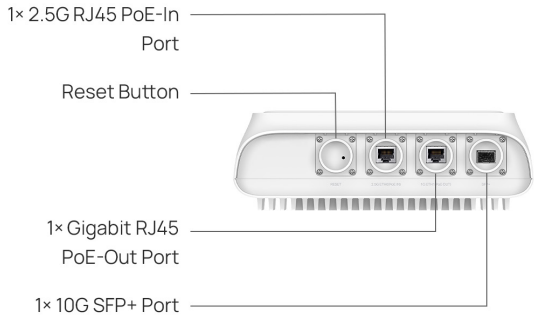
Front View





Side View

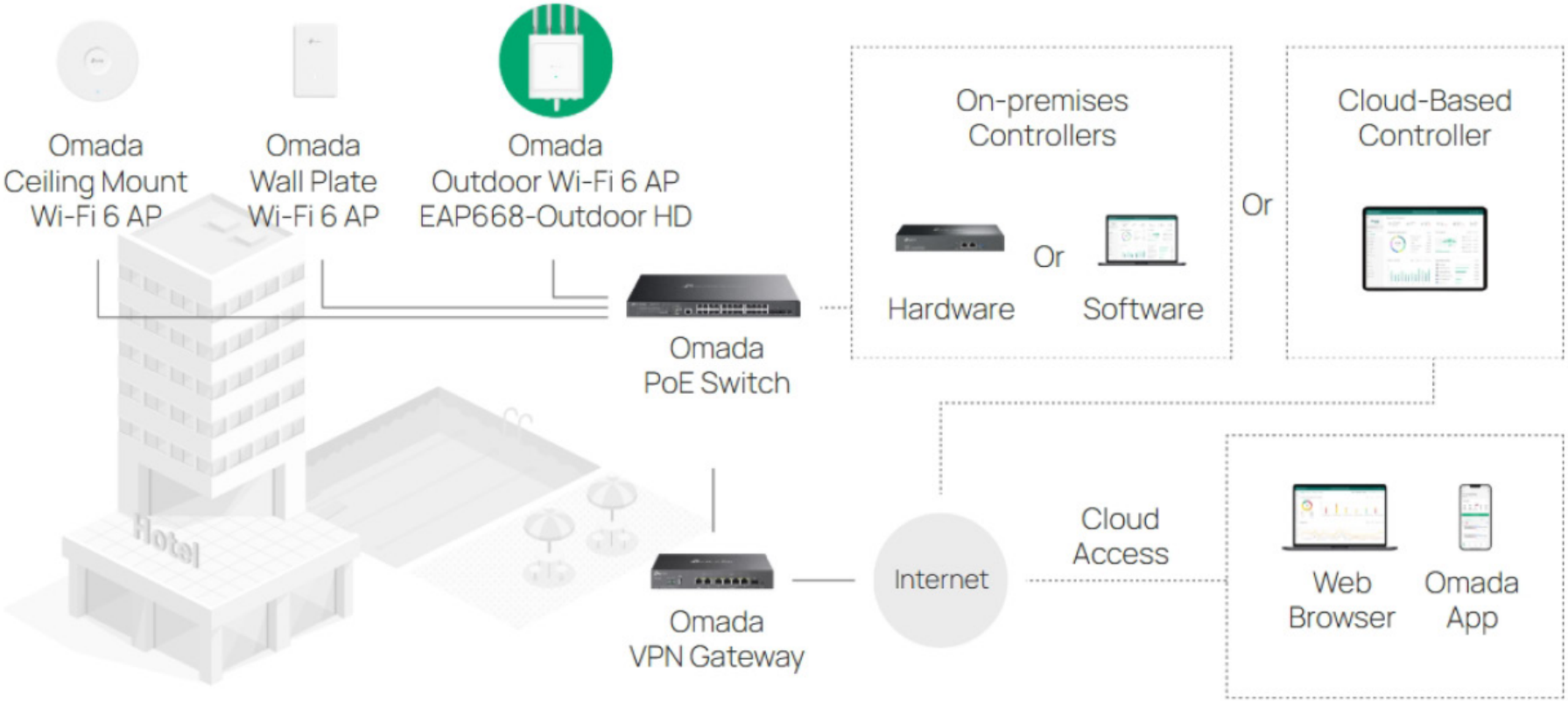




Omada Solution

Empowering Businesses with Reliable Omada SDN Solutions

Omadaâ€™s Software Defined Networking (SDN) platform integrates network devices, including access points, switches, and gateways, providing 100% centralized cloud management. Omada creates a highly scalable networkâ€”all controlled from a single interface.



Specifications

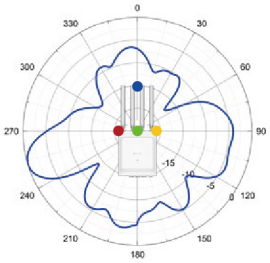
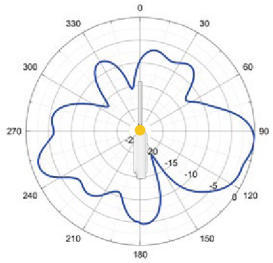
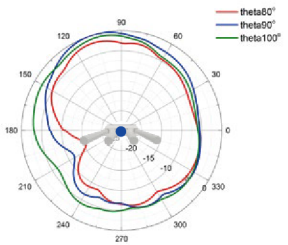
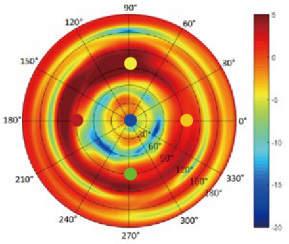
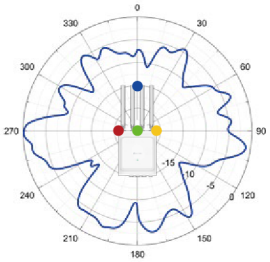
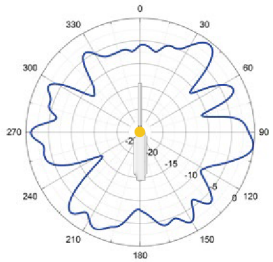
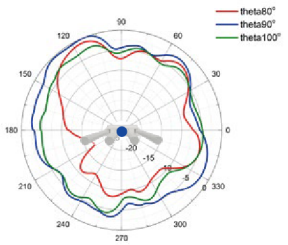
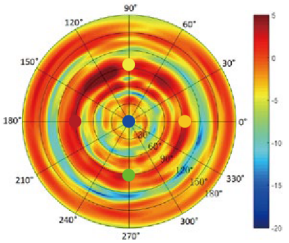
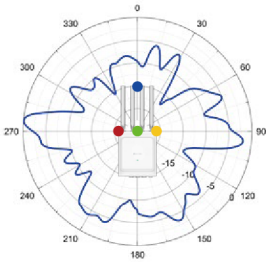
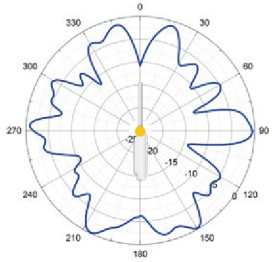
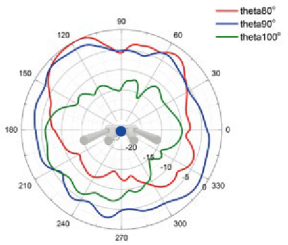
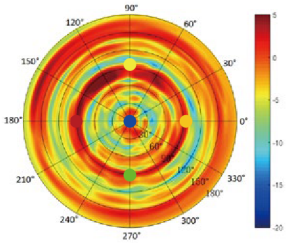
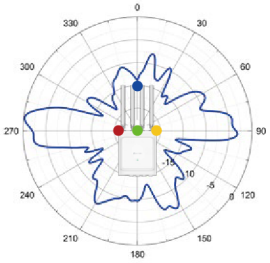
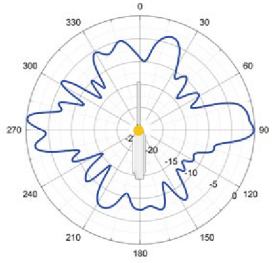
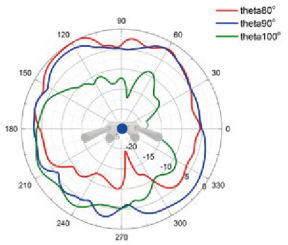
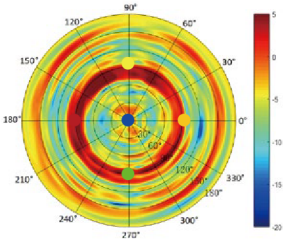
Item	Description	
Main Design	LAN Interfaces	1x 2.5G EthernetPort + 1x 1G EthernetPort + 1x10G SFP+
	Wi-Fi Standards	IEEE 802.11 a/b/g/n/ac/ax
	Maximum Data Rate	1148 Mbps (2.4 GHz) +2402 Mbps (5 GHz)
	Wireless Client Capacity	1000+
	Bluetooth	Supported
	LTE Filter	Yes
	Antennas	4× External Dual-Band Omni Antennas • 2.4 GHz: 6.0 dBi • 5 GHz: 6.0 dBi
	Transmit Power	CE: < 20 dBm (2.4 GHz, EIRP); < 23dBm (5 GHz, band1&band 2, EIRP); < 30 dBm (5 GHz,band 3, EIRP); FCC: < 29 dBm (2.4 GHz); < 28 dBm (5 GHz, Band1 & Band4) ; < 23 dBm (5 GHz, Band2 & Band3)
	Reception Sensitivity	2.4GHz: 11ax HE20 MCS0:-95dBm; 11ax HE20 MCS11:-66dBm 11ax HE40 MCS0:-93dBm; 11ax HE40 MCS11:-64dBm 5GHz: 11ax HE20 MCS0:-95dBm; 11ax HE20 MCS11:-65dBm 11ax HE40 MCS0:-92dBm; 11ax HE40 MCS11:-63dBm 11ax HE80 MCS0:-89dBm; 11ax HE80 MCS11:-60dBm
Centralized Management	Omada Software Controller	Yes
	Omada Hardware Controller	Yes
	Omada Cloud-based Controller	Yes
	Omada APP	Yes
Security	Captive Portal Authentication	Yes
	Access Control	Yes
	Maximum number of MAC Filter	4000
	Wireless Isolation between Clients	Yes
	VLAN	Yes
	Rogue AP Detection	Yes
	Wireless Encryption	WPA-Personal/Enterprise, WPA2-Personal/Enterprise, WPA3-Personal/Enterprise

Item	Description	
Wireless Function	Multiple SSIDs	16 (8 on each band)
	Channel	US: 2G:1 - 11; 5G: 36,40,44,48,52,56,60,64,100,104,108,112,116,120,124,128,132,136,140,149,153,157,161,165 EU: 2G:1 - 13; 5G: 36,40,44,48,52,56,60,64,100,104,108,112,116,120,124,128,132,136,140
	Enable/Disable Wireless Radio	Yes
	Enable/Disable SSID Broadcast	Yes
	Guest Network	Yes
	Automatic Channel Assignment	Yes
	Transmit Power Control	Adjust transmit Power on dBm
	QoS (WMM)	Yes
	Seamless Roaming	Yes
	Mesh	Yes
	Beamforming	Yes
	MU-MIMO	4x4 MU-MIMO DL/UL
	OFDMA	UL/DL OFDMA
	Rate Limit	Based on SSID/Client
	Load Balance	Yes
	Airtime Fairness	Yes
	Band Steering	Yes
	RADIUS Accounting	Yes
	MAC Authentication	Yes
	Reboot Schedule	Yes
	Wireless Schedule	Yes
	Wireless Statistics	Yes
	Static IP/Dynamic IP	Yes

Item	Description			
Wireless Function	802.11ax	8 Mbps to 2402 Mbps (MCS0-MCS11, NSS = 1 to 4 HE20/40/80)		
	802.11ac	6.5 Mbps to 1733 Mbps (MCS0-MCS9, NSS = 1 to 4 VHT20/40/80)		
	802.11n	6.5 Mbps to 300 Mbps (MCS0-MCS15, HT20/40)		
	802.11g	6, 9, 12, 18, 24, 36, 48 ,54 Mbps		
	802.11b	1, 2, 5.5, 11 Mbps		
	802.11a	6, 9, 12, 18, 24, 36, 48 ,54 Mbps		
Management	LED ON/OFF Control	Yes		
	Management MAC Access Control	Yes		
	Web-based Management	Yes		
	SNMP	v1, v2c, v3		
	SSH	Yes		
	Restore & Backup	Yes		
	Firmware update via Web	Yes		
	NTP	Yes		
	System Log	Yes		
	Email Alerts	Yes		
Physical & Environment	Power Supply	802.3at/bt PoE		
	Maximum Power Consumption	Mode	Power Consumption	System Configuration	Wi-Fi Radios
		802.3bt	EU:20.2W US: 25.4W	bt type3: af PSE out bt type4: at PSE out	4×4
		802.3at	EU:20.2W US: 25.4W	PSE disabled	4×4
		Note: PoE out power not included.			
	Reset	Yes			
	Mounting	Wall/Pole mouting (Kits included) Supports horizontal ±45° adjustment Optional bracket accessory APM-110: Supports vertical ±90°, horizontal ±45° adjustment Optional bracket accessory APM-100: Supports vertical ±45° , horizontal ±45° adjustment Note: Optional bracket accessories need to be purchased separately. The actual adjustment angle may be affected by the product antenna and installation position.			
Others	Hotspot 2.0	Yes			

Item	Description	
Others	Certifications	CE, FCC, RoHS
	Dimensions (W x D x H)	312 x 240 x 80mm (excluding antennas, waterproofing kit, and mounting kit)
	Net Weight	2.7kg
	Enclosure Material / Rack Material	Top Cover: PC+GF10% Bottom Shell: Aluminum alloy Mounting rack: SGCC
	Lightning Protection	±4kV
	Hotspot 2.0	Yes
Management	Environment	Operating Temperature: -40 °C–70 °C (-40 °F–158 °F); Storage Temperature: -40 °C–70 °C (-40 °F–158 °F); Operating Humidity: 10%–90% non-condensing; Storage Humidity: 5%–90% non-condensing;

Antenna Radiation Patterns

	Elevation-0°	Elevation-90°	Azimuth	Mapped 3D
2.45 GHz				
5.25 GHz				
5.5 GHz				
5.75 GHz				

Disclaimers

* Maximum wireless transmission rates are the physical rates derived from IEEE Standard 802.11 specifications. Range, coverage, and maximum quantity of connected devices are based on test results under normal usage conditions. Actual wireless data throughput, wireless coverage, and quantity of connected devices 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.

* The advertised coverage is calculated based on laboratory testing. Actual coverage is not guaranteed and will vary as a result of the performance of the equipped antennas, 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, Cloud Access, and Captive Portal require the use of Omada SDN controllers. Go to Omada Mesh Product List to find all the models supported by Omada mesh technology, and refer to the User Guides for Omada SDN Controllers for configuration methods.

* Protection against lightning and electro-static discharge may be achieved through proper product setup, grounding and cable shielding. Refer to the instruction manual and consult an IT professional to assist with setting up this product.

* Actual network speed may be limited by the rate of the product's Ethernet WAN or LAN port, the rate supported by the network cable, Internet service provider factors and other environmental conditions.

* PoE budget calculations are based on laboratory testing. Actual PoE power budget is not guaranteed and will vary as a result of client limitations and environmental factors.

* MU-MIMO capability requires client devices that also support MU-MIMO.

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Datasheet

EAP650-Outdoor

Omada Omnidirectional
AX3000 Wi-Fi 6 Indoor/Outdoor
Access Point



Product Overview

EAP650-Outdoor is an Omada Omnidirectional AX3000 Wi-Fi 6 Indoor/Outdoor Access Point, providing reliable and stable outdoor network connections. It is suitable for outdoor scenarios such as yards, swimming pools, and parks.

Dual-Band 4-Stream Wi-Fi:
Up to 3.0 Gbps†

Long-Range Omnidirectional Coverage:
Features dual-band antennas with MU-MIMO technology, delivering extended coverage up to 984 ft (300 m²)‡

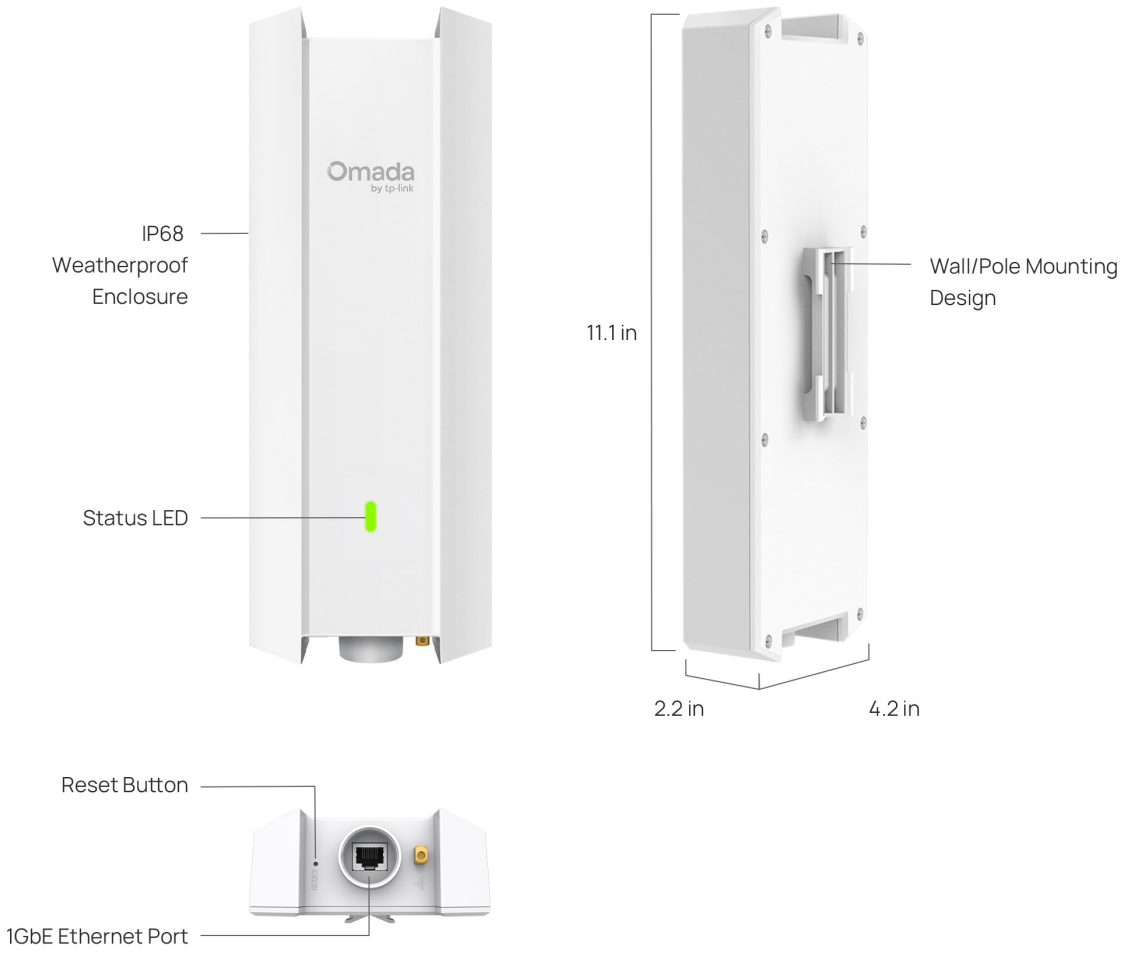
Outdoor-Ready Durability:
Features an IP68-rated weatherproof enclosure and 6 kV lightning protection

Flexible Deployment with PoE Support:
1× Gigabit PoE+ port reduces costs by delivering power and data over a single Ethernet cable

Easy and Quick Setup:
Features wall/pole mounting with Omada SDN for one-click setup

Advanced Features:
Centralized management, mesh, and seamless roaming

Front View	Side View



Feature Descriptions

Omada Wi-Fi 6 Technology*

Wi-Fi 6 (802.11ax) delivers 8×8 UL/DL MU-MIMO, OFDMA, 1024-QAM, and a 4× longer OFDMA symbol that extends coverage while improving data transmission speeds by 11% compared to Wi-Fi 5- making it the ideal solution for high-performance, high-density wireless networks.



HE160



1024 QAM



MU-MIMO



OFDMA

Long-Range Omnidirectional Coverage

Internal antennas equipped with high-power amplifiers utilize Wi-Fi 6 technology to provide strong and expansive wireless coverage to various outdoor environments, delivering extended coverage up to 656 ft (200 m) over 2.4 GHz and 984 ft (300 m^2) over 5 GHz.

Outdoor-Ready Design for Extreme Conditions

EAP650-Outdoor offers complete dustproof protection and the ability to withstand prolonged submersion in water. It supports IP68 weatherproof and 6 kV lightning protection. Additionally, an extended temperature tolerance of -30 °C to 70 °C makes it ideal for extremely hot and cold environments.

Flexible Deployment with PoE Support

1× Gigabit PoE+ port delivers both power and data through a single cable, cutting deployment costs and outdoor wiring complexity. Works with standard PoE+ switches or the included passive PoE adapter for flexible installation.

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, EAP650-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 switching clients automatically to the access points with the optimal signal.

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/160 MHz *Note: Country-Specific Restriction Apply	
	Wireless Data Rate	• 2.4 GHz: 8.6 Mbps to 573 Mbps (MCS0-MCS11, NSS=1 to 2, HE20/40) • 5 GHz: 8.6 Mbps to 2402 Mbps (MCS0-MCS11, NSS=1 to 2, HE20/40/80/160) *Note: Country-Specific Restriction Apply	
	Radio Technology	UUplink/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	• TWT (Target Wake Time) • MRC (Maximal Ratio Combining) • TxBF (Transmit Beamforming) • DFS (Dynamic Frequency Selection)	• Cycle Delay Diversity (CDD) • Cycle Shift Diversity (CSD) • Space-Time Block Coding (STBC) • Low-Density Parity Check (LDPC)
802.11ac	Spatial Streams	• 5 GHz: 2×2 Uplink/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/160 MHz	
	Wireless Data Rate	• 5 GHz: 6.5 Mbps to 1733M Mbps (MCS0-MCS9, NSS=1 to 2, VHT20/40/80/160)	
	Radio Technology	OFDM (Orthogonal Frequency-Division Multiplexing)	

Item	Description		
802.11ac	Modulation Type	256-QAM. 64-QAM, 16-QAM, QPSK, BPSK	
	Modulation Type	• 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) 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	• 2.4 GHz: 6.5 Mbps to 300 Mbps (MCS0-MCS7, NSS=1 to 2, HT20/40) • 5 GHz: 6.5 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, 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) • DFS (Dynamic Frequency Selection)	• Cycle Delay Diversity (CDD) • Cycle Shift Diversity (CSD) • STBC (Space-Time Block Coding) • LDPC (Low-Density Parity Check)
Antenna	Wi-Fi	• 2.4 GHz: 2 × 4 dBi (peak gain), internal omnidirectional antennas • 5 GHz: 2 × 6 dBi (peak gain), internal omnidirectional antennas *Note: The gains above are the single-antenna peak gains.	
Interface	• 1 x 10M/100M/1000M Ethernet Port (RJ45): PoE in • 1 x Grounding Terminal		
Memory	Flash: 1024 Mbit DRAM: 4096 Mbit*1		
Button	1 × Reset button: Press the button for longer than 5 seconds to make the device restore to factory settings.		

Item	Description	
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 front: • Power-on Status • Firmware initialization or upgrade status • Uplink service status • Error status	
Reliability	MTBF (Mean Time between Failure)	CE • 508000 hours at the operating temperature of 25°C (77 °F) • 299000 hours at the operating temperature of 40 °C (104 °F) CE • 436298 hours at the operating temperature of 25°C (77 °F) • 249274 hours at the operating temperature of 40 °C (104 °F)
Power Supply	Input	802.3at PoE+: 42.5 - 57 V=0.6A
	Output	No
Power Consumption	• 802.3at (PoE+): 14.7 W, 2.4GHz radio 2×2, 5GHz radio 2×2, wired link rate can be up to 1 Gbps, etc. • Idle mode: 8W(PoE)	
Surge/Lightning Protection	Ethernet Ports: ±6 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 transit Power	CE (EIRP) • 2.4 GHz: 20 dBm • 5 GHz: 23 dBm in U-NII-1, 23 dBm in U-NII-2A, 28 dBm in U-NII-2C, FCC (Conducted Power) • 2.4 GHz: 25 dBm • 5 GHz: 25 dBm in U-NII-1, 25 dBm in U-NII-2A, 25 dBm in U-NII- 2C, 25 dBm in U-NII-3 *Note: MIMO combined power, excluding antenna gains. The actual transmit power depends on local laws and regulations.
	Minimum transit Power	CE (EIRP) • 2.4 GHz: 20 dBm • 5 GHz: 23 dBm in U-NII-1, 23 dBm in U-NII-2A, 28 dBm in U-NII-2C, FCC (Conducted Power) • 2.4 GHz: 25 dBm • 5 GHz: 25 dBm in U-NII-1, 25 dBm in U-NII-2A, 25 dBm in U-NII-2C, 25 dBm in U-NII-3 *Note: MIMO combined power, excluding antenna gains. The actual transmit power depends on local laws and regulations.
	Adjustable power increment	1 dBm

Item	Description	
Environment	Temperature	• Operating: -30°C to 70°C (-22°F to 158°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 + 2000m (6561feet) • Operating: up to + 2000m (6561feet)
	Windproof	No
	Weatherproof Enclosure	IP68
Unit	Dimensions (W×D×H)	• Main Unit: 280.4*106.5*56.8 mm (11.04 in. x 4.35 in. x 2.24 in.) • Shipping Unit: 325*241*67 mm (12.80 in. x 9.49 in. x 2.64 in.)
	Weight	• Main Unit: 0.81 kg (1.79 lbs) • Mounting Bracket: 0.09 kg (0.20 lbs) • Shipping Unit: 1.41kg (3.11 lbs)
	Mounting	• Pole Mount (Kits included) • Wall Mount (Kits included)
Others	Hotspot 2.0	Yes

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	Yes
	WLAN Optimization	Yes
	WIDS/WIPS	No
	Lock to AP	Yes

Item	Description	
	Rate Limit	• SSID Rate Limit • Client Rame Limit
	Load Balance	• Maximum Associated Clients • RSSI Threshold
	MLO	• No
	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	
	802.1X Authentication	
	MAC-Based Authentication	
	• None • Enhanced Open • WPA/WPA2/WPA3-Personal • WPA/WPA2/WPA3-Enterprise	
	• 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 LDAP Server • External Portal Server • Pre-Authentication Access • Authentication-Free Client

Item	Description	
Security and Authentication	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 and above • Omada Essential V5.15 and above
	App	Omada App V4.25 and above
	Standalone Management	Yes
	Standalone Mesh	No
	SSH	Yes
	SNMP	v1, v2c, v3
Operating Modes	AP	Yes
	Repeater	Yes
	Mesh	Yes
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

Item	Description	
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
	Tool	• Ping / Traceroute / DNSLookup • Packet Capture (Wired and Wireless/Over-the-air Packet Capture) • Terminal • Remote Speed Test

Standards Compliance and Certifications

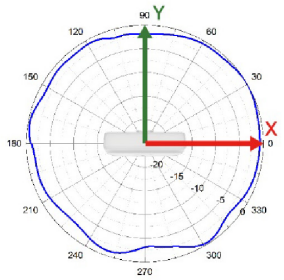
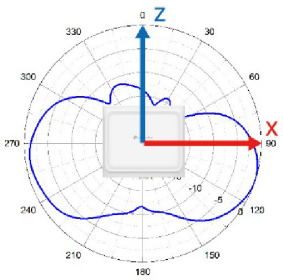
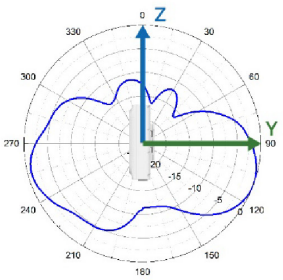
Item	Description		
	IEEE Standards	• IEEE 802.11a/b/g/n/ac/ax/be • IEEE 802.11e/i/k/v/r • IEEE 802.1x/q	• IEEE 802.3at • IEEE 802.3ab • IEEE 802.3x
Standards compliance	Radio Standards	• ETSI EN 300 328 • ETSI EN 301 893	• FCC Part 15E • RSS-247 Issue 3, RSS-GEN Issue 5 • LP0002
	EMC Standards	• EN 55032 • EN 55035 • EN 301489-1 • EN 301489-17 • EN 61000-3-3	• EN IEC 61000-3-2 • EN 60601-1-2:2015+A1:2021 • FCC Part 15B • ICES-003 Issue 7 • VCCI-CISPR 32:2016 • CNS 15936
	Safety Standards	• EN 62368-1 • IEC 62368-1 • CNS 15598-1	
	RoHS	• Directive 2011/65/EU, Directive (EU) 2015/863 • EN IEC 63000: 2018	
	Others	• Equipment Radio Regulations: 2008 (including amendments)	
Certifications	• FCC/CE/MIC,VCCI,ISED, BSMI, NCC		

RF Performance

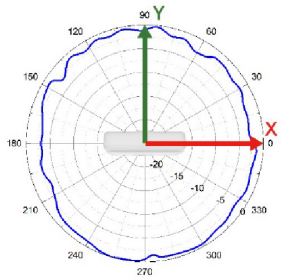
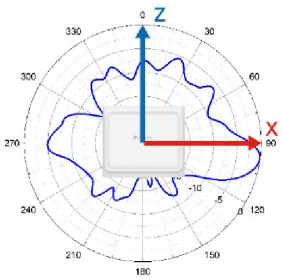
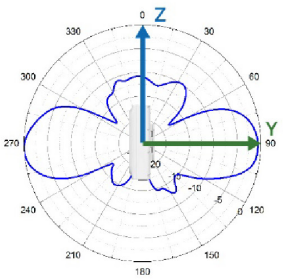
Frequency Band	Wi-Fi Protocol & Bandwidth	MCS Index / Data Rate	EU/US Maximum Transmit Power (dBm) per transmit chain	Receiver Sensitivity (dBm) per receive chain
2.4 GHz	802.11n, HT20	MCS0	15/22	-96.0
		MCS7	15/19	-76.5
	802.11n, HT40	MCS0	15/22	-92.5
		MCS7	15/19	-73.0
	802.11ax, HE20	MCS0	15/22	-96.5
		MCS11	15/18	-65.5
	802.11ax, HE40	MCS0	15/19	-93.5
		MCS11	15/18	-62.5
5 GHz	802.11n, HT20	MCS0	22/22	-96.0
		MCS7	19/19	-75.5
	802.11n, HT40	MCS0	22/22	-92.5
		MCS7	19/19	-72.5
	802.11ac, VHT20	MCS0	22/22	-96
		MCS9	18.5/18.5	-72.0
	802.11ac, VHT40	MCS0	22/22	-89.5
		MCS9	18.5/18.5	-65.5
	802.11ac, VHT80	MCS0	22/22	-89.5
		MCS9	18.5/18.5	-65.5
	802.11ax, HE20	MCS0	22/22	-93.5
		MCS11	18/18	-66.0
	802.11ax, HE40	MCS0	22/22	-90.5
		MCS11	18/18	-63.0
	802.11ax, HE80	MCS0	22/22	-87.5
		MCS11	18/18	-60.5
	802.11ax, HE160	MCS0	22/19	-84.5
		MCS11	18/18	-57.5

Antenna Radiation Patterns

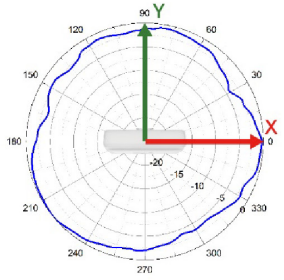
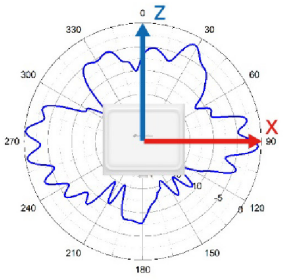
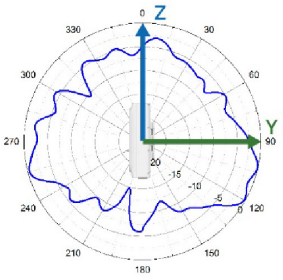
2.4 GHz

XY Plane	XZ Plane	YZ Plane
		

5 GHz

XY Plane	XZ Plane	YZ Plane
		

6 GHz

XY Plane	XZ Plane	YZ Plane
		

Package Contents

Item	Quantity
EAP650-Outdoor	1
Passive PoE Adapter	1
Power Cord	1
Waterproof Kit	1
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	2026-01-16	Initial release.

Disclaimers

* 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 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.

* 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.

* Use of Wi-Fi 6 (802.11ax) and its features, including OFDMA, 1024-QAM, and more, requires clients to support the corresponding features.

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