tp-link | Omada

# Omada
# Business Cloud SDN Solution

**Omada EAP - Business Wi-Fi Series**

Omada SDN Controller

EAP683 LR

# Omada Solution

**Hospitality**

High Quality and Full Coverage Wi-Fi

**Education**

High-Density Wi-Fi

**Retail**

Social Marketing for O2O

**Office**

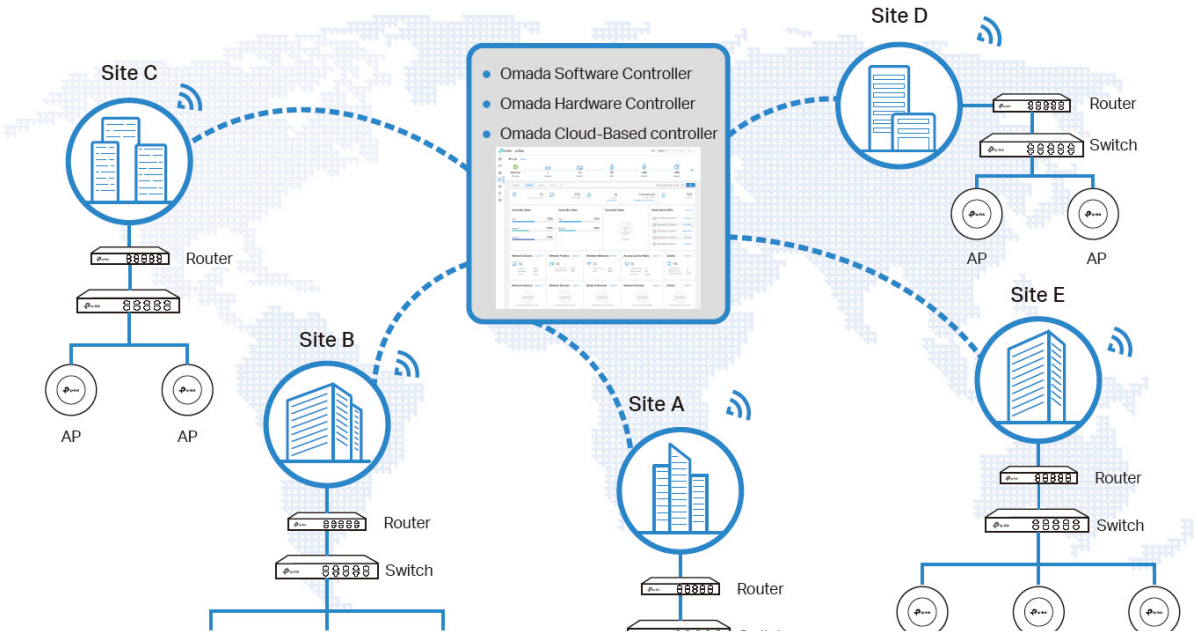
Wireless and Wired Connections

**Catering**

Full Wi-Fi Coverage in High-Density Environment

## Software Defined Networking (SDN) with Cloud Access

Omada Software Defined Networking (SDN) platform integrates network devices, including access points, switches and gateways, providing 100% centralized cloud management. Omada creates a highly scalable network——all controlled from a single interface. Seamless wireless and wired connections are provided, ideal for use in hospitality, education, retail, offices, and more.




**Higher Efficiency**

- Centralized Cloud Management
- Zero-Touch Provisioning
- AI-Driven Technology
- Auto Channel Selection and Power Adjustment
- Multi-Tenant Privilege Assignment
- Easy and Intelligent Monitoring

**Higher Security**

- Separate Management and User Data
- Abundant Security Functions

**Higher Reliability**

- 99.99% SLA Availability
- Reliable Connections with High-Density Clients

## Hassle-Free Centralized Cloud Management

100% centralized cloud management of the whole network from different sites——all controlled from a single interface anywhere, anytime.

- No additional training needed
- Unlimited scalability
- Batch management
- Devices still work even when not connected to the Cloud

## Zero-Touch Provisioning for Efficient Deployment*

Omada zero-touch provisioning allows remotely deployment and configuration of multi-site networks, so there's no need to send out an engineer for on-site configuration. The Omada Cloud ensures efficient deployment with lower costs.

* Zero-Touch Provisioning is supported when using Omada-Cloud Based Controller.

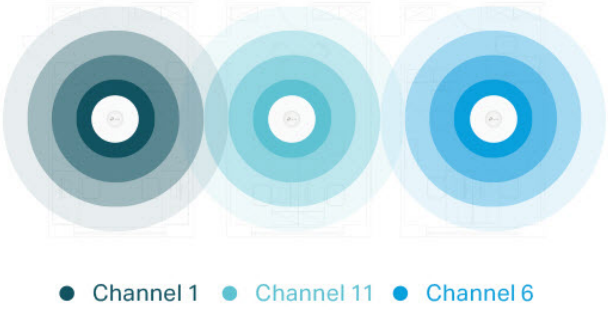
# AI-Driven Technology for Stronger Performance and Easy Network Maintenance

## Intelligent Network Analysis, Warning, and Optimization*

- Analyzes potential network problems and sends optimization suggestions for higher network efficiency
- Locates network faults, warns and notify users, and generates solutions to reduce network risk

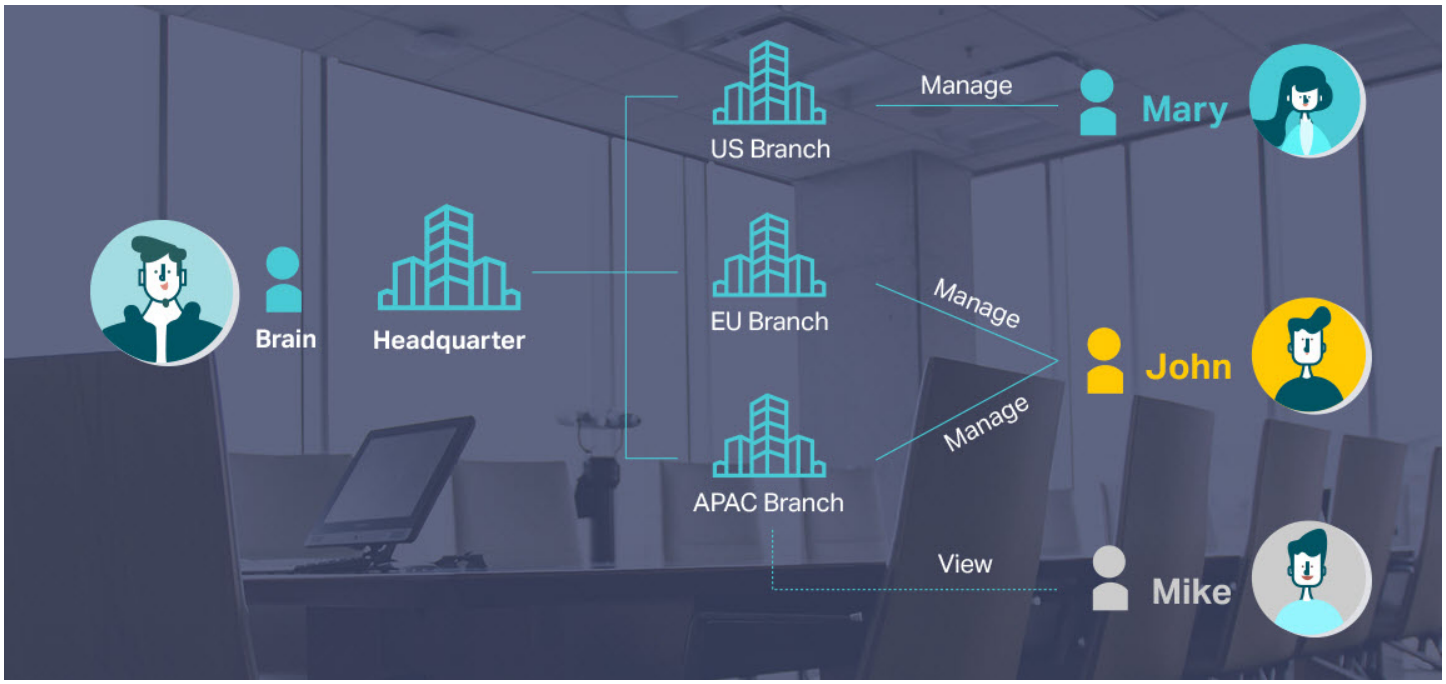
## Auto Channel Selection and Power Adjustment

Provides powerful wireless performance while greatly reducing Wi-Fi interference by automatically adjusting the channel settings and transmission power levels of neighboring APs in the same network.



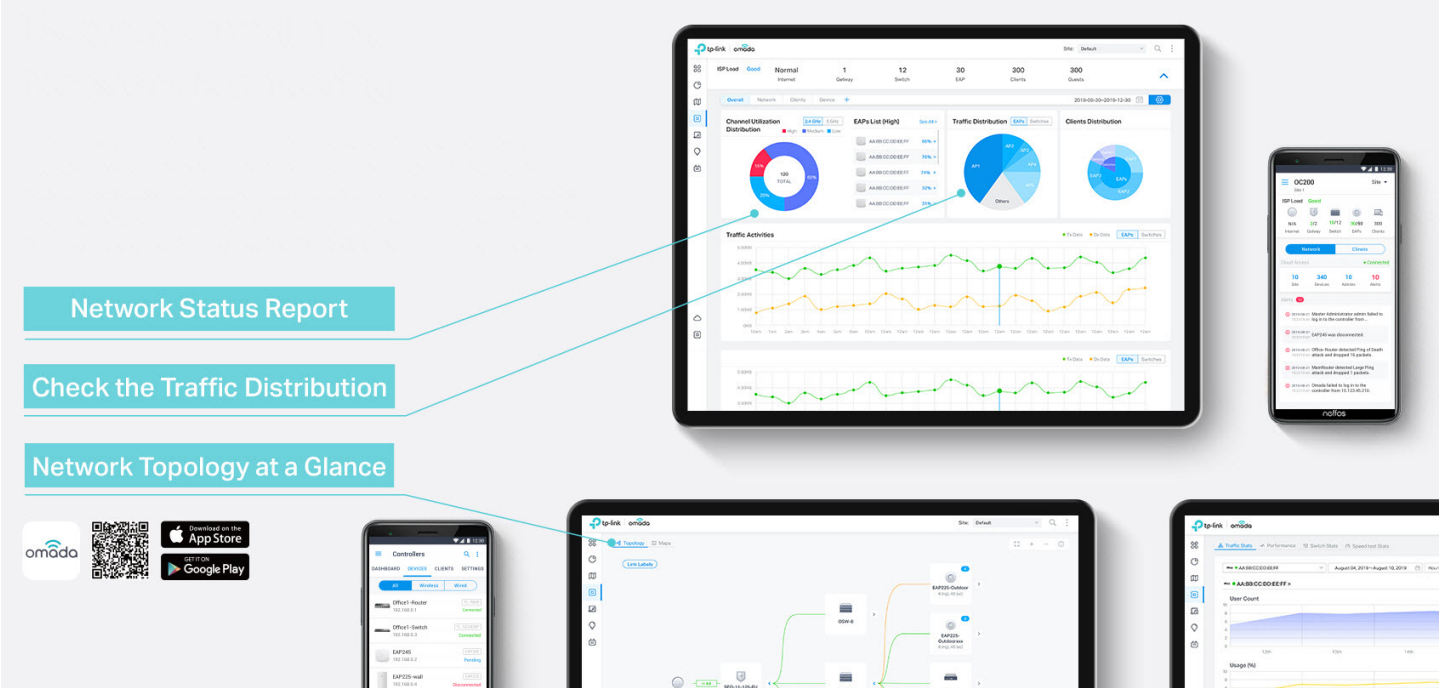

# Assign Different Management Roles

Multi-user privilege assignment is available to increase management efficiency and security. Multi-person management, multi-level permissions, and the ability to add admins as needed, enable flexible network operation and maintenance.



## Easy and Intelligent Network Monitoring

The easy-to-use dashboard makes it easy to see your real-time network status; check network usage and traffic distribution; receive network condition logs, abnormal event warnings, and notifications; or even track key data for better business results. Network topology helps IP admins quickly see and troubleshoot connection at a glance.




## Comprehensive Protection for the Whole Network

### Better Protection for Users' Privacy

TP-Link Omada separates network management data from user data, with no user traffic passing through the cloud, ensuring better protection for users' privacy.

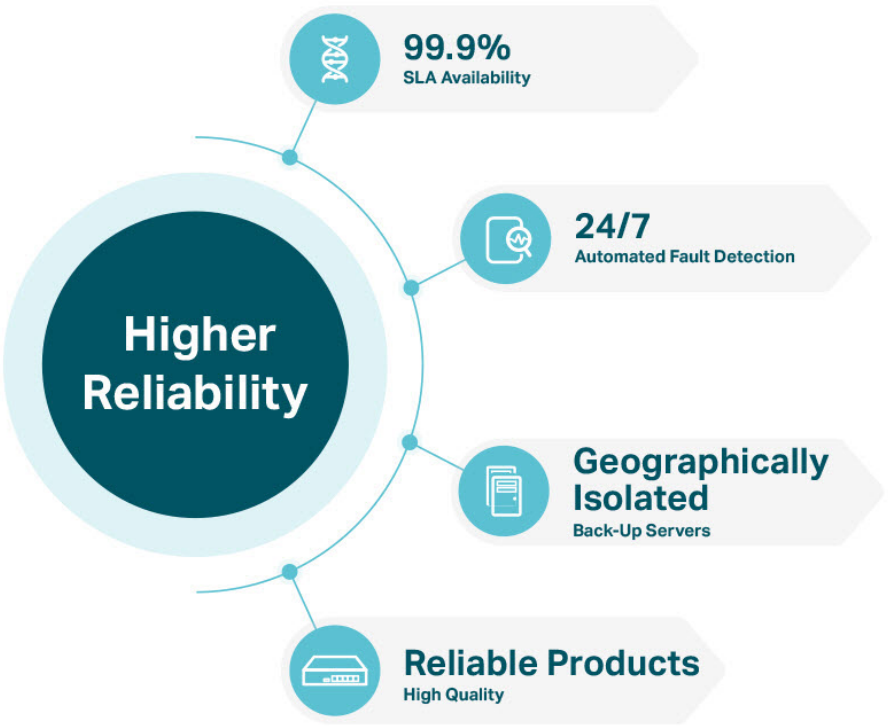
### Abundant Security Functions

Powerful firewall and advanced security functions further protect the network and data.

- High-Security VPN
- Powerful Firewall
- IP/MAC/URL Filtering
- Access Control
- Advanced WPA3 Encryption
- Captive Portal

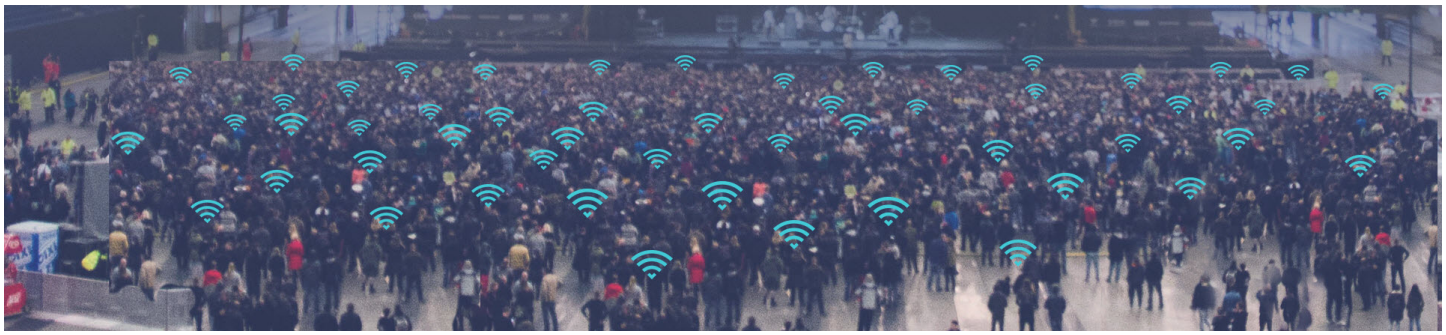
## Multiple Factors Guarantee Higher Reliability

Higher reliability of cloud service is guaranteed with 99.9% SLA availability, 24/7 automated fault detection, geographically isolated backup servers, and reliable product quality. Your network functions even if management traffic is interrupted.




## Reliable Connections Even with High-Density Clients

Equipped with enterprise chipsets, dedicated antennas, advanced RF functions, auto channel selection, and power adjustment, Omada APs have high concurrency capacities for remarkable performance in high-density environments.



# EAP Product Features

## Easy-Mount Design

The Ceiling Mount EAP's elegant appearance and easy-mount design promote fast installation on any wall or ceiling surface, and allow it to blend in seamlessly with most interior decorating styles. The slimline, inconspicuous Wall Plate EAP can be easily installed into any standard EU/US wall junction box or 86 mm wall junction box.

## PoE Power Supply*

With IEEE 802.3af/at/bt PoE or Passive PoE, you can use Ethernet cables to transfer both electrical power and network data, making deployment more flexible and removing the need to install additional power cabling.

## Business-Class Hardware Design

Enterprise-class chipsets offer outstanding performance and support longer running time, higher client capacity and greater range. Dedicated high-power amplifiers, specialized antennas and professionally designed RF shields ensure excellent wireless performance.

## Seamless Roaming*

802.11k and 802.11v seamless roaming provide seamless switching to the access point with optimal signal when moving between APs.

## Mesh*

Omada Mesh technology enables wireless connectivity between access points for extended range, making wireless deployments more flexible and convenient.

## Increased Efficiency with OFDMA*

The Wi-Fi 6 and above standards use OFDMA for more efficient channel use and reduced latency. Imagine your WiFi connection as a series of delivery trucks delivering data packets to your devices. With 802.11ac Wi-Fi, each delivery truck could only deliver one parcel to one device at a time. But with OFDMA, each truck can deliver multiple parcels to multiple devices simultaneously. This vast improvement in efficiency works for both uploads and downloads.

## Advanced RF Management

MU-MIMO, Airtime Fairness, Beamforming, and Band Steering Technologies guarantee optimal RF performance for business-level applications.

## Easy Centralized Management

Configure and monitor hundreds of Omada EAPs with ease using the Omada controller.

* PoE support varies by model. For detailed information, refer to the specifications.
* Only certain devices support Seamless Roaming. For detailed information, refer to the specifications.
* Only certain devices support Mesh. For detailed information, refer to the specifications.
* Only 802.11ax and 802.11be devices support OFDMA.

# EAP Product List

| Ceiling Mount Wi-Fi 6 AP | |
|---|---|
| Picture | |
| Model | EAP683 LR |
| Product | AX6000 Ceiling Mount Wi-Fi 6 Access Point |
| Speed | 2.4 GHz: 1148 Mbps, 5 GHz: 4804 Mbps |
| Ethernet Port | 1x 2.5Gbps Ethernet Port |
| Power Supply | 802.3at PoE or 12V/2A DC<br>DC Power Adapter Is Not Included |
| Internal Antennas | 2.4 GHz: 4 × 4.0 dBi, 5 GHz: 4 × 5.0 dBi |

# Specifications

| Ceiling Mount Wi-Fi 6 AP | | |
|---|---|---|
| Model | | EAP683 LR |
| Name | | AX6000 Ceiling Mount Wi-Fi 6 Access Point |
| Main Design | LAN Interfaces | 1x 2.5Gbps Ethernet Port |
| | Wi-Fi Standards | IEEE 802.11 a/b/g/n/ac/ax |
| | Maximum Data Rate | 2.4 GHz: 1148 Mbps, 5 GHz: 4804 Mbps |
| | Wireless Client Capacity | 2GHz: 256, 5GHz: 256 |
| | Antennas | 2.4 GHz: 4 × 4.0 dBi, 5 GHz: 4 × 5.0 dBi |
| | Transmit Power | CE: <20 dBm(2.4 GHz EIRP); <23dBm(5 GHz band 1 & band 2 EIRP); <28dBm(5 GHz band 3 EIRP)<br>FCC: <26 dBm(2.4 GHz); <26dBm(5 GHz) |
| | Reception Sensitivity | 2.4GHz:<br>11ax HE20 MCS0:-95dBm;11ax HE20 MCS11:-65dBm<br>11ax HE40 MCS0:-92dBm;11ax HE40 MCS11:-64dBm<br>5GHz:<br>11ax HE20 MCS0:-94dBm;11ax HE20 MCS11:-64dBm<br>11ax HE40 MCS0:-91dBm;11ax HE40 MCS11:-61dBm<br>11ax HE80 MCS0:-88dBm;11ax HE80 MCS11:-58dBm<br>11ax HE160 MCS0:-85dBm;11ax HE160 MCS11:-55dBm |
| Centralized Management | Omada Software Controller | • |
| | Omada Cloud-Based Controller | • |
| | Omada Hardware Controller | • |
| | Omada APP | • |
| Security | Captive Portal Authentication | • |
| | Access Control | • |
| | Maximum number of MAC Filter | 4000 |
| | Wireless Isolation between Clients | • |
| | VLAN | • |
| | Rogue AP Detection | • |
| | Wireless Encryption | WPA-Personal/Enterprise, WPA2-Personal/Enterprise, WPA3-Personal/Enterprise, OWE |

## Ceiling Mount Wi-Fi 6 AP

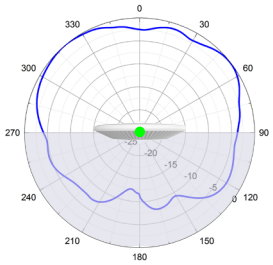
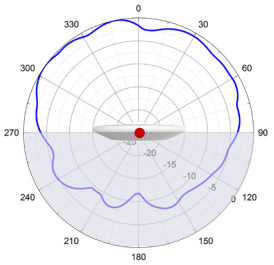
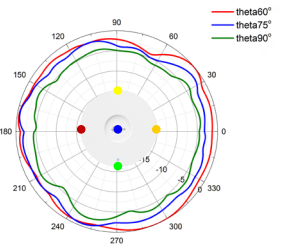
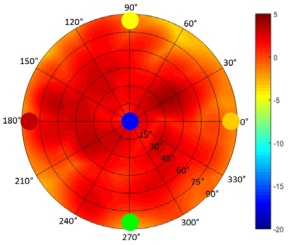
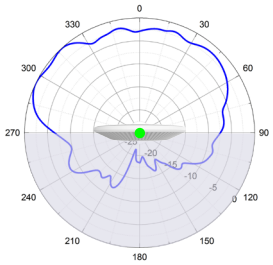
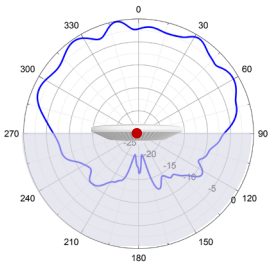
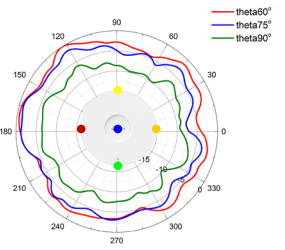
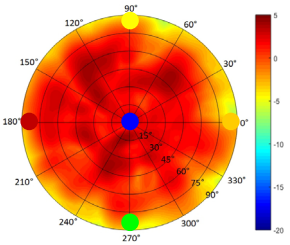
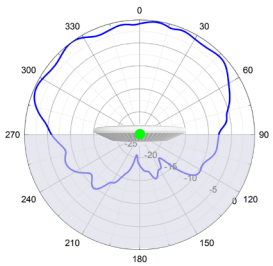
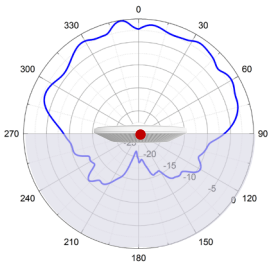
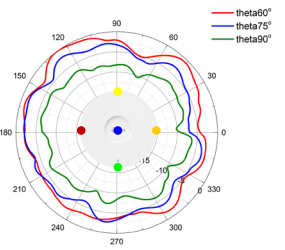
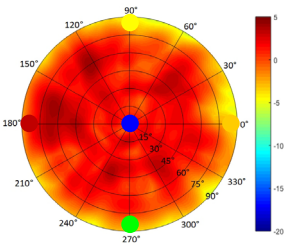
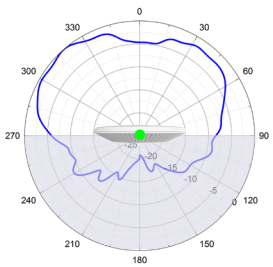
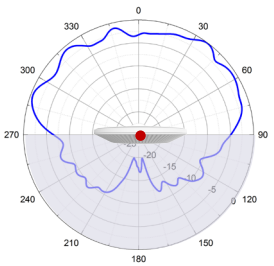
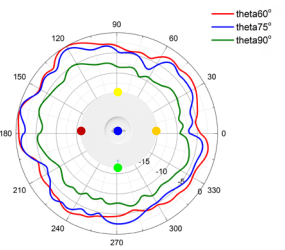
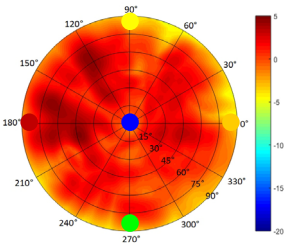
| Model | | EAP683 LR |
|---|---|---|
| Wireless Function | Multiple SSIDs | 16 (8 on each band) |
| | Channel | US: 2G:1~11; 5G: 36-48, 52-64 (DFS), 100-140 (DFS), 149-165<br>EU: 2G: 1~13; 5G: 36-48, 52-64 (DFS), 100-140 (DFS) |
| | Enable/Disable Wireless Radio | • |
| | Enable/Disable SSID Broadcast | • |
| | Guest Network | • |
| | Automatic Channel Assignment | • |
| | Transmit Power Control | Adjust transmit Power on dBm |
| | QoS (WMM) | • |
| | Seamless Roaming | • |
| | Mesh | • |
| | Beamforming | • |
| | MU-MIMO | 4*4 MU-MIMO DL&UL |
| | OFDMA | OFDMA UL/DL |
| | Rate Limit | Based on SSID/Client |
| | Load Balance | • |
| | Airtime Fairness | • |
| | Band Steering | • |
| | RADIUS Accounting | • |
| | MAC Authentication | • |
| | Reboot Schedule | • |
| | Wireless Schedule | • |
| | Wireless Statistics | • |
| | Static IP/Dynamic IP | • |
| Support Data Rates | 802.11ax | 2G Band: 8Mbps to 1148Mbps(MCS0—MCS11,NSS=1 to 4 HE20/40)<br>5G Band: 8Mbps to 4804Mbps(MCS0—MCS11, NSS=1 to 4 HE20/40/80/160) |
| | 802.11ac | 6.5Mbps to 4333Mbps(MCS0—MCS11,NSS=1 to 4 VHT20/40/80/160) |
| | 802.11n | 6.5Mbps to 800Mbps (MCS0—MCS9,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 | • |
| | Management MAC Access Control | • |
| | Web-based Management | • |
| | SNMP | v1, v2c, v3 |
| | SSH | • |
| | Restore & Backup | • |
| | Firmware update via Web | • |
| | NTP | • |
| | System Log | • |
| | Email Alerts | • |

| Ceiling Mount Wi-Fi 6 AP | | |
|---|---|---|
| Model | | EAP683 LR |
| Physical & Environment | Power Supply | 802.3at PoE or 12V/2A DC<br>DC Power Adapter Is Not Included |
| | Maximum Power Consumption | EU: 20.43W(For PoE); 17.7W(For DC)<br>US: 23.51W(For PoE); 20.63W(For DC) |
| | Reset | • |
| | Mounting | Ceiling / Wall mouting (Kits included) |
| Others | Certifications | CE, FCC, RoHS |
| | Dimensions (W x D x H) | 220 x 220 x 32.5 mm |
| | Net Weight | 694.6g |
| | Enclosure Material / Rack Material | Top cover: PC-V0<br>Bottom shell: aluminum alloy ADC-12<br>Mounting rack: SUS304 stainless steel |
| | Lightning Protection | Air discharge: ±8kV<br>Contact discharge: ±4kV<br>Common mode: 10/700: ±4kV |
| | Environment | Operating Temperature: 0 °C–40 °C (32 °F–104 °F);<br>Storage Temperature: -40 °C–70 °C (-40 °F–158 °F);<br>Operating Humidity: 10%–90% non-condensing;<br>Storage Humidity: 5%–90% non-condensing; |

# Antenna Radiation Patterns

## Ceiling Mount AP

### EAP683 LR

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

# Disclaimers

## Wireless Speed and Range Disclaimer

Maximum wireless transmission rates are the physical rates derived from IEEE Standard 802.11 specifications. Range and coverage specifications were defined according to test results under normal usage conditions. Actual wireless transmission rate and wireless coverageare 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 Disclaimer

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.

## Ethernet Port Limitation Disclaimer

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.

## MU-MIMO Disclaimer

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

## Seamless Roaming Disclaimer

(Only for certain devices)
Seamless roaming requires both the access point and client devices to support 802.11k and 802.11v protocols.

## Lightning and Electro-Static Discharge Protection Disclaimer

(Only for outdoor devices)
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 Disclaimer

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.

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