MAIPU

IAP300-822-PE

AX3000 Ceiling Mounted AP

Highlight Features

Support 802.11ax MU-MIMO Technology
Support 802.11K/V/R Roaming Technology
Central Managed by IGW500 Internet Gateway
Self-Provisioning Networking Supported
Lifetime Free Maipu MMC Cloud Management

Key Features

- **High-speed Gigabit dual-band wireless**

The IAP300-822-PE supports 2.4GHz and 5GHz dual-band concurrent communication. The 2.4GHz and 5GHz bands adopt a new generation of Wi-Fi wireless standard 802.11ax, providing 2.4GHz 574mbps and 5GHz 2402mbps. The highest access rate of the whole device is 2976Mbps. Compared with the traditional 802.11ac wireless mode, the throughput is significantly improved, bringing a real gigabit high-speed extreme experience.

- **Intelligent AP management technology, AP zero configuration, plug and play**

In the fit AP application mode, the zero-configuration fit AP can be found and automatically connected to the IGW500 series converged internet gateway through the L2/L3 network. The converged gateway can configure, operate and manage the fit AP. IGW500 converged gateway supports rich L2/L3 functions, and forms the management and monitoring of fit AP through the networks.

- **Support 802.11k/v/r protocols for fast WiFi roaming**

The IAP300-822-PE supports intelligent fast roaming technology, which significantly improves user experience when mobile clients move between APs. It achieves seamless mobility and smooth roaming by optimizing the switching process between APs. This ensures service continuity and reliability for latency-sensitive applications running over the WLAN.

Compared to basic roaming solutions, the fast roaming technology provides faster AP switching, lower packet loss, and smooth experience for roaming clients. This is critical for mobility-enabled WLAN applications.

- **Support MU-MIMO, higher capacity**

The IAP300-822-PE supports MU-MIMO (multi-user multi-input multi-output), realize concurrent transmission of multiple Wi-Fi users, double the wireless effective capacity, and easily deal with high-density scenes. The wired adopts two gigabit ethernet interfaces for uplink, without the bottleneck of wireless bandwidth.

5GHz has more abundant bandwidth resources and less wireless interference. 802.11ax protocol adopts the latest modulation technology to greatly improve the wireless rate. Compared with traditional device, it has higher speed and larger capacity. At the same time, it realizes the effects of intelligent load and 5GHz prior, improves the utilization of 5GHz band, and improves the total capacity.

- **Unique antenna signal optimization algorithm, improving AP signal coverage**

The unique antenna signal optimization algorithm is adopted to make IAP300-822-PE signal have wide coverage and strong penetration ability. In the standard scenario, a single AP can cover more than 25 meters reducing customers' investment in hardware equipment.

- **SSID + VLAN binding, ensuring information security**

The IAP300-822-PE supports transmitting 16 SSIDs at the same time. By setting different passwords for each SSID, dividing individual VLAN ID and assigning different network segments, it is easy to realize the effect that different wirelesses (SSID) transmit different services. By this way, sensitive information can be safely isolated internally.

- **One-key network optimization, improving the maintenance efficiency**

The IAP300-822-PE support one-key network auto channel optimization function. This will greatly improve the maintenance efficiency and reduce the troubleshooting cost.

- **Green design and energy saving**

The IAP300-822-PE adopts professional green environmental protection and low power consumption design. The device has low calorific value and supports green AP mode. It also supports U-APSD that allows devices to enter a low-power sleep mode when not actively transmitting data while ensuring they remain reachable.

Technical Specifications

Product Model	IAP300-822-PE
Version	**V2**
Interface Specification	
Service Port	1*10/100/1000Mbps Base-T adaptive Ethernet Port, 802.3af PoE (LAN1) 1*10/100/1000Mbps Base-T adaptive Ethernet Port (LAN2)
USB Port	1*USB 2.0
Serial Console Interface	1*RJ45 Port
Power Interface	1*12VDC (Nominal, +/-5%)
Indicators	1*Multi-Color LED (For System and Radio status)
Reset Button	1*Rest Button (Factory reset; WPS)
Environment Specification	
Working Temperature	0℃ to +45℃
Working Humidity	10% to 90% non-condensing
Storage Temperature	-40℃ to +70℃
Storage Humidity	5% to 95% non-condensing
IP Rating	IP51
Weight	0.62 kg
Dimension(W*D*H) mm	197*197*58
Hardware Specification	
Installation Mode	Ceiling Mounting
Power Supply	Adapter: DC 12V/1.5A (optional) PoE Standard: IEEE 802.3af/802.3at-compliant (compatible). When both DC and PoE power sources are available, DC power takes priority over PoE.
Power Consumption	<13W (without USB output) The maximum transmit power of the AP complies with the regulations of different countries and regions
Radio Specification	
RF Design	Dual-band design: - Radio1: 2.4GHz, 2 streams: 2*2 - Radio2: 5GHz, 2 streams: 2*2
Operating Bands (Country-specific restrictions apply)	- Radio1: 2.400-2.4835GHz - Radio2: 5.150–5.350GHz, 5.47–5.725GHz, 5.725–5.850GHz
Transmission Rate	- 802.11b: 1Mbps, 2Mbps, 5.5Mbps, 11Mbps - 802.11a/g: 6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps, 54Mbps - 802.11n: 6.5Mbps-300Mbps (MCS0-MCS31, HT20-HT40), 400Mbps with 256-QAM - 802.11ac: 6.5Mbps-866Mbps (MCS0-MCS9, NSS=1-2, VHT20-VHT160) - 802.11ax (2.4GHz): 8.6Mbps-574Mbps (MCS0-MCS11, NSS=1-2, HE20-HE40) - 802.11ax (5GHz): 8.6Mbps-2,402Mbps (MCS0-MCS11, NSS = 1-2, HE20-HE160)
Antenna	Built-in Intelligent Antennas
Antenna Gain	2.4GHz: 4.0dBi 5GHz: 4.0dBi
Transmit Power	2.4GHz: +20dBm

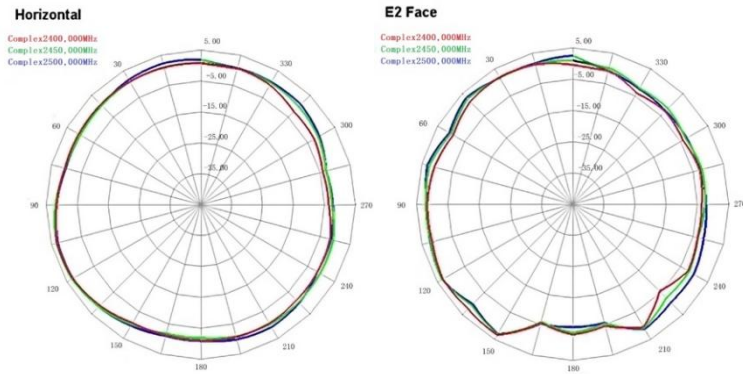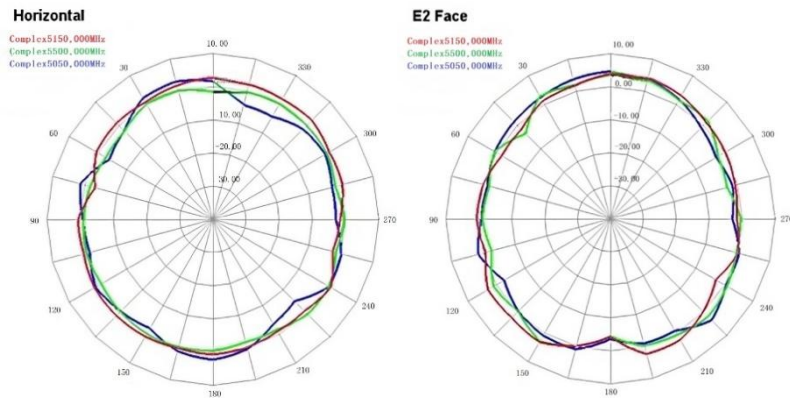|	5GHz: +20dBm
	The actual transmit power complies with the regulatory requirements for radio frequency emissions in various countries and regions
Transmit Power Adjustment	1 dBm
Modulation Mode	- 802.11b: BPSK, QPSK, CCK - 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM - 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM - 802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM
Modulation and Encoding	- Low Density Parity Check (LDPC) - Maximum Likelihood Detection (MLD)
Advanced RF Features	- TPC (Transmit Power Control) - ACS (Automatic Channel Scanning)
WIFI Specification	
WIFI Standards	IEEE 802.11a/b/g/n/ac/ax
SSID Numbers	16*SSIDs
Channelization	20, 40, 80, 160 MHz
Recommend Users	64-128
Working Mode	Fit Mode, Standalone
Security Type	Open, PSK, WPA-Personal, WPA-Enterprise, WPA2-Personal, WPA2-Enterprise, WPA3-Personal, WPA3-Enterprise, Portal, 802.1X, Radius
Working Bandwidth	- 802.11ax: HE160, HE80, HE40, HE20 - 802.11ac: VHT160, VHT80, VHT40, VHT20 - 802.11n: HT40, HT20
Date Rate	- Radio1: 2.4GHz, 574Mbps - Radio2: 5GHz, 2.402Gbps
MIMO Technologies	- Multi-User Multiple Input Multiple Output (MU-MIMO) - Maximum Ratio Combining (MRC) - Space-Time Block Coding (STBC) - Cyclic Delay/Cyclic Shift Diversity (CDD/CSD) - Dynamic MIMO power saving
Energy Saving	- U-APSD - SM Power Save - Green AP mode
Advanced WIFI Features	- Orthogonal Frequency Division Multiple Access (OFDMA) - Short GI (Short Guard Interval) - DFS (Dynamic Frequency Selection) - Spectrum Navigation

Order Information

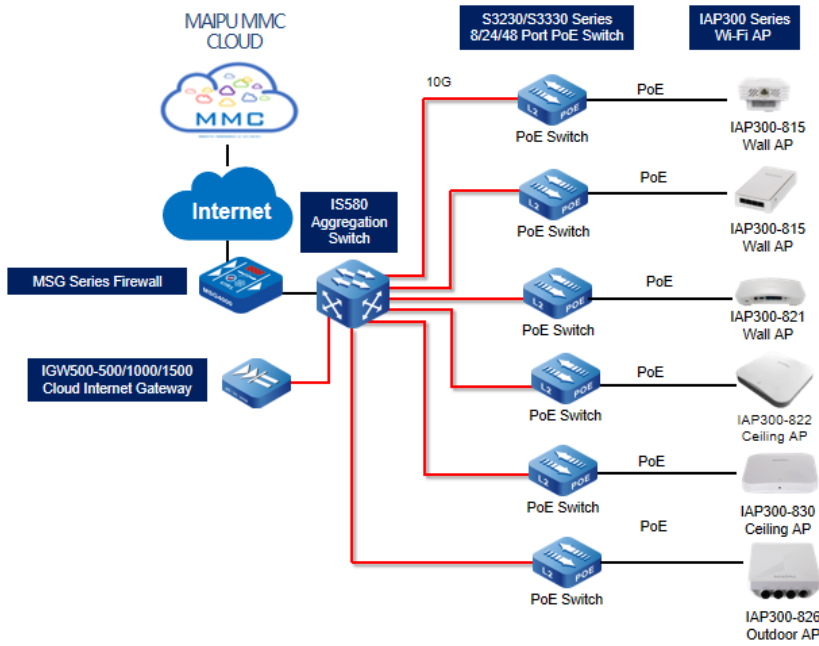| Model	Description
IAP300 Series Wi-Fi6 Access Point	
IAP300-822-PE	V2 Version: IAP300-822-PE, ceiling mount Wi-Fi6 802.11a/b/g/n/ac/ax, Dual frequency band, dual mode, forwarding performance of the whole device 2976Mbps, 2:2 MIMO, inbuilt antennas, PoE power input, 1*1000M RJ45 LAN (PoE), 1*1000M RJ45 LAN.

Antenna Patterns

- **2.4GHz Wi-Fi (Antennas 1,2)**

- **5GHz Wi-Fi (Antennas 1,2)**

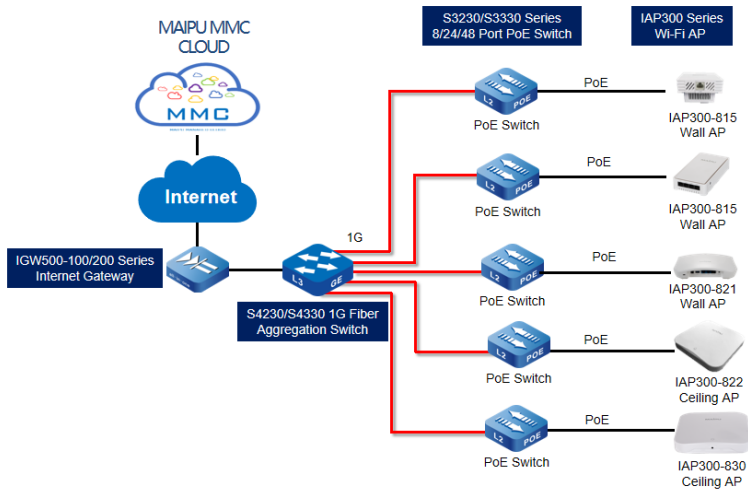# Application Scenario

Scenario One: Medium-Sized Networking

MAIPU MMC CLOUD

Internet

MSG Series Firewall

IGW500-500/1000/1500 Cloud Internet Gateway

IS580 Aggregation Switch

S3230/S3330 Series 8/24/48 Port PoE Switch

IAP300 Series Wi-Fi AP

10G

- PoE — PoE Switch (L2) — IAP300-815 Wall AP
- PoE — PoE Switch (L2) — IAP300-815 Wall AP
- PoE — PoE Switch (L2) — IAP300-821 Wall AP
- PoE — PoE Switch (L2) — IAP300-822 Ceiling AP
- PoE — PoE Switch (L2) — IAP300-830 Ceiling AP
- PoE — PoE Switch (L2) — IAP300-826 Outdoor AP

Highlight:
- 500+ User Scale Network
- 10G Bandwidth For Aggregation
- Unified Managed by Maipu MMC Cloud

Scenario Two: Branch Networking

MAIPU MMC CLOUD

Internet

IGW500-100/200 Series Internet Gateway

S4230/S4330 1G Fiber Aggregation Switch

S3230/S3330 Series 8/24/48 Port PoE Switch

IAP300 Series Wi-Fi AP

1G

- PoE — PoE Switch (L2) — IAP300-815 Wall AP
- PoE — PoE Switch (L2) — IAP300-815 Wall AP
- PoE — PoE Switch (L2) — IAP300-821 Wall AP
- PoE — PoE Switch (L2) — IAP300-822 Ceiling AP
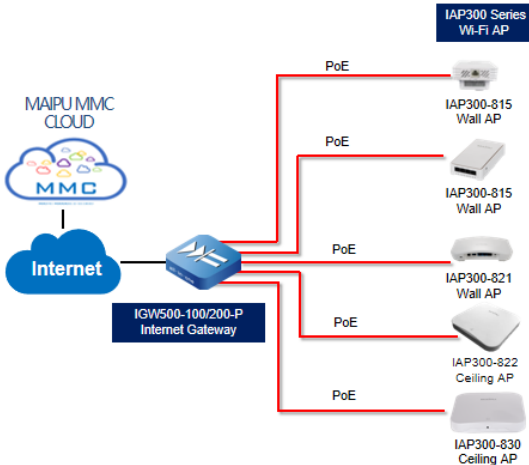- PoE — PoE Switch (L2) — IAP300-830 Ceiling AP

Highlight:
- 100+ User Scale Network
- 1G Bandwidth For Aggregation
- Unified Managed by Maipu MMC Cloud

Scenario Three: Small Office Networking

MAIPU MMC CLOUD

Internet

IGW500-100/200-P Internet Gateway

IAP300 Series Wi-Fi AP

- PoE — IAP300-815 Wall AP
- PoE — IAP300-815 Wall AP
- PoE — IAP300-821 Wall AP
- PoE — IAP300-822 Ceiling AP
- PoE — IAP300-830 Ceiling AP

Highlight:
- 50+ User Scale Network
- Inbuilt PoE Interfaces for Saving Cost
- Unified Managed by Maipu MMC Cloud

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