MAIPU

IAP300-921-PTE

BE3600 Ceiling Mounted AP

Highlight Features

- Latest 802.11be Wi-Fi7 technology supported
- Support 802.11k/v/r Roaming Technology
- Central Managed by IGW500 Internet Gateway
- Self-Provisioning Networking Supported
- Lifetime Free Maipu MMC Cloud Management

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Key Features

- **High Performance Wi-Fi7 Access Point**

IAP300-921-PTE supports Dual-band concurrent 2.4GHz and 5.0GHz and supports Wi-Fi7 (802.11be) standard protocol. It adopts 4096-QAM modulation mode, comparing with Wi-Fi6 1024-QAM, the performance increases 20%. The 5.0GHz band supports 2 spatial streams with a maximum negotiated rate of 2.882Gbps, the 2.4GHz band supports 2 spatial streams with a maximum negotiated rate of 0.688Gbps. The total wireless access rate of the device can reach 3.57Gbps.

IAP300-921-PTE integrates the latest Multi-RU, MU-MIMO and OFDMA technologies to subdivide the wireless channel into more subchannels, enabling simultaneous communication with multiple terminal devices. When multiple users access the internet at the same time, the user experience is significantly improved. It supports BSS Color spatial reuse function to color and use different mechanisms to process the basic service set, reducing interference, improving channel utilization, and achieving effects such as intelligent load balancing and 5G priority. It improves the 5G band utilization and increases the total number of devices.

- **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 IAP300-921-PTE supports intelligent fast roaming technology, significantly improving user experience when mobile clients move between APs. By optimizing the switching process between APs and utilizing techniques like PMK Caching, it ensures seamless mobility and smooth roaming. This enhancement is crucial for maintaining service continuity and reliability, especially for latency-sensitive applications running over the WLAN.

Compared to basic roaming solutions, this fast roaming technology provides quicker AP switching, reduced packet loss, and a smoother experience for roaming clients. This is essential for mobility-enabled WLAN applications.

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

The unique antenna signal optimization algorithm is adopted to make IAP300-921-PTE signal have wide coverage and strong penetration ability. A single AP can cover 25-50 meters based on different environment scenarios which can reduce customers' investment in hardware equipment.

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

The IAP300-921-PTE supports transmitting 32 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 IAP300-921-PTE 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 IAP300-921-PTE 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	IAP300-921-PTE
Version	V2
Interface Specification	
Service Port	1*10/100/1000M/2500Mbps Base-T Ethernet Port (802.3at PoE+)
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	-10°C to +45°C
Working Humidity	10% to 90% non-condensing
Storage Temperature	-40°C to +70°C
Storage Humidity	5% to 95% non-condensing
IP Rating	IP41
Weight	0.55kg
Dimension(W*D*H) mm	186mm*186mm*37mm
Hardware Specification	
Installation Mode	Ceiling Mounted
Power Supply	Adapter: DC 12V/0.5A PoE Standard: IEEE 802.3at When both DC and PoE power sources are available, DC power takes priority over PoE.
Power Consumption	<17W (without USB output)
Wireless Specification	
RF Design	Dual-band design: - Radio1: 2.4GHz, 2 streams: 2*2 - Radio2: 5GHz, 2 streams: 2*2
Operating Bands	- 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) - 802.11be (2.4GHz): 7.3Mbps-688.2Mbps (MCS0-MCS13, NSS=1-2, EHE20-EHE40) - 802.11be (5GHz): 7.3Mbps-2,882Mbps (MCS0-MCS13, NSS = 1-2, EHE20-EHE160)
Antenna	Built-in Intelligent Antennas
Antenna Gain	2.4GHz: 3.0dBi 5GHz: 3.0dBi
Transmit Power	2.4GHz: +23dBm 5GHz: +23dBm The actual transmit power complies with the regulatory requirements for radio frequency emissions in various countries and regions
Transmit Power Adjustment	1 dBm

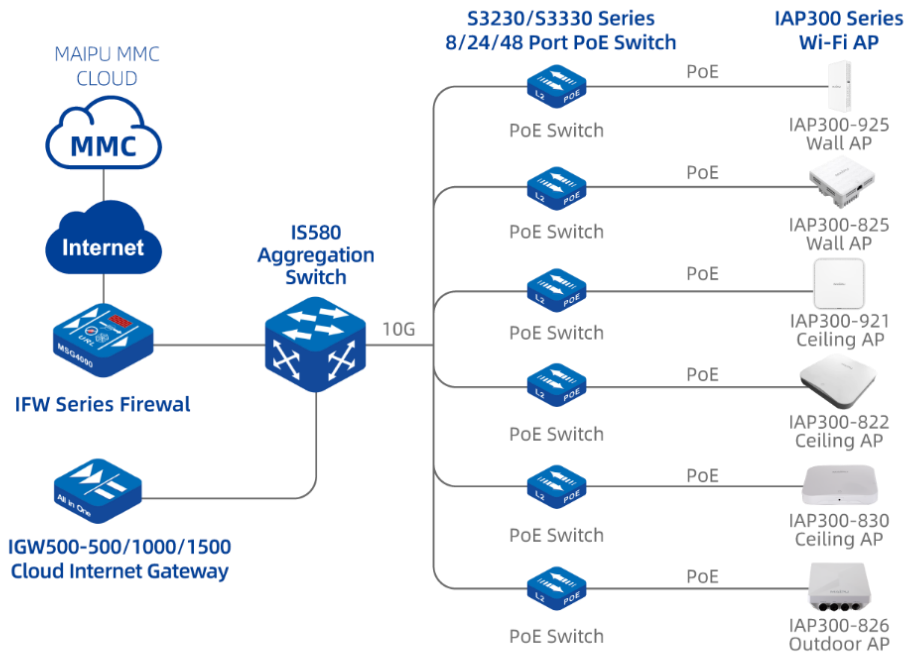
Modulation Mode	- 802.11b: BPSK, QPSK, CCK - 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM - 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM - 802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM - 802.11be: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM, 4096-QAM
Modulation and Encoding	- Low Density Parity Check (LDPC) - Maximum Likelihood Detection (MLD)
Advanced RF Features	- TPC (Transmit Power Control) - ACS (Automatic Channel Scanning)
Fast Roaming	- 802.11 K/V/R, PMK Caching
Rate Limitation	- Based On SSIDs - Based On Users
Load Balancing	- Based On Users
Software Specification	
WIFI Standards	IEEE 802.11a/b/g/n/ac/ax/be
SSID Numbers	32*SSIDs (2.4GHZ+5GHZ)
Channelization	20, 40, 80, 160 MHz
STA Capacity	1024
Recommend Users	120-200
Working Mode	FIT Mode
Security Type	Open, PSK, WPA-Personal, WPA-Enterprise, WPA2-Personal, WPA2-Enterprise, WPA3-Personal, WPA3-Enterprise, Portal, 802.1X, Radius, WIDS/WIPS, AES/TKIP, anti-rouge
Working Bandwidth	- 802.11be: EHT160, EHT80, EHT40, EHT20 - 802.11ax: HE160, HE80, HE40, HE20 - 802.11ac: VHT160, VHT80, VHT40, VHT20 - 802.11n: HT40, HT20
Data Rate	- Radio1: 2.4GHz, 688Mbps - Radio2: 5GHz, 2.882Gbps
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 - Green AP mode
Advanced WIFI Features	- Multiple Resource Unit (Multi-RU) - Orthogonal Frequency Division Multiple Access (OFDMA) - Short GI (Short Guard Interval) - DFS (Dynamic Frequency Selection) - Spectrum Navigation

Order Information

Model	Description
IAP300 Series Wi-Fi7 Access Point	
IAP300-921-PTE	V2 Version: Ceiling mount Wi-Fi7 802.11a/b/g/n/ac/ax/be, Dual-band, Dual-mode, forwarding performance of the whole device 3.57Gbps, 2*2:2 MIMO, inbuilt antennas, PoE power input, 1*10/100/1000M/2500Mbps Base-T Ethernet Port (802.3at PoE+). (installation accessory included)

Application Scenario

Scenario One: Medium-Sized Networking



500+

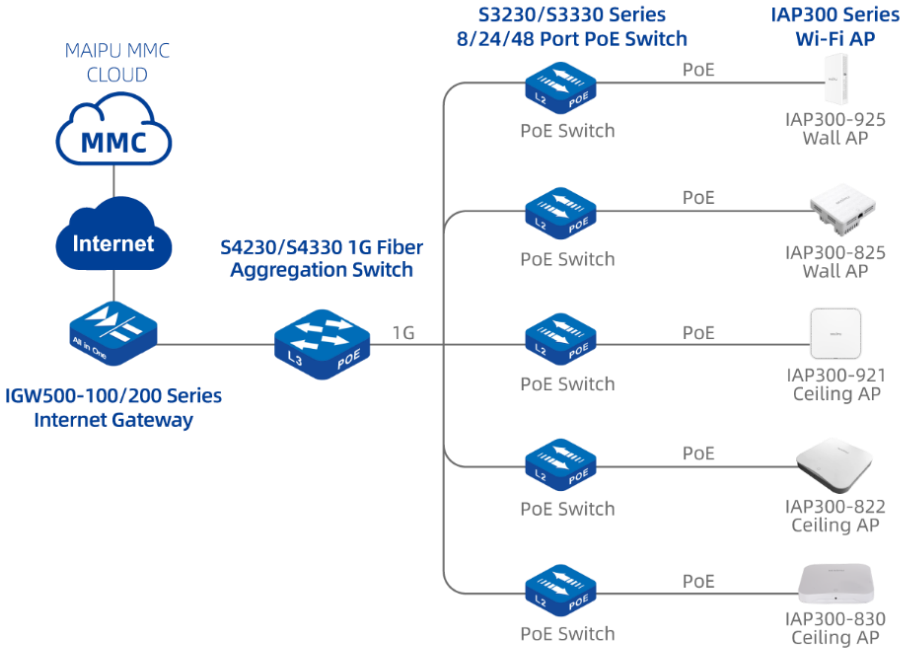
500+ User Scale Network

10G Bandwidth for Aggregation

MMC

Unified Managed by Maipu MMC Cloud

Scenario Two: Branch Networking



100+

100+ User Scale Network

1G Bandwidth for Aggregation

MMC

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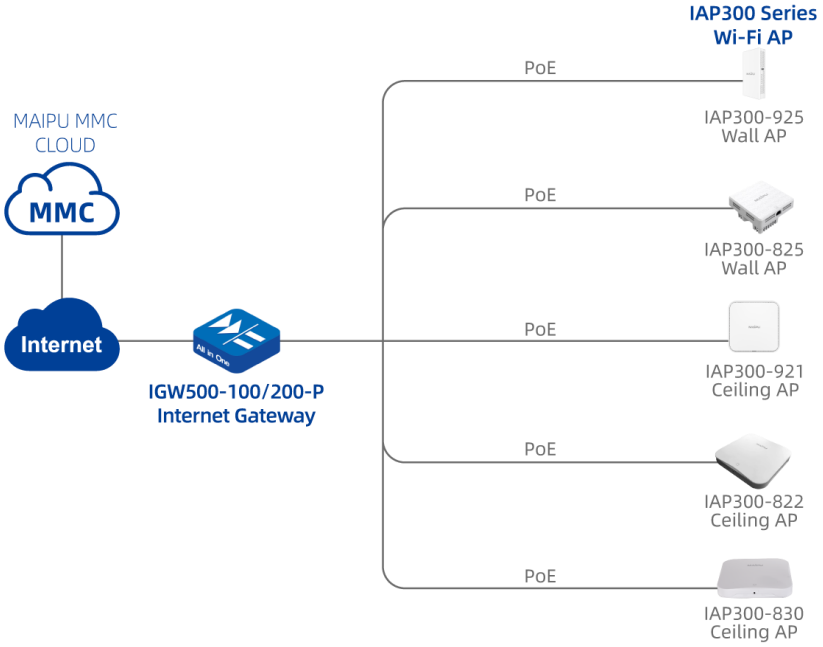
Scenario Three: Small Office Networking



50+

50+ User Scale Network

POE

Inbuilt PoE Interfaces for Saving Cost

MMC

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