## MAipu

# IAP300-826-PTE AX1800 Outdoor Pole Mounted AP

## **Highlight Features**

- Outdoor Pole Mounted Installation Design
- Support 802.11ax MU-MIMO Technology
- Support 802.11K/V Roaming Technology
- 1\*1000M Combo Ports and 1\*1000M PoE RJ45 interface
- Managed by IGW500 Series Internet Gateway
- Internal directional antenna saving installation cost
- Self-Provisioning Networking Supported
- Lifetime Free Maipu MMC Cloud Management

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### **Key Features**

#### • High-speed Gigabit dual-band wireless

The IAP300-826-PTE 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 1201mbps. The highest access rate of the whole device is 1775Mbps. Compared with the traditional 802.11ac wireless AP, the throughput is significantly improved, bringing a real gigabit high-speed extreme experience.

#### • Support 802.11k/v protocols for fast WiFi roaming

The IAP300-826-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.

#### Built-in Antenna Model Reduces Procurement and Installation Costs

The IAP300-826-PTE features a built-in high-gain smart antenna array, suitable for a wide range of scenarios, such as park squares and wireless cities. Its integrated design significantly reduces the costs associated with external antenna procurement and installation. A single AP can cover 100-250 meters based on different environment scenarios which can reduce customers' investment in hardware equipment.

#### Gigabit Optical-Electrical Port Multiplexing for Long-Distance Outdoor Networking

The IAP300-826-PTE not only provide up to two Gigabit Ethernet ports but also offer a Gigabit SFP port for multiplexing. This adaptability caters to various types of wired network link configurations on-site. The SFP optical port can handle data transmission, while the Ethernet uplink port is used for PoE adapter power supply applications, providing greater flexibility in network deployment.

#### Portable Installation Design Reduces Ladder Construction Risks

The IAP300-826-PTE come with a single-arm handle and a portable design for installation. This ensures that construction personnel always have one hand gripping the ladder, eliminating the risk of equipment falling or even personnel injury during high-risk operations like arm clamping and hugging.

#### IP68 Grade for Harsh Environment

The IAP300-826-PTE employ fully sealed designs that are waterproof, dustproof, moisture-resistant, lightningresistant, and flame-retardant, meeting the requirements of IP68 protection grade. They can be left outdoors for extended periods, easily coping with harsh environmental conditions like wind erosion, rain, and humidity.

#### • Zero Configuration, Zero Maintenance Reduces Workload for Maintenance Personnel

The IAP300-826-PTE can automatically download configurations from IGW500 series controllers and load them for operation. This eliminates the need for on-site configuration by engineering maintenance personnel, saving significant manpower and resources while improving network installation and maintenance efficiency.

#### • Support for Infinite Endurance Ensures Reliable Wireless Network Operation

In FIT AP mode, it supports the ability to continue working even if disconnected from the controller. When the controller loses management, it continues to provide access for existing wireless users and can authenticate new users, ensuring the reliability of the wireless network. In the event of a network disconnect, the AP can be restarted and continue to operate without interruption.

#### • Green and Environmentally Friendly Design Saves Energy

The IAP300-826-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	IAP300-826-PTE
Version	V2
Interface Specification	
Service Port	1*10/100/1000M Base-T adaptive Ethernet Combo Port, 802.3at PoE (LAN1) 1*1000M Base-X SFP Fiber Combo Port 1*10/100/1000M Base-T adaptive Ethernet Port, 6.5W PoE Out (LAN2)
Indicators	1*Multi-Color LED (For System and Radio status)
Other Port	1*Rest Button (Factory reset; WPS) 1*RJ45 Console Port
Environment Specification	
Working Temperature	-30°C to +55°C
Working Humidity	0% to 100% non-condensing
Storage Temperature	-50°C to +85°C
Storage Humidity	0% to 100% non-condensing
IP Rating	IP68
Weight	1.9 kg
Dimension (W*D*H) mm	275*230*80
Hardware Specification	
Installation Mode	Pole Mounting
Power Supply	PoE: IEEE 802.3af/802.3at-compliant (compatible).
Power Consumption	<25W
Wireless Specification	
RF Design	Dual-radio design, one 2.4 GHz radio and one 5 GHz radio - Radio1: 2.4 GHz, 2 streams: 2*2 - Radio2: 5 GHz, 2 streams: 2*2
Operating Bands	- Radio1: 2.400 to 2.4835GHz - Radio2: 5.150–5.350GHz, 5.47–5.725GHz, 5.725–5.850GHz
Transmission Rate	<ul> <li>- 802.11b: 1Mbps, 2Mbps, 5.5Mbps, 11Mbps</li> <li>- 802.11a/g: 6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps, 54Mbps</li> <li>- 802.11n: 6.5Mbps-300Mbps (MCS0-MCS31, HT20-HT40), 400Mbps with 256-QAM</li> <li>- 802.11ac: 6.5Mbps-866Mbps (MCS0-MCS9, NSS=1-2, VHT20-VHT80)</li> <li>- 802.11ax (2.4GHz): 8.6Mbps-574Mbps (MCS0-MCS11, NSS=1-2, HE20-HE40)</li> <li>- 802.11ax (5GHz): 8.6Mbps-1,202Mbps (MCS0-MCS11, NSS = 1-2, HE20-HE80)</li> </ul>
Antenna	Internal 4 Antennas
Antenna Gain	2.4 GHz: 10dBi 5 GHz: 10dBi Directional Antenna
Transmit Power	2.4 GHz: +27dBm

	5 GHz: +27dBm
	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, 256-QAM - 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-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) - Beamforming
Advanced RF Features	<ul> <li>Channel Rate Adjustment, include TPC (Transmit Power Control)</li> <li>ACS (Automatic Channel Scanning)</li> </ul>
Fast Roaming	- 802.11 K/V, 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
SSID Numbers	16*SSIDs (2.4GHZ+5GHZ)
Channelization	20, 40, 80 MHz
STA Capacity	256
Recommend Users	100-150
Working Mode	FIT/FAT Mode
Network Features	PPPoE Client, DHCP Server/Client, Static IP, DNS Proxy, Bridge, NAT (Note: FAT Working Mode)
Security Type	Open, PSK, WPA-Personal, WPA-Enterprise, WPA2-Personal, WPA2-Enterprise, WPA3- Personal, WPA3-Enterprise, Portal, 802.1X, Radius
Working Bandwidth	- 802.11ax: HE80, HE40, HE20 - 802.11ac: VHT80, VHT40, VHT20 - 802.11n: HT40, HT20
Data Rate	- Radio1: 2.4 GHz, 574 Mbps - Radio2: 5 GHz, 1201Mbps - Combined: 1.775 Gbps
MIMO Technologies	<ul> <li>Multi-User Multiple Input Multiple Output (MU-MIMO)</li> <li>Maximum Ratio Combining (MRC)</li> <li>Space-Time Block Coding (STBC)</li> <li>Cyclic Delay/Cyclic Shift Diversity (CDD/CSD)</li> <li>Dynamic MIMO power saving</li> </ul>
Energy Saving	- U-APSD - Green AP mode
Advanced WIFI Features	<ul> <li>Orthogonal Frequency Division Multiple Access (OFDMA)</li> <li>Short GI (Short Guard Interval)</li> <li>DFS (Dynamic Frequency Selection)</li> <li>Spectrum Navigation</li> </ul>

## **Order Information**

Model	Description
IAP300 Series AX1800 Access Point	

V2 Version: IAP300-826-PTE, AX1800 Outdoor pole mount Wi-Fi6 802.11a/b/g/n/ac/ax, Dual frequency band, Dual mode, forwarding performance 1.775Gbps, 2:2 MIMO, PoE power input, inbuilt directional antennas, IP68, 1\*1000M Combo Port (PoE), 1\*1000M LAN Port. (installation accessory included)

## **Application Scenarios**

#### Scenario One: Medium-Sized Networking



#### Scenario Two: Branch Networking



Scenario Three: Small Office Networking





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





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