

WA2600-821-PE AX1800 Ceiling Mount Wi-Fi6 AP

Datasheet

Overview

The new generation series 802.11ax wireless access point WA2600-821-PE developed by Maipu is an indoor wireless access device that supports the latest 802.11ax technical standard. The product complies with the IEEE 802.11a/b/g/n/ac/ax standard, adopts a hardware-independent dual-frequency design, four spatial streams, and the whole machine can provide up to 1.8Gbps access rate.

WA2600-821-PE adopts a built-in antenna design that is simple and elegant with convenient deployment. It supports ceiling mounting installation methods. It provides local DC and PoE two power supply modes, which can be flexibly selected according to the user environment. It is suitable for high-density, high-bandwidth and high-concurrency deployment scenarios such as enterprise office building, hotel, education, government campus, etc.



WA2600-821-PE

Highlight Features

- High performance hardware design support up to 1.8Gbps
- 802.11ax MU-MIMO Technology Supported
- Dual band for high density wireless connection
- Central Managed by WNC6600 Series Access Controller
- Seamless Layer2/3 Roaming Supported
- Self-Provisioning Networking Supported
- Rich Security Features for Wireless Network

Key Features

● High Performance Wi-Fi6 Access Point

The device supports dual-band concurrent 2.4GHz and 5GHz, and also supports Wi-Fi 6 (802.11ax) standard protocol. It adopts 1024QAM modulation mode. The 5GHz band supports 2 spatial streams with a maximum negotiated rate of 1.2Gbps. The 2.4GHz band supports 2 spatial streams with a maximum negotiated rate of 0.6Gbps. The total wireless access rate of the device can reach 1.8Gbps.

It also integrates MU-MIMO and OFDMA technologies to subdivide the wireless channel into more sub channels, 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 forwarding strategy

It supports centralized forwarding and local forwarding functions. According to business scenarios, intelligent forwarding strategies can be configured. By cooperating with Maipu Wireless Controller, the data forwarding mode of WA2600-821-PE can be flexibly configured. When configured as centralized forwarding, data packets are sent from the wireless access device to the wireless controller for unified forwarding.

It supports flexible configuration based on SSID or user VLAN. When configured as local forwarding mode, data packets can bypass the wireless controller and be directly converted into wired format packets for forwarding over the wired network, greatly relieving the traffic pressure of the wireless controller and releasing port bandwidth capabilities to reduce network bandwidth costs and overall improve network utilization.

● Support 802.11k/v protocols for enhanced WiFi roaming

The WA2600-821-PE 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.

● Comprehensive security protection

Together with the Maipu independently developed wireless controller, WA2600-821-PE supports 802.1x authentication, MAC authentication, WEB authentication and other authentication methods to ensure network security.

It supports Multiple SSID technology, WA2600-821-PE supports up to 16*SSIDs. The administrator can set different passwords for each SSID, divide separate VLAN IDs, and easily achieve the effect of transmitting different services on different wireless networks (SSIDs). It can implement user isolation based on VLAN to ensure the security of data services in each VLAN.

It supports Wireless Intrusion Detection/Prevention (WIDS/WIPS), supports blacklists, whitelists and other wireless user access control features to detect, identify and counteract illegal wireless devices for effective blocking. At the same time, it also supports protection against ARP, SYN, port scanning and other network attacks to comprehensively build a secure and reliable network for users.

● Convenient deployment and intelligent management

WA2600-821-PE can be automatically discovered by Maipu Wireless Controller and automatically download the configuration. The device automatically goes online with zero configuration. It can be installed where wireless signal coverage is required to achieve flexible deployment, on-demand purchase and plug-and-play.

Based on the Wireless Controller management system, it supports local and remote management platform for wireless business managers to implement functions such as fault management, performance monitoring, and software version management to greatly improve network operation efficiency.

● Environmentally friendly design and energy saving

WA2600-821-PE integrates energy-saving technologies such as target wake-up time technology, MIMO power saving technology, and packet power control technology. By reducing the number of terminal wake-ups, improving antenna efficiency, and integrating highly efficient power supply designs, it achieves energy saving and power saving.

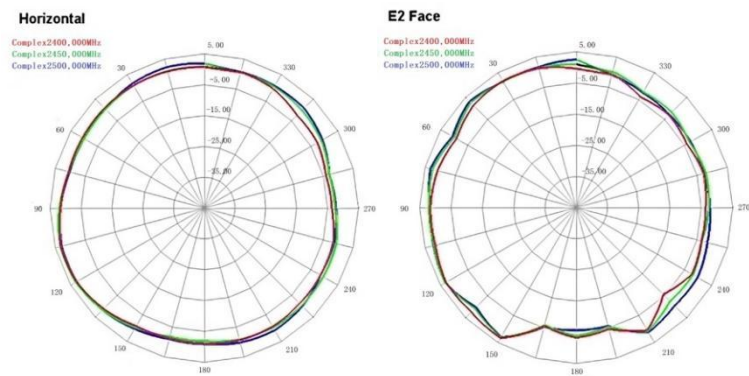
Technical Specifications

Product Model	WA2600-821-PE
Version	V4
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°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	IP51
Weight	0.6 kg
Dimension(W*D*H) mm	197mm*197mm*58mm
Hardware Specification	
Installation Mode	Ceiling Mounting
Power Supply	Adapter: DC 12 V/1.5 A (optional) PoE: IEEE 802.3af/802.3at-compliant (compatible). When both DC and POE power sources are available, DC power takes priority over POE.
Power Consumption	<15W (without USB output) The maximum transmit power of the AP complies with the regulations of different countries and regions
Radio 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 (Country-specific restrictions apply)	- Radio1: 2.400 to 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-VHT80) - 802.11ax (2.4GHz): 8.6Mbps-574Mbps (MCS0-MCS11, NSS=1-2, HE20-HE40) - 802.11ax (5GHz): 8.6Mbps-1,202Mbps (MCS0-MCS11, NSS = 1-2, HE20-HE80)
Antenna	Internal 2*2 MIMO Antenna
Antenna Gain	2.4 GHz: 4 dBi

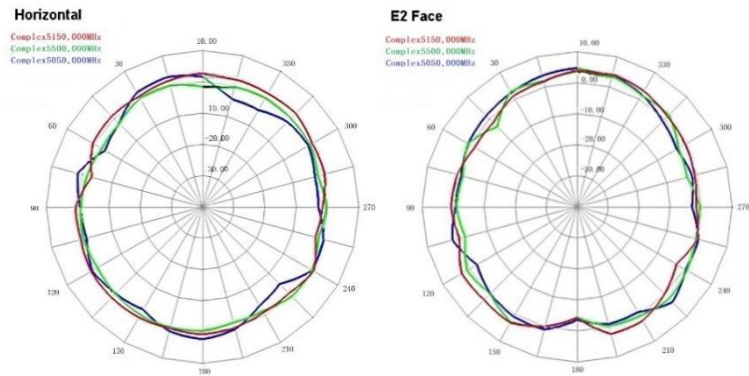
	5 GHz: 4 dBi
Maximum Transmit Power	2.4 GHz: +20 dBm 5 GHz: +20 dBm The actual transmit power complies with the regulatory requirements for radio frequency emissions in various countries and regions
Transmit Power Adjustment	1 dBm
Modulation Mode	- 802.11b: BPSK, QPSK, CCK - 802.11a/g/n: BPSK, QPSK, 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) - Beamforming
Advanced RF Features	- Channel Rate Adjustment, include 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	64~125
Working Mode	Fit 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: HE160, HE80, HE40, HE20 - 802.11ac: VHT160, VHT80, VHT40, VHT20 - 802.11n: HT40, HT20
Date Rate	- Radio1: 2.4 GHz, 600 Mbps - Radio2: 5 GHz, 1.2 Gbps - Combined: 1.8 Gbps
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

Antenna Patterns

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



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



Order Information

Model	Description
WA2600 Series Wi-Fi6 Access Point	
WA2600-821-PE	V4 Version: Ceiling mount Wi-Fi6 802.11a/b/g/n/ac/ax, Dual frequency, dual mode, forwarding performance of the whole device 1.8Gbps, 2*2:2 MIMO, inbuilt antennas, PoE power input, 1*1000M LAN Port (PoE), 1*1000M LAN Port. (installation accessory included)

Application Scenario



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