WA2600-830-PTE AX5400 Ceiling Mount Wi-Fi6 AP

Datasheet

Overview

The new generation series 802.11ax wireless access point WA2600-830-PTE developed by Maipu is an indoor wireless access point that supports the latest 802.11ax technical standard. The product complies with the IEEE 802.11a/b/g/n/ac/ax standard, adopts a triple-band independent hardware design, six spatial streams, and the whole machine can provide up to 5.4Gbps access rate.

WA2600-830-PTE adopts a built-in antenna design that is simple and elegant with convenient deployment. It supports desktop, ceiling mounting and wall 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 conference room, university lecture room, office building corridor, etc.

WA2600-830-PTE

Highlight Features

- High performance hardware design support up to 5.4Gbps
- 802.11ax MU-MIMO technology supported
- Triple-band for high density wireless connection
- Central managed by WNC6600 series access controller
- 802.11k/v and seamless Layer2/3 Roaming Supported
- Self-provisioning networking supporting
- Rich security features for wireless network

Key Features

● **High Performance Wi-Fi6 Access Point**

WA2600-830-PTE supports triple-band concurrent 2.4GHz, 5.2GHz and 5.8GHZ, and also supports Wi-Fi 6 (802.11ax) standard protocol. It adopts 1024QAM modulation mode. The 5GHz band supports 4 spatial streams with a maximum negotiated rate of 4.8Gbps. 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 5.4Gbps.

It also integrates 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 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 WA2600-830-PTE 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 WA2600-830PTE 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, WA2600-830-PTE supports 802.1x authentication, MAC authentication, WEB authentication and other authentication methods to ensure network security.

It supports Multiple SSID technology, WA2600-830-PTE 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 blacklist, whitelist 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**

WA2600-830-PTE can be automatically discovered by Maipu WNC6600 Series Wireless Controller and automatically download the configuration. The device automatically goes online with zero parameter configuration. It can be installed where wireless signal coverage is required to achieve truly flexible deployment, on-demand purchase and plug-and-play.

It can be managed by Maipu Matrix Center SNMP management system, this is a wired and wireless management platform for configuration management, topology management, fault management, performance monitoring, and upgrade management to greatly improve network operation efficiency.

● **Environmentally Friendly Design and Energy Saving**

WA2600-830-PTE 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 wakeups, improving antenna efficiency, and integrating highly efficient power supply designs, it achieves energy saving and power saving.

Technical Specifications

| Product Model	WA2600-830-PTE
Version	**V2**
Interface Specification	
Service Port	1*10/100/1000M/2.5Gbps Base-T adaptive Ethernet Port, 802.3at PoE (LAN1) 1*10/100/1000Mbps Base-T adaptive Ethernet Port, 6.5W PoE Out (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	0.85 kg
Dimension(W*D*H) mm	230mm*230mm*51mm
Hardware Specification	
Installation Mode	Ceiling Mounting
Power Supply	Adapter: DC 12V/2.0A (optional) PoE Standard: IEEE 802.3at When both DC and PoE power sources are available, DC power takes priority over PoE.
Power Consumption	<20W (without PoE output and USB output) The maximum transmit power of the AP complies with the regulations of different countries and regions
Radio Specification	
RF Design	Triple-band design: - Radio1: 2.4GHz, 2 streams: 2*2 - Radio2: 5.2GHz, 2 streams: 2*2 - Radio3: 5.8GHz, 2 streams: 2*2
Operating Bands (Country-specific restrictions apply)	- Radio1: 2.400–2.4835GHz - Radio2: 5.150–5.350GHz, - Radio3: 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)

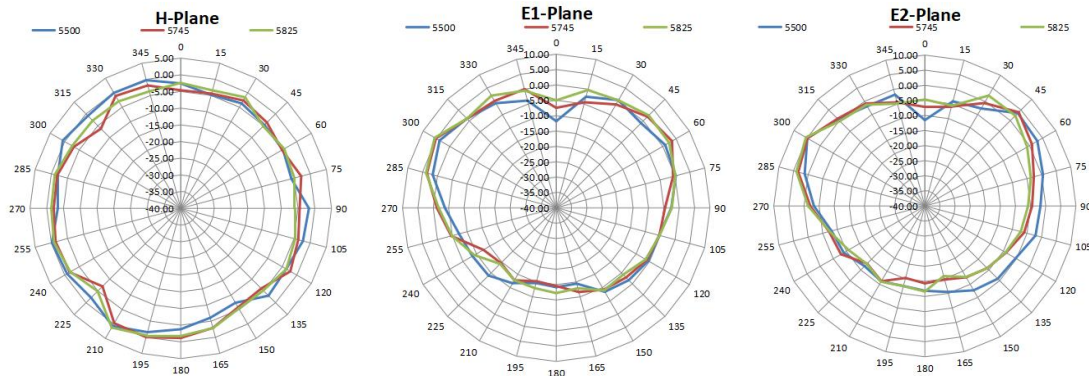|	
Antenna	Built-in Intelligent Antennas
Antenna Gain	2.4GHz: 4.0dBi 5.2GHz: 4.0dBi 5.8GHz: 4.0dBi
Maximum Transmit Power	2.4GHz: +23dBm 5.2GHz: +23dBm 5.8GHz: +23dBm Note: The actual transmit power complies with the regulatory requirements for radio frequency emissions in various countries and regions
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	125~225
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: 2.4GHz, 574Mbps - Radio2: 5GHz, 2.402Gbps - Radio2: 5GHz, 2.402Gbps - Combined: 5.378Gbps
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)**
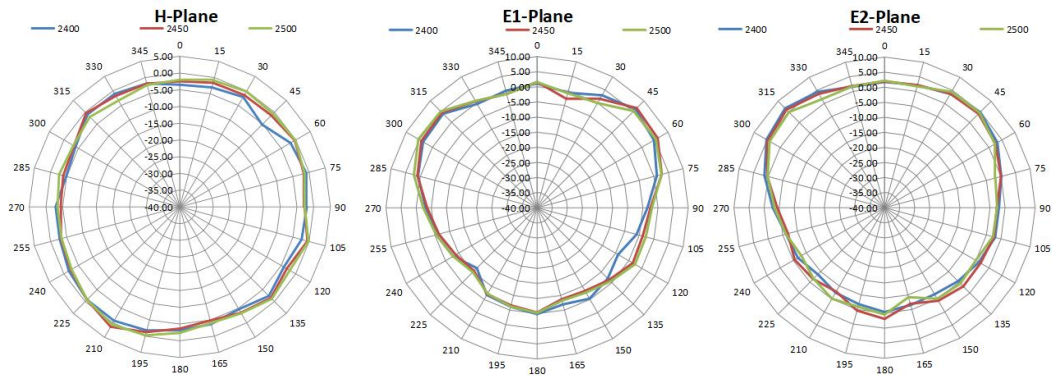
- **5.2GHz Wi-Fi(antennas 1,2)**
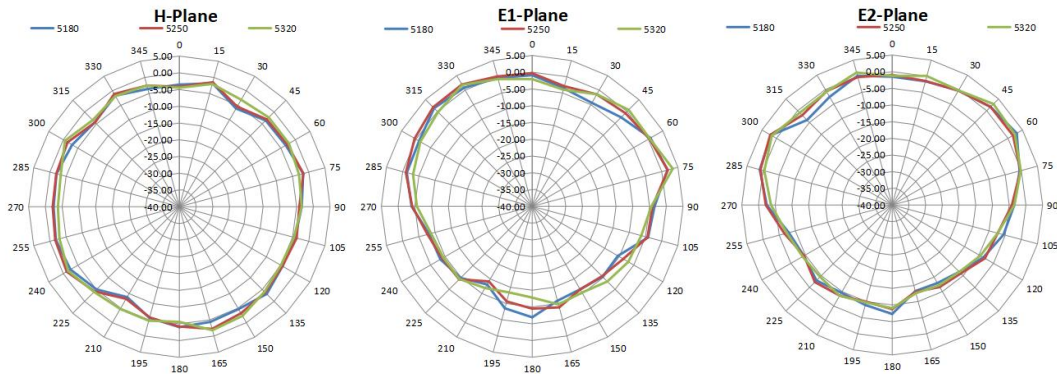
- **5.8GHz Wi-Fi(antennas 1,2)**

Order Information

Model	Description
WA2600 Series Wi-Fi6 Access Point	
WA2600-830-PTE	V2 Version: ceiling mount Wi-Fi6 802.11a/b/g/n/ac/ax, triple-band, dual mode, forwarding performance of the whole device 5.4Gbps, 3*2:2 MIMO, inbuilt antennas, PoE power input, 1*2.5G LAN Port (PoE), 1*1000M LAN Port. (installation accessory included)

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Application Scenario

- **Scenario One: Campus Networking**

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