WA2600-930-PTE(V3) Ceiling Mount Wi-Fi7 AP Datasheet

Overview

The new generation series 802.11be wireless access point WA2600-930-PTE developed by Maipu is an indoor wireless access point that supports the latest Wi-Fi7 technical standard. The product complies with the IEEE 802.11a/b/g/n/ac/ax/be standard, adopts high performance Triple-band hardware design, six spatial streams, and the whole machine can provide up to 9.33Gbps access performance.

WA2600-930-PTE 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 dual 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.

WA2600-930-PTE

Highlight Features

- High-performance throughput supporting up to 9.33 Gbps
- Supports latest 802.11be Wi-Fi 7 technology
- Triple-band design for high-density wireless connections
- Centrally managed by WNC6600 and IGW500 series controller
- Supports seamless Layer 2/Layer 3 fast roaming
- Supports self-provisioning networking
- Comprehensive security features for wireless networks
- Integrates with BD-Campus SDN Controller
- Lifetime Free Maipu MMC cloud management

Key Features

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

WA2600-930-PTE supports Triple-band concurrent 2.4GHz, 5.0GHz, 6GHZ 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 6.0GHz band supports 2 spatial streams with a maximum negotiated rate of 5.76Gbps, 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 9.33Gbps.

WA2600-930-PTE integrates the latest Multi-RU, MLO, 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**

WA2600-930-PTE 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 this mode 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.

WA2600-930-PTE 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 L2/L3 enhanced Fast roaming**

WA2600-930-PTE supports 802.11 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, WA2600-930-PTE supports 802.1x authentication, MAC authentication, WEB authentication and other authentication methods to ensure network security. It supports Multiple SSID technology, WA2600-930-PTE supports up to 48*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**

WA2600-930-PTE can be automatically discovered by Maipu WNC6600&IGW500 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 platform, MMC Cloud platform and BD-Campus SDN Controller, they are 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**

WA2600-930-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

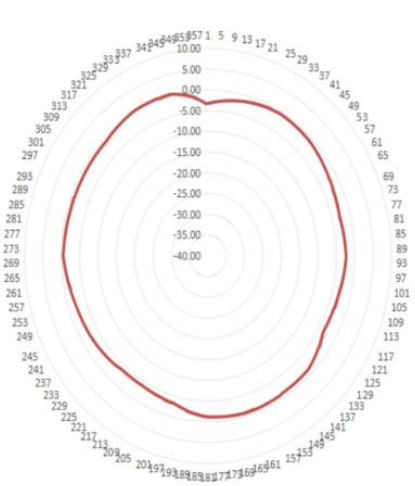
Product Model	WA2600-930-PTE
Hardware Version	**V3**
Interface Specification	
Service Port	1*10/100/1000M/2500M/5000Mbps Base-T Ethernet Combo Port (802.3at PoE+) 1*1/2.5/10Gbps Fiber Combo Port (SFP+) 1*10/100/1000Mbps Base-T Ethernet Port (PoE Out)
USB Port	1*USB 3.0
Serial Console Interface	1*RJ45 Console Port
Bluetooth	Support Bluetooth 5.1 Support Bluetooth serial port for remote maintenance
Power Interface	1*48V DC Input
System Indicators	1*Multi-Color LED
Reset Button	1*Factory Reset Button
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
Net Weight (kg)	0.9kg
Dimension(W*D*H) mm	210mm*210mm*41mm
Hardware Specification	
Installation Mode	Ceiling Mounting
Power Supply (Optional)	-Adapter: DC 48V/0.5A -PoE Standard: IEEE 802.3at-compliant
PSE Out	48V DC, 0.17A (Max. 8W)
Power Consumption	<22W (excluding USB and PSE out)
Radio Specification	
RF Design	Triple-band design: - Radio1: 2.4GHz, 2 streams: 2*2 - Radio2: 5GHz, 2 streams: 2*2 - Radio3: 6GHz, 2 streams: 2*2

Operating Bands	- Radio1: 2.400-2.4835GHz - Radio2: 5.150–5.350GHz, 5.47–5.725GHz, 5.725–5.850GHz - Radio3: 5.925-7.125GHz
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-1733Mbps (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) -802.11ax (6GHz): 8.6Mbps-2,402Mbps (MCS0-MCS11, NSS = 1-2, HE20-HE160) - 802.11be (2.4GHz): 8.6Mbps-688.2Mbps (MCS0-MCS13, NSS=1-2, EHE20-EHE40) - 802.11be (5GHz): 8.6Mbps-2,882Mbps (MCS0-MCS13, NSS = 1-2, EHE20-EHE160) - 802.11be (6GHz): 8.6Mbps-5,764Mbps (MCS0-MCS13, NSS = 1-2, EHE20-EHE320)
Antenna	Built-in Intelligent Omnidirectional Antennas
Antenna Gain (dBi)	2.4GHz: 3.0dBi 5GHz: 4.0dBi 6GHz: 5.0dBi
Maximum Transmit Power (dBm)	2.4GHz: +23 dBm 5GHz: +23 dBm 6GHz: +23 dBm
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)
WIFI Specification	
WIFI Standards	IEEE 802.11a/b/g/n/ac/ax/be
Throughput (Gbps)	Total Throughput: 9.335Gbps - Radio1: 2.4GHz, 0.688Gbps - Radio2: 5GHz, 2.882Gbps - Radio3: 6GHZ, 5.765Gbps
SSID Numbers	48*SSIDs (16 SSIDs per radio)
Channelization	20, 40, 80, 160, 320MHz
Maximum Access Users	1536
Recommend Access Users	120
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	- 802.11be: EHT320, EHT160, EHT80, EHT40, EHT20 - 802.11ax: HE160, HE80, HE40, HE20 - 802.11ac: VHT160, VHT80, VHT40, VHT20 - 802.11n: HT40, HT20
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

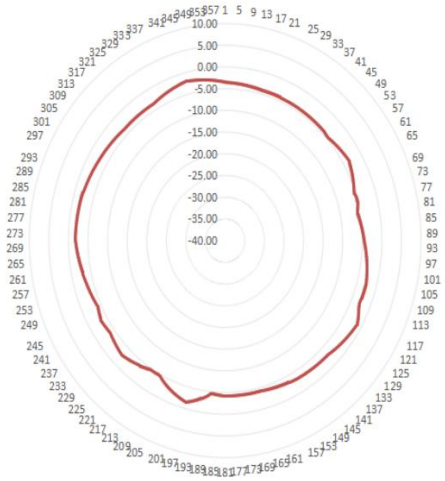
Energy Saving	- U-APSD - SM Power Save - Green AP mode
Advanced WIFI Features	- Multiple Resource Unit (Multi-RU) - Orthogonal Frequency Division Multiple Access (OFDMA) - Short Guard Interval (Short GI) - Dynamic Frequency Selection (DFS) - Spectrum Navigation

Antenna Pattern Plots

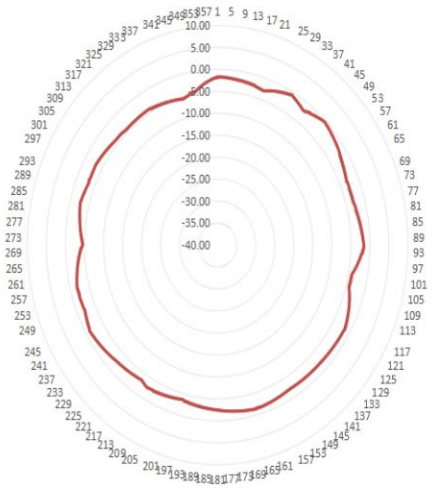
- **Horizontal Planes (Top View)**



2.4GHz

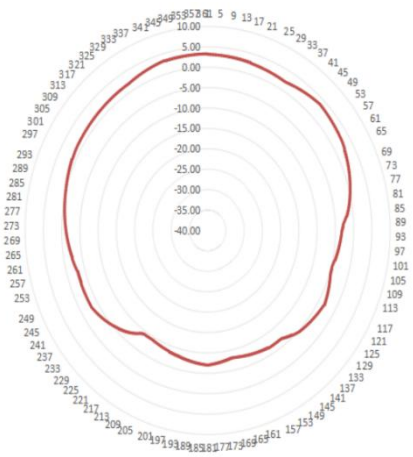


5GHz

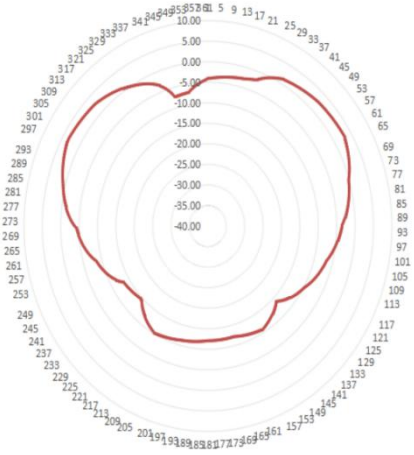


6GHz

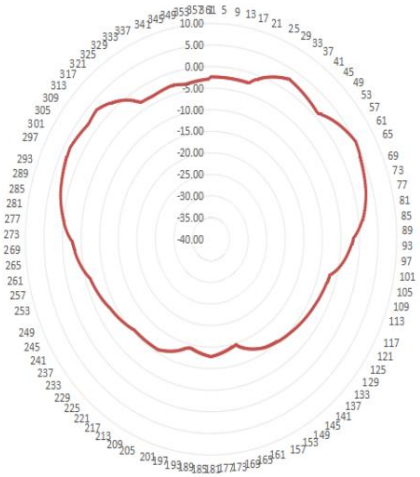
- **Vertical Planes (Front View)**



2.4G



5G



6G

Order Information

Model	Description
WA2600 Series Wi-Fi7 Access Point	
WA2600-930-PTE	V3 Version: Ceiling mount Wi-Fi7 802.11a/b/g/n/ac/ax/be, Triple-band, Dual-mode, forwarding performance of the whole device 9.33Gbps, 3*2:2 MIMO, inbuilt antennas, PoE power input, 1*10/100/1000/2500/5000M RJ45 Combo Port (PoE+), 1*10/100/1000M RJ45 Port (PoE out), 1*1/10G SFP+ Fiber Combo Port. (installation accessory included)

Application Scenario

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