AX110

Carrier Grade Outdoor
Dual Band 2x2 802.11ac Access Point

Highlights

- 2.4GHz/5GHz IEEE 802.11ac 2x2 MIMO
- Dual-concurrent 802.11ac radios, up to 1167 Mbps aggregate throughput
- Max coverage distance: 1Km Line-of-Sight
- Max number of users (both bands) : 256
- Cloud based or traditional Wi-Fi controllers
- Weatherproof Outdoor deployment

Dimensions & Weight

- Dimension:212.6 mmx 212.6mm x 53 mm (HxWxD)
- Weight: 1.87 kg

Overview

AX110 is a Carrier Grade, 2x2 dual-concurrent 802.11ac gigabit access point designed for rapid deployments in outdoor environments. It is primarily targeted for operators to provide reliable outdoor Wi-Fi coverage and long distance wireless backhaul connectivity, to deliver high-speed broadband services previously only achievable using fiber-optics.

AX110 provides one of the most economical and cost effective way for last mile data access. The advanced MIMO internal antenna with beam forming allows the AX100 to provide wide-area Wi-Fi coverage, delivering connectivity to large rural or dense urban areas effortlessly. With excellent interoperability, AX110 is compatible with most Wi-Fi devices and CPEs for building a high capacity wireless system, providing rapid ROI (Return-of-Investments) for Telecom Operators and Service Providers.

AX110 uses the latest generation Qualcomm 802.11ac Wi-Fi technologies for high throughput and reliable operation required by modern multimedia applications, in a weather proof enclosure that can be deployed in a wide variety of harsh outdoor environments, from wet tropical regions to frigid arctic conditions.

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Features

Excellent Performance:
The AX110 is a carrier grade 802.11n and 802.11ac AP with an aggregated data rate of up to 1167 Mbps and features two powerful Wi-Fi radios specifically designed for enhanced receive sensitivity and RF noise mitigation. The integrated high-gain dual-band panel antenna is specially optimized for outdoor LOS and NLOS deployment. It delivers up to 50% increased range compared to typical carrier grade 802.11n APs, requiring fewer APs for a given deployment. The AX110 supports up to 256 simultaneous users per radio, for up to 512 simultaneous connected users.

Weatherproof:
The AX110 is designed and tested for salt spray, vibration, extreme thermal conditions, shock and dust and is IP67-rated, making it ideal for extreme environments.

All-in-one Integrated AP:
The integrated AP software package provides complete functionalities for quick deployments. The functions include, QoS, Web authentication, MAC authentication, MAC ACL, Portal Integration, VLAN, IGMP and NTP. It can meet the requirements of the various applications. An optional Cloud based controller operation mode provides even more deployment flexibility by allowing the AX110 to be deployed in virtually any network configurations.

3rd party Integration - Open Platform:
The AX110 supports centralized management by integration with 3rd party controller or cloud management systems. The management data between the AX110 and the access controller (AC) is encrypted. The APs are zero configuration APs prior to connecting them to the AC. By creating different service templates, it is easy for the manager to configure many APs effortlessly. It is possible for the manager to manage the AX110 from anywhere by modifying the configurations, upgrading the software, rebooting the AP, monitoring the AP status via the alarms and monitoring the system logs.

Multiple Wireless Services:
The AX110 supports multiple operation modes including AP, AP WDS and WDS Bridge. When operating in the AP mode, the AX110 provides high capacity wireless access in a service area. When operating in the AP WDS mode, the AX110 provides clients with WDS capability to access the LAN. When operating the AX110 in WDS bridge mode on the 5GHz radio and AP mode on the 2.4GHz radio, to the operator is able to establish a mesh network.

Prioritizes Applications and Maintains Quality of Experience:
The AX110's advanced Quality of Service (QoS) capability the operator will allocate the appropriate bandwidth and latency for the applications and services. This will improve the

end user's experience when accessing the internet. The bandwidth and latency management based on the SSID/Role allows the operator to manage access for all users.

Multiple SSIDs:

The AX110 supports up to 32 SSIDs - 16 SSIDs for each radio; these SSIDs are isolated from each other, creating multiple virtual network. Multiple SSIDs allow users to access these virtual networks on a single physical access point. Based on the SSID, the operator can apply different QoS policies and authentication methods. With the AX 110, the operator can easily provision multiple virtual Wi-Fi networks to cater for their business models and application requirements.

Industry-Standard Security:

The AX110 supports multiple security methods, WEP, WPA/WPA2-PSK, 802.1x Authentication (PEAP, EAP/SIM), MAC Authentication and Web Authentication. The use of MAC Access Control Lists helps make your business network safe from intruders or from malicious software attacks from the Internet.

Easy Installation:

The AX110 is designed to withstand outdoor environments. It is weatherproof to IP65 which allows it to operate in extreme weather conditions including hurricane force downpour. It can withstand wide temperature range of -40°C to +65°C, allowing it to be installed anywhere from desert to arctic environments. With built-in antennas, the AX110 is an all-in-one unit without the need to mount neither external antennas nor RF cables, making installation a breeze. Supporting standard 802.3at, connecting and powering up the AX110 is as simple as plugging a single cable to the PoE switch. The AX110 package also includes standard outdoor pole mounts and can be ordered with optional outdoor wall mounts.

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Applications

Indoor Coverage from Outdoor Wi-Fi Signals:

In many scenarios, such as college campuses and rural areas, there are many obstacles to providing good wireless coverage. The AX110 is designed to work with the excellent AE106 CPE to enable superior wireless network access to obstructed remote indoor locations, providing dual-band Wi-Fi coverage extension from outdoor to indoor areas.

Outdoor Coverage:

AX110 provides extensive wide-area Wi-Fi coverage for venues such as town squares, residential neighborhoods, schools, parks, or other wide open, sprawling area with large number of simultaneous users.

Wireless Bridge:

The AX110 can be configured to form a Wireless Distribution System network. In a typical deployment, the AX110 is configured to act as a wireless bridge between buildings such as large scale factory buildings or office buildings. In this case, both the 2.4GHz and 5GHz frequencies can be used for wireless backhaul as needed, providing a level of flexibility rarely seen in other Wi-Fi equipment.

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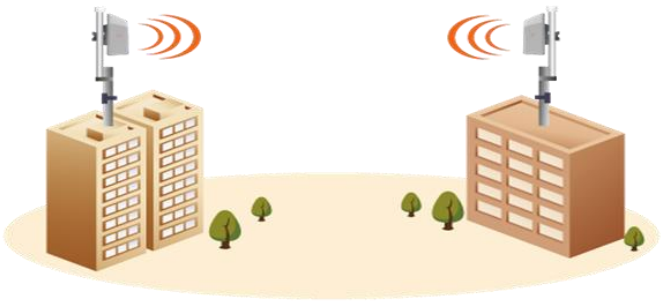


Specifications

Physical Specification Dimension:212.6mmx212.6mm x53mm (H x W x D) Weight: 1.87 kg Installation: pole mounting, wall mounting LEDs: PWR LAN Wireless signal strength: 1- 4 **Environmental Specification** Operating temperature:-40℃ to +65℃ Humidity: 5% to 95% non-condensing Elevations: 86 kPa – 106 kPa RoHS-6 compliant Wind resistance > 90MPH Dustproof and Waterproof GB 4208-2008: IP67, IEC60529:2001 Pole Diameter 54mm (2 inch) -110mm (4 inch) **Power Supply** Standard 802.3at PoE	**Ethernet Interface** 1x10/100/1000 Base-T interfaces with RJ-45 connectors, auto MDI/MDIX sense Optional SFP interface, support for Gigabit Ethernet SFP transceivers **Wi-Fi Interface** Operating mode: AP, CPE, Bridge Compliant with MIMO 2×2 IEEE 802.11b/g/n and IEEE 802.11a/c Operating frequency: 2.4GHz (2.412GHz - 2.4835GHz), 5GHz (5.150 - 5.250, 5.250 - 5.350, 5.470 - 5.725,5.725 - 5.875GHz) Compliant with MIMO 2×2 IEEE 802.11b/g/n and IEEE 802.11a/c RF Maximum Transmit Power: 2.4GHz:27dBm (without antenna gain) 5GHz:27dBm (without antenna gain) 2.4GHz Receive sensitivity: 802.11g -91dBm@6Mbps -77dBm@54Mbps

Antenna Pattern (Built-in Antennas)

Frequency: 2.4GHz - 2.5GHz
- Gain: 12dBi
- Horizontal HPBW: 60°
- Vertical HPBW: 15°

Frequency: 5.15GHz ~ 5.875GHz
- Gain: 15dBi
- Horizontal HPBW: 60°
- Vertical HPBW: 8°

VSWR: 2.0:1 (max.)

Polarization: Bipolar ±45°

Isolation: 20dB (min.)

Feature Description

Operating Mode:
- AP/AP WDS
- WDS Bridge

Supports 32 BSSIDs, 256 concurrent users

Wireless security:
- 64 or 128 bit WEP
- WPA-PSK/ WPA2-PSK
- WPA-enterprise/WPA2-enterprise
- MAC Authentication

Access Control List (ACL)

QoS (Airtime/Rate limit)

VLAN

Multicast (IGMP)

Management:
- Manage by the web base interface
- 3rd party integration: Open platform (Thin AP only)

Upload and download configuration files

Syslog

802.11n:

	HT20	HT40
MCS0/8/16	-91dBm	-88dBm
MCS7/17	-74dBm	-71dBm

802.11a:
- -93dBm@6Mbps
- -77dBm@54Mbps

802.11ac:

	VHT2	VHT40	VHT80
MSC0	-91dBm	-88dBm	-85dBm
MSC8	-70dBm	/	/
MSC9	/	-64dBm	-61dBm

Safety & EMI

FCC certificate

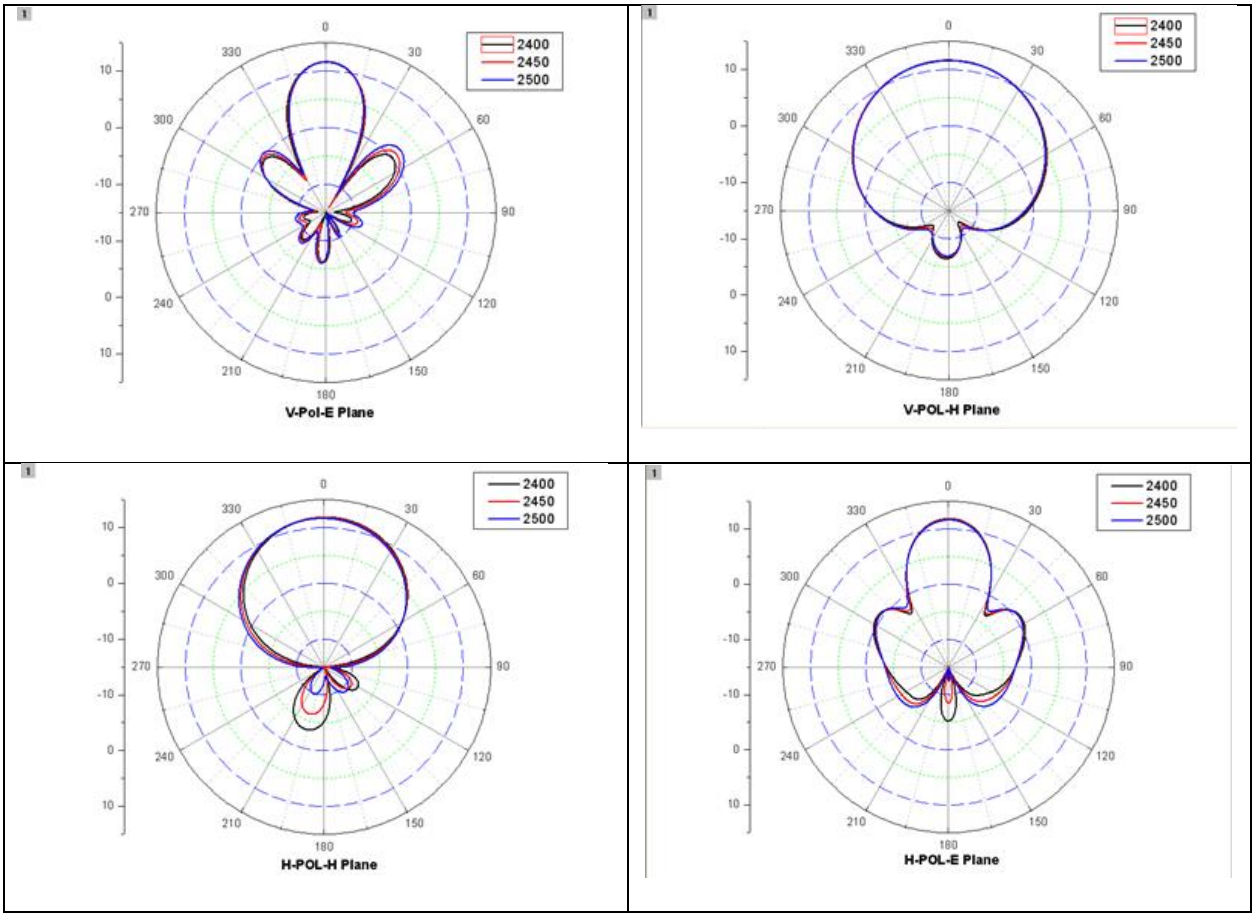
UL Compliant

External Antennas

Optional 2.4GHz External Antenna Ports

Optional 5GHz External Antenna Ports

Antenna Patterns (2.4 GHz)



Antenna Patterns (5 GHz)