



PS-200N-AX

eXtreme Power 11Na 5Ghz 2x2

+15dBi AP Bridge (500mW)



EAN Code : 4712757152586

Built-in CenOS 3.0 Software Core

500mW HIGH POWER	11a/n 5GHz	300Mbps 2T2R	GAIN +15dBi	ESD 15kV	Telnet W/CLI	PoE SUPPORTED	PoE Bridge	Pole Mounted
IAPP SUPPORT	WDS X8	TAG VLAN	STP SUPPORTED	STP SUPPORTED	ACL SUPPORTED	Layer7 Filter	PPPoE WLAN	Wall Mounted
QOS WMM	Client Bridge	Wireless CPE	SSID X8	SNMP Trap	SNMP v1/v2c/v3	Bandwidth Shaping	Multi Language	WEB BASED

The **CERIO PS-200N-AX** eXtreme Power 11Na 5Ghz 2x2 +15dBi AP Bridge enables connection to Wireless In/Outdoor Networks for service provider deploying last mile services to Home, businesses, or residential broadband subscribers. Network administrators can create and centrally manage multiple subscriber service tiers using per-subscriber rate limiting features.

PS-200N-AX In/Outdoor WISP Bridge utilizes **500mW** high power with plastic weatherproof housing and uses both 533 Mhz high level base CPU and **Built-in 5 GHz +15dBi 2x2 directional panel antennas**. **PS-200N-AX** may connect to the WiFi mesh or WDS infrastructure and provide subscribers with an Ethernet connection for local access, thereby extending the range and increasing the performance of a wireless network. The **PS-200N-AX** may also connect to the **WiFi Mesh** or **WDS** infrastructure and provides the subscriber with an Ethernet connection for a local access, additionally supplying both **PoE power** and data to the unit through CAT5 Ethernet cable.

CERIO PS-200N-AX eliminate hangs carries the newest Cerio CenOS 3.0 Software Core and support Cerio **Wireless Management Software (CWMS)** and optimizes the operation handling ability and promotes user efficiency.

Cerio Wireless Management Software (CWMS) Centralized APs management software– PC Base



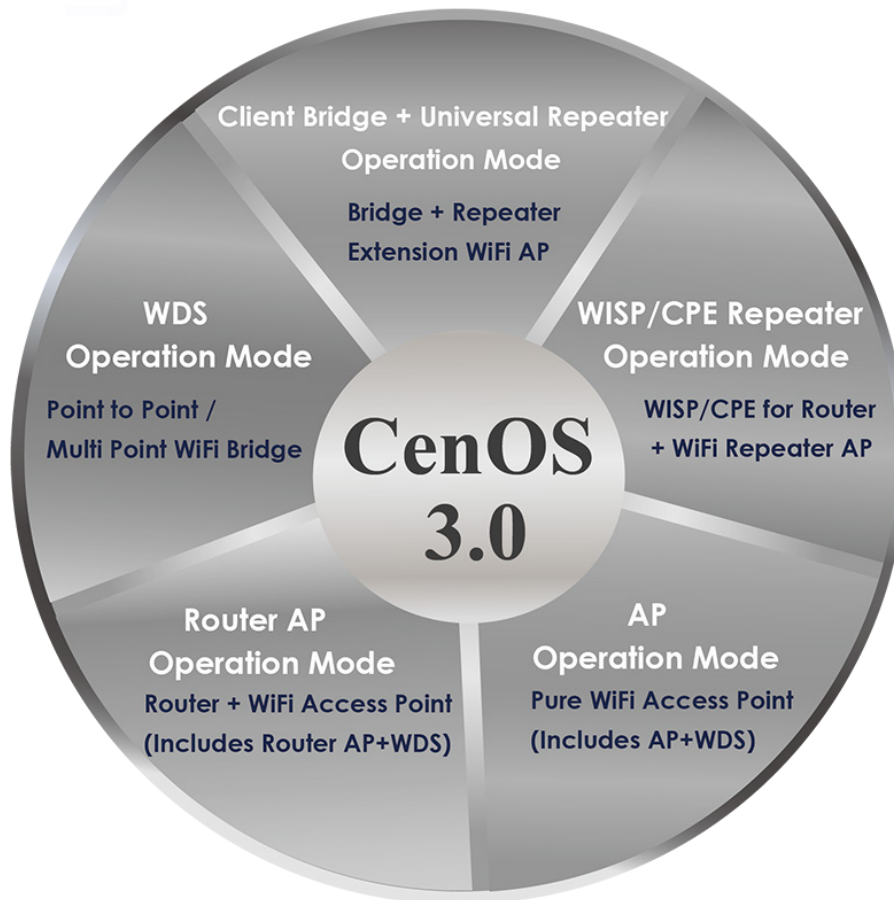
Control AP Group Management
Support up to 500 Access Point / Windows base

CWMS only supports Cerio's CenOS 3.0 core

The Software Built-in : CenOS 3.0 Introduction

CERIO's GS Firmware uses the CenOS 3.0 core . The firmware's main functions are Wifi application for Pure WiFi Access Point (Includes AP+WDS) and Point to Point / Multi Point WiFi Bridge and Bridge + Repeater Extension WiFi AP and WISP/CPE for Router + WiFi Repeater AP functions .

The CenOS 3.0 core's operational mode supports Pure AP with WDS Mode / Pure WDS mode / Client Bridge + Universal Repeater Mode and WISP/CPE Repeater +AP mode. The CenOS 3.0 features that simplify deployment and reduce cost for continued maintenance of the indoor Access Point . The Cerio CenOS is undoubtedly your wifi application best choice.



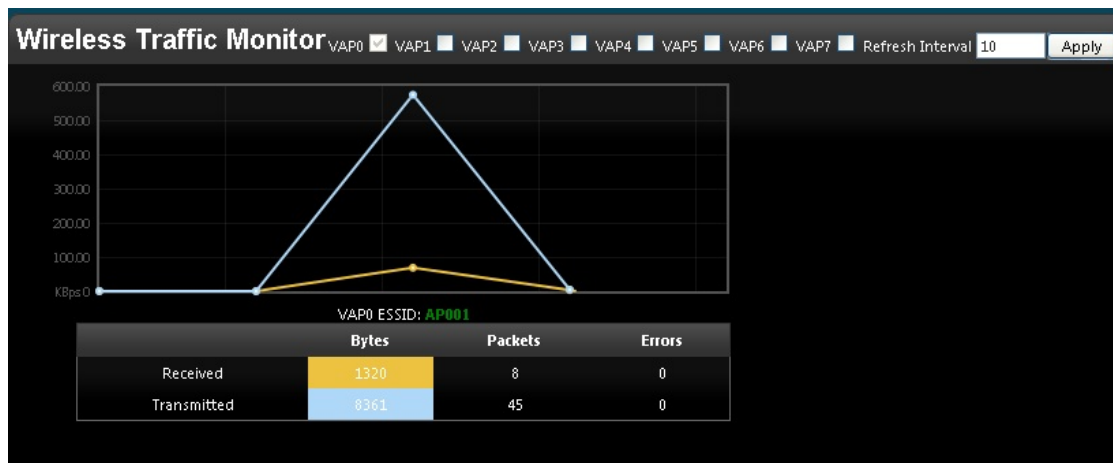
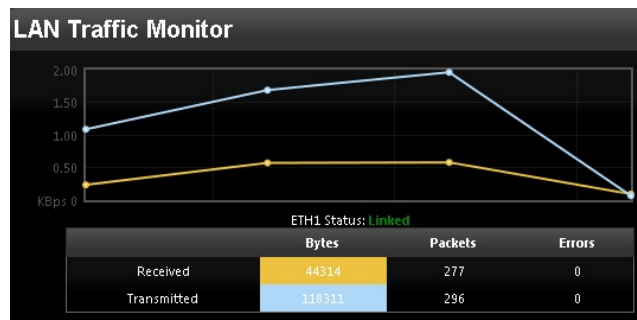
Only Cerio's special model supports Router AP mode

Note: PS-200N-AX supports only Pure AP Mode , Pure WDS Mode, CPE Mode, Client Bridge + Universal Repeater Mode and CPE + AP Mode mode through Cerio's CenOS3.0 software.

PS-200N-AX CenOS 3.0 Software key Features

- Operation Modes :
Pure AP Mode , Pure WDS Mode ,Client Bridge + Universal Repeater Mode and WISP/CPE + Repeater AP Mode
- Maxmum Security with 802.1x, WPA, and WPA2
- Supports 8 Multiple-ESSID. And Support IEEE802.11f IAPP
- QoS(Quality of Service) for bandwidth management and traffic prioritization
- Supports IEEE802.1d Spanning Tree
- Integragted IGMP v1/v2/v3 snooping functions and Support Web management and SNMP MIB-II
- Ping Watchdog function support

- Support Hardware chipset base Watch Time Dog , Can reboot before crash automatically
- Software UI support Auto reboot setting function , Can by Hour/Daily/Weekly to setting software Auto reboot.
- Provide enhanced values in a well-managed WLAN solution by CERIO backend controlling gateway.
- Built-in Cerio CenOS3.0 software interface allows for communicating with Cerio Wireless Management Software (CWMS) and CERIO AM-Series AP Management WLAN Switch or Access Controller hardware device of network management servers
- Provide Traffic Monitor and Graphical GUI Status Interface.



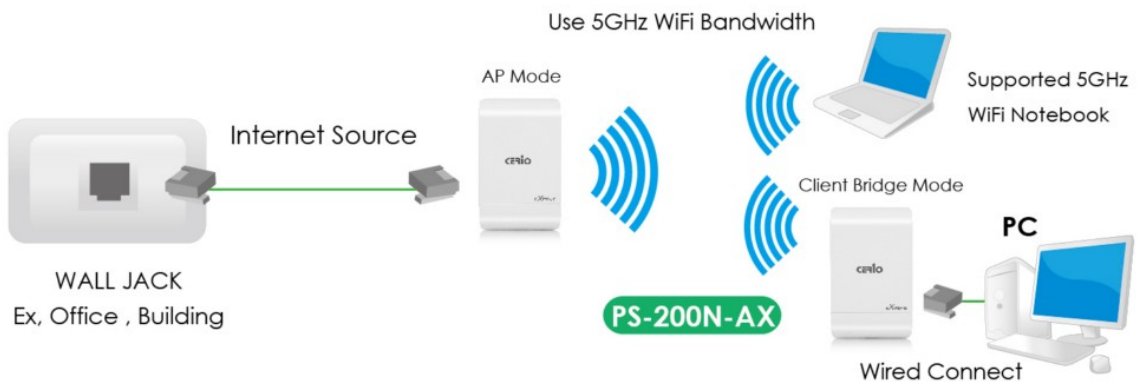
PS-200N-AX's CenOS 3.0 Operation Mode Applications

The PS-200N-AX eXtreme Power 11Na 5Ghz 2x2 +15dBi AP Bridge supports Five operational modes: the **Pure AP mode/AP+WDS mode** and the **Pure WDS mode** and the **CPE and CPE +AP mode** and **Client Bridge + Universal Repeater Mode**. The CERIO PS-200N-AX is equipped with built-in remote management features that simplify the deployment and reduce costs for continued maintenance of the outdoor bridge.

Pure AP Mode & AP/ AP+WDS Mode

- It can be deployed as a tradition fixed wireless Access Point
- It allows wireless clients or Stations(STA) to access
- This enables the wireless interconnection of Access Point in an IEEE802.11 network and accepts wireless clients at the same time

Pure AP Mode



Pure AP with WDS Mode



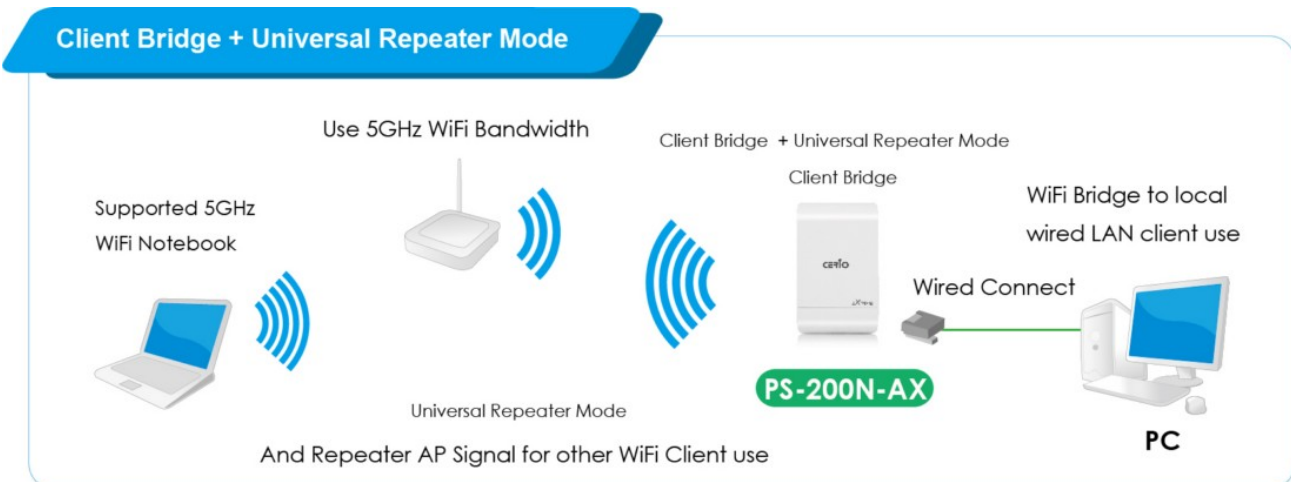
Pure WDS Mode

- This enables the wireless interconnection of Access Point in an IEEE802.11 network
- It allows a wireless network to be expanded using multiple access point without the need for a wired backbone to link them
- This also be referred to as repeater mode
- It can not allow wireless clients or Stations (STA) to access



Client Bridge + Universal Repeater Mode

- It can be used as an Client Bridge + Universal Repeater to receive wireless signal over last mile applications, helping WISPs deliver wireless broadband Internet service to new residential and business customers.
- In this mode, PS-200N-AX is enabled with DHCP Server functions. The wired clients of PS-200N-AX are in the same subnet from Main Base Station and it accepts wireless connections from client devices
- You can disabled the mode extend repeater AP function, will be do to “AP Client ” function.



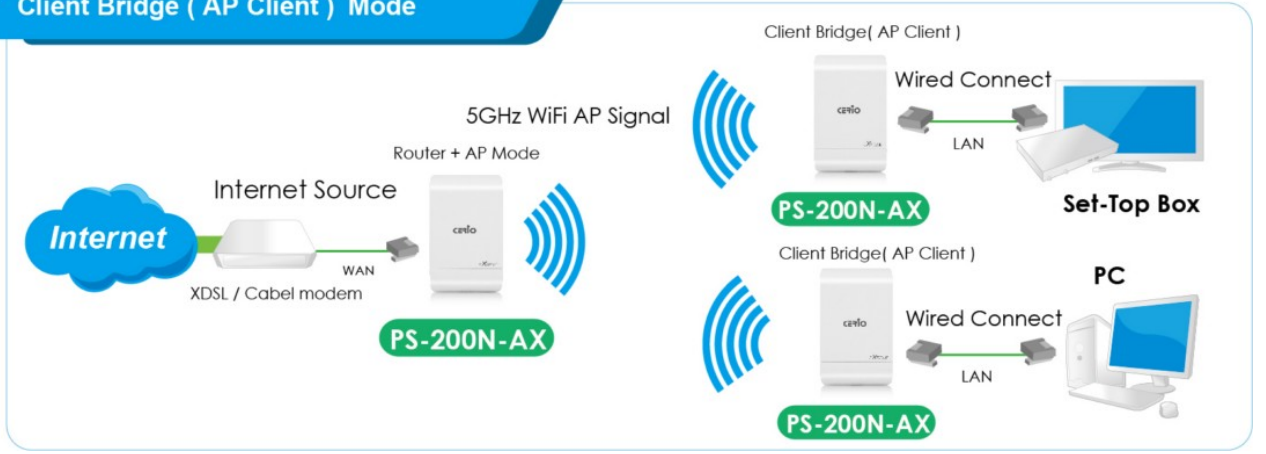
Client Bridge (AP Client) Mode



CPE (WISP) +AP Mode

- WiFi connection as WAN , in CPE + AP mode , the device run as DHCP server to assign IP address to clients out of a private IP address pool behind a NAT
- It can be used as an Outdoor Customer Premises Equipment (CPE) to receive wireless signal over last mile application, helping WISPs deliver wireless broadband Internet service to residents and business customers
- In the CPE + AP mode, PS-200N-AX is a gateway enabled with NAT and DHCP Server functions. The wired clients connected to PS-200N-AX are in different subnet from those connected to Main Base Station, and, in CPE + AP mode, it also accept wireless association from Wireless clients.

Client Bridge (AP Client) Mode



CPE (WISP) Mode

- WiFi connection as WAN , in CPE + AP mode , the device run as DHCP server to assign IP address to clients out of a private IP address pool behind a NAT
- It can be used as an Outdoor Customer Premises Equipment (CPE) to receive wireless signal over last mile application, helping WISPs deliver wireless broadband Internet service to residents and business customers
- In the CPE mode, PS-200N-AX is a gateway enabled with NAT and DHCP Server functions. The wired clients connected to PS-200N-AX are in different subnet from those connected to Main Base Station, and, in CPE mode, it does not accept wireless association from Wireless clients.



PS-200N-AX CenOS 3.0 Software Specifications

Networking

(In CPE mode support)

- Static IP, Dynamic IP(DHCP Client) and PPPoE on WiFi WAN Connection
- Support VPN Pass Throughput (PPTP , IPSec , L2TP)
- PPPoE Reconnect : Always on , On demand, Manual
- MAC Cloning
- DHCP Server
- IEEE802.3 Bridging
- Masquerading (NAT)
- Virtual DMZ, Virtual Server (IP / Port Forwarding)

- Support IP / MAC Filter

(In other mode support)

- Proxy DNS ,Dynamic DNS ,NTP Client
- Bandwidth traffic Shaping

Wireless Feature

- Transmission power control : Layer 1~9
- Channel selection : Manual or Auto
- No of associated clients per AP : 32
- Setting for max no associated clients : Yes
- No. of ESSID (Virtual AP) : 8
- No. of Max. WDS setting : 8
- Preamble setting : Short/ Long
- Setting for 802.11a/n mix or 802.11a only
- Setting for transmission speed
- Dynamic Wireless re-transmission
- IEEE802.11f IAPP (Inter Access Point Protocol), hand over users to another AP
- IEEE 802.11i Preauth (PMKSA Cache)
- IEEE 802.11h - TPC(Transmission Power Control) and DFS(Dynamic Frequency Select)
- IEEE 802.11d -Multi country roaming
- Channel Bandwidth setting : 20MHz or 20/40MHz
- HT Tx/Rx Stream selection : 1 or 2
- A-MSDU and A-MPDU support
- Maximal MPDU density for TX aggregation setting
- Short Slot support

Authentication/Encryption (Wireless Security)

- Blocks client to client discovery within a specified VLAN
- WEP 64/128 bit /EAP-TLS + Dynamic WEP , EAP-TTLS + Dynamic WEP
- PEAP/MSPEAP + Dynamic WEP

- WPA-PSK/TKIP,WPA-802.1x/TKIP, 802.11i WPA2-PSK/CCMP/AES 128/256bit, WPA2 (802.1x /CCMP / AES 128/256bit)
- Setting for TKIP/CCMP/AES 128/256bit (ASCII 63 & HEX 64)key's refreshing period
- Hidden SSID broadcast support
- Access Control list (ACL) by MAC Address
- No. of registered RADIUS servers : 1
- VLAN assignment on BSSID

Quality of Service

- Download and Upload traffic control
- Packet classifications via DSCP (Differentiated Services Code Point)
- Control Policy by IP/IP Ranges/ MAC/ Service
- Layer-7 Protocol Support
- Traffic Analysis and Statistics
- DiffServ/TOS
- IEEE 802.11p/COS
- IEEE 802.1Q Tag VLAN priority control
- IEEE802.11e WMM

Management

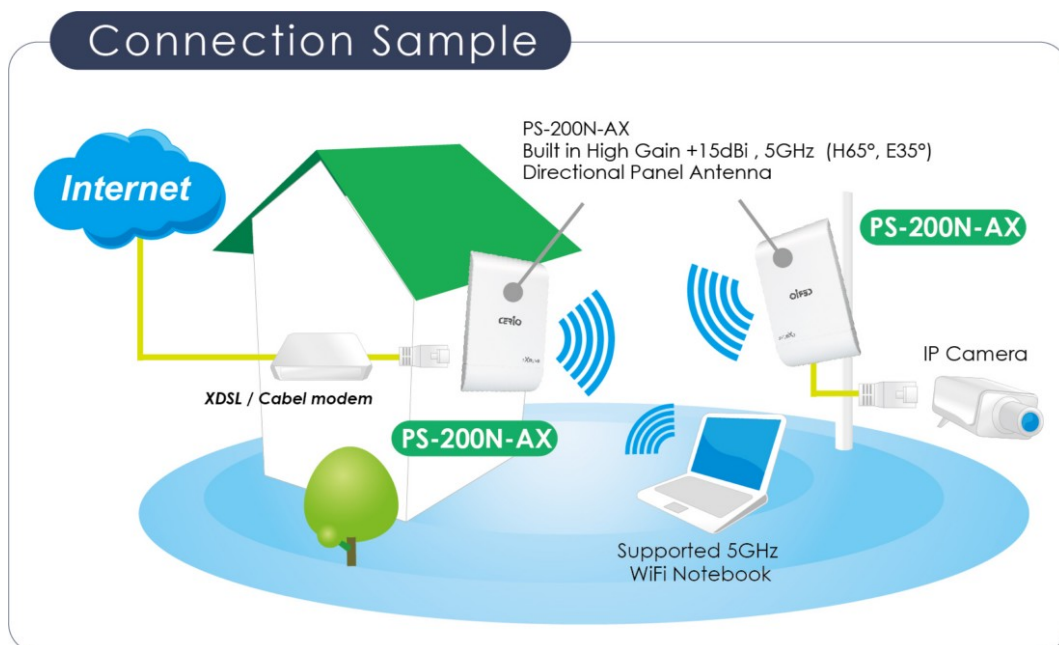
- Web-Based management interface
- Intuitive Web Management Interface
- Support Firmware Upgrade via Web , Reset to Factory Defaults,
- Support Profiles Configuration Backup and Restore
- Remote Link Test – Display connect statistics
- Support SNMP v1/v2c/v3 , MIB II
- Administrative Access : HTTP and HTTPS
- UPnP (Universal Plug and Play) by CPE mode
- NTP Time Synchronization
- SNMP Traps to a List of IP Address
- DHCP client

- Support Event log
- Support CLI access via Telnet and SSH

PS-200N-AX Hardware Key Features

- IEEE 802.11n 2Tx / 2Rx Design, Bandwidth of up to 300Mbps(Tx), 300Mbps(Rx) link rate
- 500mW eXtreme High Power at 5Ghz
- Support IEEE 802.11n and 802.11a, Operates in the 5GHz ISM Band
- Built in +15dBi , 5GHz 2x2 Dual Polarization Directional Panel Antenna (H65°, E35°)
- Topology : Point to Point , Point to Multi Point Apps
- Supports 3 LEDs Wireless Signal Strength and ETH LED .
- Supports Over load current protection and Build in lightning arrester (15kV ESD) for the board design
- Weather-Proof RJ45 Connector , Support Power over Ethernet (PoE) & PoE Bridge by LAN Port function.
- The PoE Ethernet support Wide Range Voltage support (12-68VDC)
- Waterproof IPX6 EN60529/IEC529 stand .and IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-14,IEC 60068-2-28

PS-200N-AX Hardware Application



PS-200N-AX eXtreme Power 11Na 5Ghz 2x2 +15dBi AP Bridge with plastic weatherproof housing utilizes built-in 5 GHz 2x2 15dBi directional antennas and hardware a lightning arrester (15kV ESD) design.

PoE Bridge application

The **CERIO PS-200N-AX** Design in for PoE Bridge hardware function, the PoE Bridge function support provide power source to next PoE AP or next PoE passive PoE(PD) Device . Passthrough the PoE surplus electric power to for next **PS-200N-AX/OW-2xxN2-Series / OW-3xxN2-Series AP** or other 48V PoE the electricity PD installment use, will be structure become very convenience.

Pole / Wall Mount Application

The **PS-200N-AX** hardware Structure (Form Factor) supports both Wall Mounting and Pole Mounting and is designed with a Plastics Weatherproof Housing.



PS-200N-AX Hardware Specifications

	Application Software
OS System Compatible edition	Cerio CenOS 3.0 Software Core
	Specifications
Network Standards Conformance	IEEE 802.11 a/n compliant IEEE 802.3 / IEEE 802.3u IEEE 802.11a/n compliant IEEE802.11f IAPP (Inter Access Point Protocol), hand over users to another AP IEEE 802.11i Preauth (PMKSA Cache) IEEE 802.11h -Transmission Power Control IEEE 802.11d -Multi country roaming
Ethernet Configuration	Plastics Housing Weatherproof Ethernet Connector x 2
LED Indicators	ETH1 LEDx1, ETH2 LED x1 PWR LED x1 LEDs Wireless Signal Strength x 3 (only for Client signal bridge)
	Wireless Specifications
Data Transfer Rate	IEEE802.11a :6/ 9/ 12/ 18/ 24/ 36/ 48/ 54Mbps (auto sensing) IEEE801.11n: 300Mbps (Tx), 300Mbps (Rx)
Frequency Range	IEEE802.11a : 5.150 – 5.350 & 5.725 – 5.825 GHz(USA) 4.900 – 5.250 GHz(Japan) 5.150 – 5.350 & 5.470 – 5.725GHz (Europe ETSI) IEEE802.11n : 5.150 – 5.350 & 5.725 – 5.825 GHz(USA) 4.900 – 5.250 GHz(Japan) 5.150 – 5.350 & 5.470 – 5.725GHz (Europe ETSI)

Channel Spacing	IEEE802.11a : 20MHz IEEE802.11n : 20/40MHz
Media Access Protocol	CSMA / CA with ACK
Modulation Method	IEEE 802.11a : OFDM with BPSK, QPSK, QAM and 64QAM IEEE 802.11n : BPSK, QPSK, 16-QAM, 64-QAM
Operating Channels	IEEE 802.11a : US : 12 (CH: 36, 40, 44, 48, 52, 56, 60, 64, 149, 153, 157, 161) Japan : 4 (CH: 34, 38, 42, 46) ETSI : 19 (CH: 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140) IEEE 802.11n @ 5GHz : US : 12 (CH: 36, 40, 44, 48, 52, 56, 60, 64, 149, 153, 157, 161) Japan : 4 (CH: 34, 38, 42, 46) ETSI : 19 (CH: 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140)
Transmit Power Variation	Max : 27dBm
Receiver Sensitivity	Max : -97dBm

Environmental & Mechanical Characteristics

Operating Temperature	-25 °C ~ 70°C
Storage Temperature	-30 °C ~ 80 °C
Operating Humidity	100% Non-Condensing
Storage Humidity	100% Non-Condensing
Built-In Antenna	+15dBi 2x2 Dual Polarization Directional Antenna (H : 65° , E : 35°)
Form Factor	Pole Mount Ability, Plastics Housing with Weatherproof
System Power Consumption	9Watt Max.
Power Supply	Fast Ethernet PoE Injector Switching Power Supply Supports Power Over Ethernet (48V 24Watt) input (PoE Power Injector) AC Input : 110-240V
Input Power	12~68 Voltage Wide Range PoE in
Dimensions (W x H x D)	5.9x115x194mm

Unit Weight	305g
Reliable Approve	IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-14, IEC 60068-2-28 , EN60529/IEC529
Certifications	CE ,FCC,NCC, ROHS compliant

Package Content

PS-200N-AX Main Unit	x1
PoE Injector (Power Supply)	x1
Self Locking Cable Ties for Pole Mounting	x2
Wall Mounting kit	x1
CD Manual	x1
Quick Installation Service Card	x1