



OW-310N2

eXtreme Power 11N 2.4Ghz 2x2 +10dBi

Outdoor Access Point (1000mW)



EXTREME
POWER

EAN Code : 4712757152708

Built-in CenOS 3.0 Software Core

1000mW HIGH POWER	11n/bg SUPPORT	300Mbps 2T2R	CONNECTOR N-Type	IAPP SUPPORT	IP68 Approved	802.1X	WEP	WPA	WPA2
WEB BASED	PPPoE WLAN	DHCP SERVER	Client Bridge	Repeater WDS	Multiple SSIDx7	Wireless CPE	DMZ SUPPORTED	VPN Pass Through	Virtual Server
QoS WMM	PoE Bridge	Wall Mounted	Pole Mounted	SNMP Trap	SNMP v1/v2c/v3	TAG VLAN	ACL SUPPORTED	Layer7 Filter	ESD 15kV

The **CERIO OW-310N2** eXtreme Power 11N 2.4Ghz 2x2 +10dBi Outdoor Access Point enables connection to Wireless Outdoor Network for service provider deploying last mile services to business or residential broadband subscribers. Network administrators can create and centrally manage multiple subscriber service tier using per-subscriber rate limiting features. The WISP bridge utilizes a **1000mW** output Tx Power with **Built-in 10dBi patch antennas** connect to the Wi-Fi mesh or WDS infrastructure and provides the subscriber with an Ethernet connection for a local access to extend the range and increase the performance of our wireless network. The outdoor bridge may connect to the **Wi-Fi MESH** or **WDS** infrastructure and provides the subscriber with an Ethernet connection for a local access. The CERIO OW-310N2 also **includes PoE**, power and data that are supplied to the unit using CAT5 Ethernet cable. **CERIO OW-310N2** eXtreme Power 11N 2.4Ghz 2x2 +10dBi Outdoor Access Point **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**. Regardless of the wireless bandwidth and the wireless load capacity potency, supports seven operational modes: **the Router AP mode / Router AP + WDS mode and Pure AP mode / AP+WDS mode and the Pure WDS mode and the Client Bridge + Repeater AP Mode and WISP + Repeater AP mode**. CERIO OW-310N2 is equipped with built-in remote management features that simplify deployment and reduce cost for continued maintenance of the outdoor bridge.

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 Router + WiFi Access Point (Includes Router AP+WDS) and 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 Router AP with WDS mode / 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.

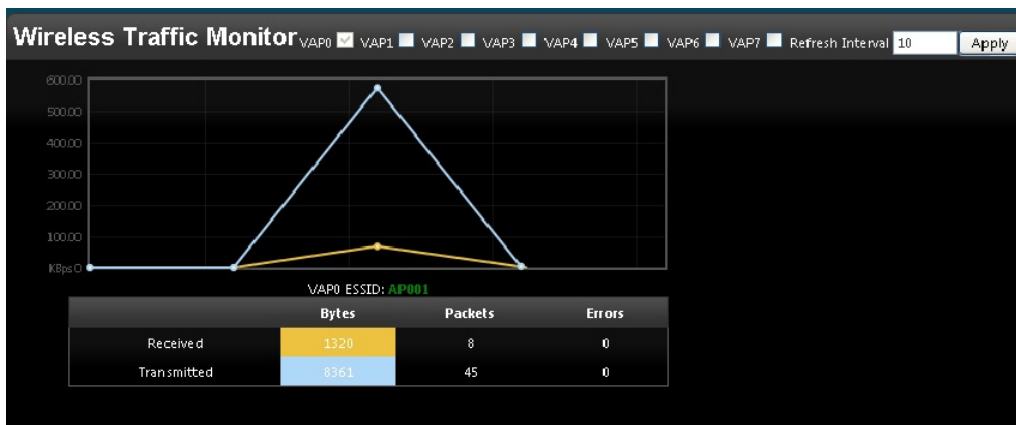
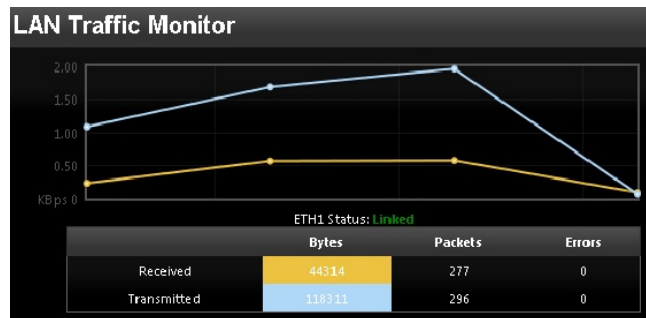


Only Cerio's special model supports Router AP mode

OW-310N2 CenOS 3.0 Software key Features

- Operation Modes : Router AP Mode, AP Mode, WDS Mode, Client Bridge + Repeater AP Mode and WISP + Repeater AP Mode
- Maximum Security with 802.1x, WPA, and WPA2
- Supports 8 Multiple-ESSID. And Support IEEE802.11f IAPP
- Supports Static Routing and RIP and OSPF Dynamic Routing
- Supports Layer-7 Protocol Filter and Content Filter
- QoS(Quality of Service) for bandwidth management and traffic prioritization
- Supports IEEE802.1d Spanning Tree
- Ping Watchdog function support
- Support Hardware chipset base Watch Time Dog , The OS will be reboot by automatically before crash
- Software UI support Auto reboot setting function , Can by Hour/Daily/Weekly to setting software Auto reboot.
- Integrated IGMP v1/v2/v3 snooping functions and Support Web management and SNMP MIB-II

- 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
- Support Web management and SNMP MIB-II and CLI via Telnet and the SSH interface Management function
- Provide Traffic Monitor and Graphical GUI Status Interface



OW-310N2 CenOS 3.0 Operation Mode Applications

Router AP Mode (Gateway + Access Point + WDS)

- Router AP without WDS , It can be deployed as a gateway with wireless Access Point
- Router AP with WDS, It can be deployed as a gateway with wireless Access Point and provides WDS link for network extension

Pure AP Mode & AP+WDS Mode

- It can be deployed as a tradition fixed wireless Access Point
- It allow wireless clients or Stations(STA) to access

- This enables the wireless interconnection of Access Point in an IEEE802.11 network. and accept wireless clients at the same time

Pure WDS Mode (Repeater)

- 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 cannot allow wireless clients or Stations (STA) to access

Client Bridge + Repeater AP Mode

- It can be used as an Client Bridge + Repeater AP to receive wireless signal over last mile applications, helping WISPs deliver wireless broadband Internet service to new residential and business customers.
- In this mode, OW-310N2 is enabled with DHCP Server functions. The wired clients of OW-310N2 are in the same subnet from Main Base Station and it accepts wireless connections from client devices

WISP +AP Mode

- Wi-Fi connection as WAN , in CPE 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, OW-310N2 is a gateway enabled with NAT and DHCP Server functions. The wired clients connected to OW-310N2 are in different subnet from those connected to Main Base Station, and, in CPE mode, it does not accept wireless association from wireless clients.

OW-310N2 CenOS 3.0 Software Specifications

Networking

- Supports Static IP, Dynamic IP(DHCP Client) and PPPoE on Wi-Fi WAN Connection
- Supports VPN Pass Throughput (PPTP , IPSec , L2TP) and MAC Cloning
- Proxy DNS ,Dynamic DNS ,NTP Client

- Virtual DMZ, Virtual Server (IP / Port Forwarding)
- Supports IP / MAC Filter and Support Bandwidth traffic Shaping

Wireless Feature

- Transmission power control : 1~100%
- Channel selection : Manual or Auto
- No of associated clients per AP : 32
- Setting for max no associated clients : Yes
- Supports 8 virtual ESSID and associated clients per AP to 32 and the Pure WDS Max. 4
- Setting for transmission speed
- Dynamic Wireless re-transmission
- IEEE 802.11i Preauth (PMKSA Cache)
- IEEE 802.11d -Multi country roaming
- Channel Bandwidth setting : 20MHz or 20/40MHz
- HT Tx/Rx Stream selection : 1 or 2
- 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), No. of registered RADIUS servers : 1
- Setting for TKIP/CCMP/AES 128/256bit (ASCII 63 & HEX 64)key's refreshing period
- Hidden SSID broadcast support, and VLAN assignment on BSSID
- Access Control list (ACL) by MAC Address

Quality of Service

- Download and Upload traffic control and support Traffic Analysis and Statistics
- Packet classifications via DSCP (Differentiated Services Code Point) and Support IEEE802.11e WMM
- Control Policy by IP/IP Ranges/ MAC/ Service , Layer-7 Protocol Support
- No. of Max. Policy setting : 10
- DiffServ/TOS , COS, IEEE 802.1Q Tag VLAN priority control

Management

- Web-Based management interface, Intuitive Web Management Interface, Administrative Access : HTTP and HTTPS and support CLI access via Telnet and SSH
- Supports Firmware Upgrade via Web , Reset to Factory Defaults,
- Supports SNMP v1/v2c/v3 , MIB II
- UPnP (Universal Plug and Play)
- NTP Time Synchronization
- SNMP Traps to a List of IP Address
- Support Event log

OW-310N2 Hardware Key Features

- IEEE 802.11n Compliance in 2Tx / 2Rx Design
- Enables Bandwidth of up to 300Mbps(Tx), 300Mbps(Rx) link rate
- Support IEEE 802.11n, Operates in the 2.4GHz ISM Band
- 1000mW at 2.4Ghz eXtreme High Power
- Built in +10dBi , 2.4GHz (H110, E60) Directional Panel Antenna
- Topology : Point to Point , Point to Multi Point
- Support Over load current protection for the board design . and 3 LEDs Wireless Signal Strength
- Weather-Proof Housing (IP67/ 68 Approved)
- Weater-Proof M-13 RJ45 Connector
- Support Power over Ethernet (PoE) & PoE Bridge by LAN Port function.
- Wide Range Voltage Input PoE Power support (12-68VDC)
- Build-in lightning arrester (15kV ESD)

OW-310N2 Hardware Application

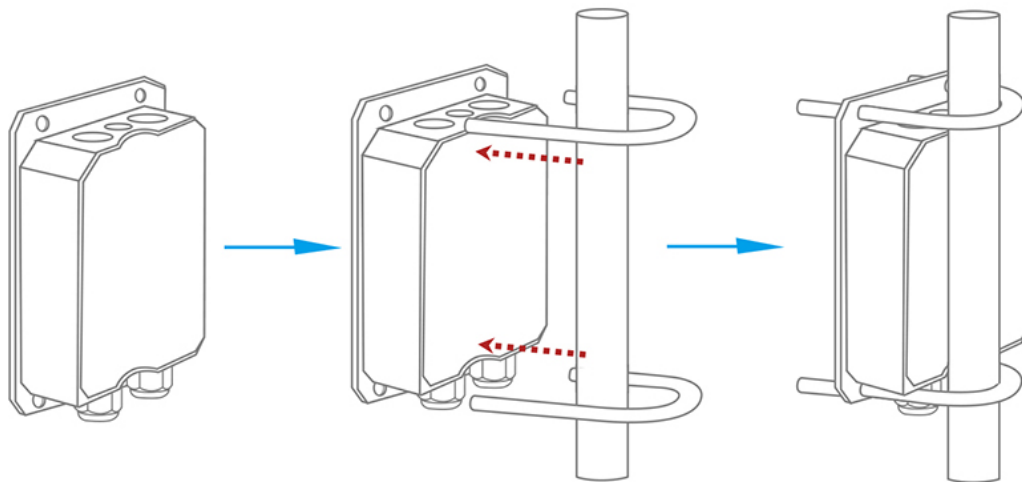
OW-310N2 eXtreme Power 11N 2.4Ghz 2x2 +10dBi Outdoor Access Point with die case weatherproof housing utilizes built-in 2.4 GHz 2x2 10dBi directional antennas and hardware a lightning arrester (15kV ESD) design.

PoE Bridge application

The CERIO OW-300N2 / OW-310N2 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 **OW-2xxN2-Series / OW-3xxN2-Series AP** or other 48V PoE the electricity PD installment use, will be structure become very convenience.

Use U-Clamps for Easy Pole Mount Installation



OW-310N2 Hardware Specifications

Application Software

OS System Compatible edition

Cerio CenOS 3.0 Software Core

Specifications

Network Standards Conformance

- IEEE 802.11 b/g/n compliant
- IEEE 802.3 / IEEE 802.3u
- IEEE 802.11 b/g/n compliant
- IEEE 802.11i Preauth (PMKSA Cache)
- IEEE 802.11d -Multi country roaming
- IEEE 802.11Q

Ethernet Configuration IEEE802.11f
 IEEE802.11e WMM
 Die Case Housing Weatherproof Protection Ethernet Connector x 2
 (Power over Ethernet PoE in and PoE Bridge Port)

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 IEEE802.11b : 1 / 2 / 5.5 / 11Mbps (auto sensing)
 IEEE801.11g : 6/ 9/ 12/ 18/ 24/ 36/ 48/ 54Mbps (auto sensing)
 IEEE802.11n : 300Mbps (Tx), 300Mbps (Rx)

Frequency Range 2.412 ~ 2.462GHz (USA)
 2.412 ~ 2.484GHz (Japan)
 2.412 ~ 2.472 GHz (Europe ETSI)
 2.457 ~ 2.462 GHz (Spain)
 2.457 ~ 2.472 GHz (France)

Channel Spacing IEEE802.11b/g/n : 20/40MHz

Media Access Protocol CSMA / CA with ACK

Modulation Method IEEE 802.11b: DSSS (DBPK,DQPSK,CCK)
 IEEE 802.11g/n : OFDM(64-QAM,16-QAM,QPSK,BPSK)

Operating Channels 802.11b/g : 11 for FCC,14 for Japan,13 for Europe, 2 for Spain, 4 for France

Transmit Power Variation Max : 30± 2 dBm

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

Antenna Connector 10dBi Dual Polarization Directional Antenna (H : 110 , E : 60)

Form Factor	Wall Mount and Pole Mount Ability, Die-Cast aluminum Enclosure with IP67/IP68 Rating
System Power Consumption	9 Watt
Power Supply	Fast Ethernet PoE Injector Switching Power Supply Support Power Over Ethernet (48V) input (PoE Power Injector) AC Input : 110-220V
Input Power	12~68 Voltage Wide Range PoE in
Dimensions (W x H x D)	102 x 162 x 58 mm
Unit Weight	671g
Certifications	CE , FCC , NCC 、BSMI 、ROHS compliant

Package Content

OW-310N2 Main Unit	x1
POE Power Injector kit (Power Supply)	x1
Wall/Pole Mounting Bracket	x1
CD Manual	x1
Warranty Card	x1