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CERIO Corporation

OW-310N2

1000mW eXtreme Power 11N 300Mbps Outdoor Access Point

Quick Installation Guide

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1. Overview

CERIO OW-310N2 Outdoor AP Bridge utilizes a 1000mW high power with Aluminum Extrusion housing weatherproof. **The OW-310N2 Build-in 2.4 GHz 2Tx/2Rx Directivity antennas,** Flow Bandwidth support 802.11n of up to 300Mbps(Tx), 300Mbps(Rx) link rate. **And Build in lightning arrester (15kV ESD) OW-310N2** may connect to the WiFi 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 AP/bridge may connect to the **WiFi Mesh** or **WDS** infrastructure and provides the subscriber with an Ethernet context and provides the subscriber with an Ethernet context and provides the subscriber with an Ethernet context to the **WiFi Mesh** or **WDS** infrastructure and provides the subscriber with an Ethernet context to the unit using CAT5 Ethernet cable. Furthermore the **OW-310N2** have support PoE power supply function, and Support PoE Bridge, Can provide PoE Power to the next OW-310N2 PoE unit.

CERIO OW-310N2 1000mW eXtreme Power 11N Outdoor Access Point 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 respectively with built-in remote management features simplify the deployment and reduce cost for continued maintenance of the outdoor bridge.

CERIO OW-310N2 1000mW eXtreme Power 11N Outdoor Access Point supports Design smart PoE Bridge function, the PoE Bridge function support provide next AP power. Can will be structure become very convenience. And the PoE bridge support CERIO WM-series AP or OW-series to be dual band budle wireless soultion.

CERIO OW-310N2 1000mW eXtreme Power 11N Outdoor Access Point supports High Power Outdoor AP/ Bridge 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** etc. respectively with built-in remote management features simplify the deployment and reduce cost for continued maintenance of the outdoor bridge.



2. Package Content

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

3. Panel Function Description

There is several LED indicators on the front of the **OW-310N2**. Please refer to the definitions below :



- (1) The Ethernet connect of LAN Port
- (2) The LED indicator of LAN Port
- (3) At in Reset button , and Support Ground connection
- (4) The Ethernet connect of WAN / PoE Port
- (5) The LED indicator of WAN Port
- (6) Power LED
- (7) The three LED's for strong or weakly indicator on signal bridge, and the three LED's only support "Client Bridge + Repeater AP and WISP + Repeater AP modes".
- (8) Built-in 10dBi Directional Antenna



4. Features

- Operation Modes : Router AP Mode, AP Mode, WDS Mode, Client Bridge + Repeater AP Mode and WISP Repeater + AP Mode
- > 1000mW at 2.4Ghz Output High Power
- IEEE 802.11n 2Tx / 2Rx Design, Bandwidth of up to 300Mbps(Tx), 300Mbps(Rx) link rate
- Maxmum Security with 802.1X, WAP, and WPA2
- Support Over load current protection for the board design . and 3 LEDs Wireless Signal Strength
- Weater-Proof RJ45 Connector, Integragted Power over Ethernet (PoE)
- Support PoE Bridge by LAN Port funtion.
- Build in lightning arrester (15kV ESD)
- Support 8 Multiple-BSSID. And Support IEEE802.11f IAPP
- Support Static Routing and RIP and OSPF Dynamic Routing
- Support Layer-7 Protocol Filter and Content Filter
- > QoS(Quality of Service) for bandwidth management and traffic prioritization
- Support IEEE802.1d Spanning Tree
- Integragted IGMP v1/v2/v3 snooping functions and Support Web management and SNMP MIB-II
- Built-in software interface allows for communicating with CERIO AM-Series AP Management
- > WLAN Switch or Access Controller of network management servers.

Networking

- Support Static IP, Dynamic IP(DHCP Client) and PPPoE on WiFi WAN Connection
- Support VPN Pass Throughput (PPTP, IPSec, L2TP) and MAC Cloning
- Proxy DNS ,Dynamic DNS ,NTP Client
- > Virtual DMZ, Virtual Server (IP / Port Forwarding) and
- Support IP / MAC Filter and Support Bandwidth trafic 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
- Support 8 virtual BSSID and associated clients per AP to 32 and the Pure WDS Max. 8
- Setting for transmission speed
- > Dynamic Wireless re-transmission



- IEEE 802.11i Preauth (PMKSA Cache)
- IEEE 802.11h TPC(Transmission Power Control)
- 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, IEEE 802.11p/COS, IEEE 802.1Q Tag VLAN priority control

Parental Control

- Blocking Control Policy by IP Range / MAC Group / Port / Layer-7 Protocol
- URL Blocking

Management

- Web-Based management interface, Intuitive Web Management Interface, Administrative Access : HTTP and HTTPS and support CLI access via Telnet and SSH
- Support Firmware Upgrade via Web , Reset to Factory Defaults,
- Support 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

5. Software Configuration

OW-310N2 supports web-based configuration. Upon the completion of hardware installation, **OW-310N2** can be configured through a PC/NB by using its web browser such as Internet Explorer 6.0 or later.

- > Default IP Address: 192.168.2.254
- > Default Subnet Mask: 255.255.255.0
- > Default Username and Password

MODE	Router , AP , WDS , (WISP / Client Bridge)+ Repeater AP		
Management Account	Root Account Admin Account		
Username	root	admin	
Password	default	admin	

> IP Segment Set-up for Administrator's PC/NB

Set the IP segment of the administrator's computer to be in the same range as **OW-310N2** for accessing the system. Do not duplicate the IP Address used here with IP Address of **OW-310N2** or any other device within the network.

- > Example of Segment: (Windows XP)
 - Click Start -> Settings -> Control Panel, and then "Control Panel" window appears. Click on "Network Connections", and then "Network Connections" window appears.
 - Click right on "Local Area Connection", and select Properties.





 In "Local Area Connection Properties" window, select "Internet Protocol (TCP/IP)" and click on Properties button.

🕹 Local Area Connection Properties 🛛 🔹 💽				
General Advanced				
Connect using:				
Wheel Accel accel and AND PD ac. Accel Configure				
This connection uses the following items:				
✓ 7 Microsoft TCP/IP version 6				
✓				
Install Uninstall Properties				
Description				
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.				
 Show icon in notification area when connected Notify me when this connection has limited or no connectivity 				
OK Cancel				



• Select "Use the following IP address", and type in

Internet Protocol (TCP/IP) Properties				
General				
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.				
O Obtain an IP address automatical	ly 🔤			
Use the following IP address: —				
IP address:	192.168.2.22			
S <u>u</u> bnet mask:	255 . 255 . 255 . 0			
Default gateway:				
Obtain DNS server address auton	natically			
Output the following DNS server addresses and the server addresses addre	dresses:			
Preferred DNS server:	· · ·			
Alternate DNS server:	· · ·			
	Ad <u>v</u> anced			
OK Cancel				

Launch Web Browser

Launch as web browser to access the web management interface of system by entering the default IP Address, http://192.168.2.254, in the URL field, and then press Enter.





System Login

Connect to 192.16	8.2.254	? 🗙
	G	
The server 192.168.2 and password.	.254 at OW-310N2 requires a us	emame
Warning: This server password be sent in a without a secure com	is requesting that your username n insecure manner (basic authent nection).	e and tication
<u>U</u> ser name :	2	*
<u>P</u> assword :		
	Remember my passw	ord
	ОК С	ancel

System Overview page will appear after successful login.

CERIO	OW-310N2
System ▼ Wireless ▼ Advance ▼ Utilities ▼ Status ▼	
Overview	
Device Information	LAN Information Traffic Monitor
Mode: Router AP	IP Address: 192.168.2.254
Firmware Version: Cen-CPE-N2H10A V1.0.0 BETA	IP Netmask: 255.255.0
Firmware Date: 2012/12/21 14:22:56	
System Time: 1970/01/01 00:06:33	WAN Information Traffic Monitor
System Up Time: 06:33	Internet Connection Type: Dynamic IP
ETH1 MAC: 00:11:A3:00:00:0B	Reconnect Mode: Renew Release
ETH2 MAC: 00:11:A3:00:00:0A	IP Address:
Wireless MAC: 00:11:A3:00:00:0C	IP Netmask:
CPU Loading:0%	IP Gateway:
Memory Used: 72%	DNS:
ETH1 ETH2	
	Wireless Information Traffic Monitor
	Band: 802.11b/g/n
	Channel: 5
	Current Txpower: 28 dBm (630 mW)

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6. Wizard Setup

The setup wizard is designed to be an 'easy to use' utility that allows quick modification of the **OW-310N2** UI Web-based GUI interface settings . The wizard should take no longer than 5 minutes to use. Please be aware that the wizard doesn't give full access to all the setup options in **OW-310N2** in/Outdoor PoE Bridge Router AP.

This is purely because the wizard has been designed for a quick and easy setup aimed at all users. More advanced users can configure the remaining settings using the advanced settings options from the setup menu.

> Chose Your Operating Mode

OW-310N2 supports six operational modes, AP and AP+WDS mode, WDS mode, Client Bridge + Repeater AP mode, Router AP mode , WISP and WISP + Repeater AP mode etc. respectively with built-in remote management features



> Wizard Guide

Please click on **System** \rightarrow **Setup Wizard** \rightarrow Next and follow the below guide.



1) Follow And Guide Continuing Setting



Setup Wizard	
Setup Wizard	
The setup wizard will guide you to configure access wizard step by step	point for first time. Please follow the setup
In this mode, the device can be used to Access Point ports and wireless interface are bridged together.	for wireless clients connection, the all ethernet
Nex	

2) LAN setup → Here are the instructions for setup your OW-310N2 local LAN IP address and netmask. If you don't want change the default OW-310N2 IP 192.168.2.254 address, please keep the default and go next setup.

Setup Wizard			
	-LAN-Setup		
	This page is used to configure t	the parameters for local ar	ea network which connects to the LAN port
	of your Access Point. Here you may change the setting for IP Address, Netmask, etc.		
	Mode:	💿 Static IP 📃 Dyna	mic IP
		102 1/0 2 254	
	IP Address:	192.168.2.254	
	IP Netmask:	255.255.255.0	
	IP Gateway:	192.168.2.1	
	Cancel Back Next		

3) DNS → If you don't know for your ISP correct DNS IP address, Please click "No default DNS server" to follow your ISP DNS related IP address.

<u>S</u> (etup Wizard		
	DNS		
	This page allows you assign DNS Server IP address.		
	DNS: 💿 No Default DNS Server 🔍 Specify DNS Server IP		
	Primary DNS: 168.95.1.1		
	Secondary DNS:		
	Cancel Back Next		



4) Wireless Setup → If you are not sure which setting to choose, Please then the default setting to best WiFi smart channel judgment for auto channel, and adjust the output power to level9 (100%) Extended service set ID indicated the SSID which the clients used to connect to the access point ESSID.

Se	Setup Wizard				
	Wireless Setup				
	This page is used to configure the parameters for wireless LAN clients which may connect to your			n may connect to your	
	Access Point.				
	Band Mode:	802.11b/g/n	>		
	Country:	US	×		
	Channel:	9 (2.452 Ghz)	×		
	Tx Power:	Level 9	×		
	Channel BandWidth:	0 20	20/40		
	Extension Channel:	🔍 Upper	💿 Lower		
	ESSID:	CERIO_TEST			
	Cancel Back Next				

5) Wireless Security setup → Suggested setting that you use wireless encryption authentication type for security Type : to "WPA2-PSK" the cipher suite : to "AES", Key Type : to "ASCII" for 11n high speed mode.

Pre-shared Key : Enter the information for pre-shared key; Pre-shared key can be either entered as a 256-bit secret in 64 HEX digits format or 8 to 63 ASCII characters. The Pre-Shared key sample as "12345678" wireless encryption key for wireless access.

Setup Wizard			
Wireless Security Setup			
This page allows you setup the wireless security to prevent any unauthorized access to your wireless network.			
Security Type: WPA2-PSK			
WPA General			
Cipher Suite: 💿 AES 💿 TKIP			
Key Type: 💿 ASCII 💦 🔍 HEX			
Pre-shared Key: 12345678			
Cancel Back Finish			



6) Finishing Wizard

Setup Wizard		
Wireless Security Setup This page allows you setup the wireless secu network.		
Security Type: WPA2-PSK		Please Wait
WPA General		A System is restarting, please wait for 44 seconds
Cipher Suite: 🔍 AES		
Key Type: 🔍 ASCII		
Pre-shared Key: certouserman		
CanCel	Back Finish	

Click *Finish* button to save your setting . please wait till completion of the reboot process.