CERIO Corporation

OW-300N2

1000mW eXtreme Power 11N 300Mbps Outdoor Access Point

Quick Installation Guide

1. Overview

CERIO OW-300N2 Outdoor AP Bridge utilizes a 1000mW high power with Aluminum Extrusion housing weatherproof. Flow Bandwidth support 802.11n of up to 300Mbps(Tx), 300Mbps(Rx) link rate. **And Build in lightning arrester (15kV ESD) OW-300N2** 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 connection for a local access. also with **included PoE power** and data are supplied to the unit using CAT5 Ethernet cable. Furthermore the **OW-300N2** have support PoE power supply function, and Support PoE Bridge, Can provide PoE Power to the next OW-300N2 PoE unit .

CERIO OW-300N2 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. And the CERIO OW-300N Support QoS mechanism by .

2. Package Content

OW-300N2 Main Unit	**x1**
Power Adapter (Power Supply)	**x1**
PoE Injector	**x1**
Wall / Pole Mounting Bracket	**x1**
CD Manual	**x1**
Warranty Card	**x1**

3. Applications in Wireless Network

Smart of PoE Bridge application

CERIO OW-300N2 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-300N2 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.

Wireless Architecture Mode

Pure AP Mode & AP/ 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

➢ 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-300N2** is enabled with DHCP Server functions. The wired clients of OW-300N2 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.

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

WISP + Repeater AP Mode

➢ 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-300N2** is a gateway enabled with NAT and DHCP Server functions. The wired clients connected to OW-300N2 are in different subnet from those connected to Main Base Station, and, in CPE mode, it does not accept wireless association from wireless clients.

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. Panel Function Description

There is several LED indicators on the front of the **OW-300N2**. Please refer to the definitions below :
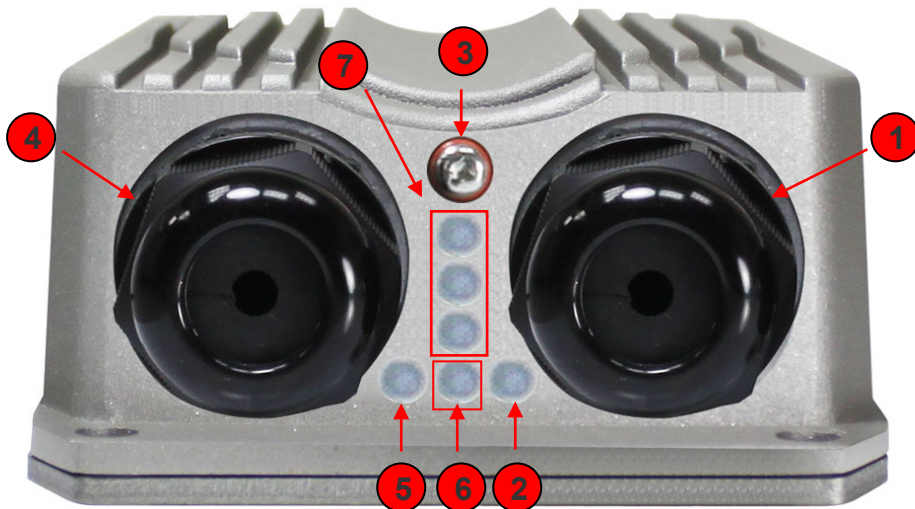
(1) The Ethernet connect of LAN Port

(2) The LED indicator of LAN Port

(3) At in Reset button

(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**".

Antenna Description

6. Ground connection install a method

Back
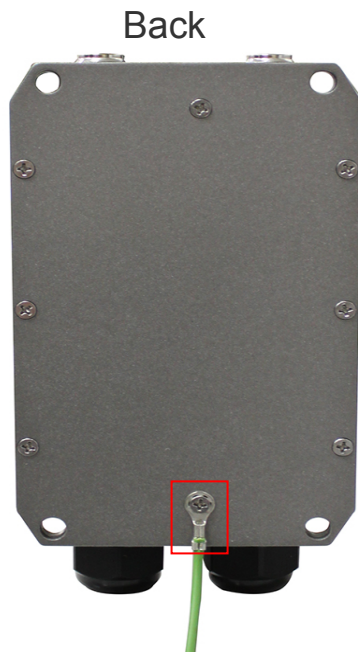
7. Software Configuration

OW-300N2 supports web-based configuration. Upon the completion of hardware installation, **OW-300N2** 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-300N2** for accessing the system. Do not duplicate the IP Address used here with IP Address of **OW-300N2** 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**.
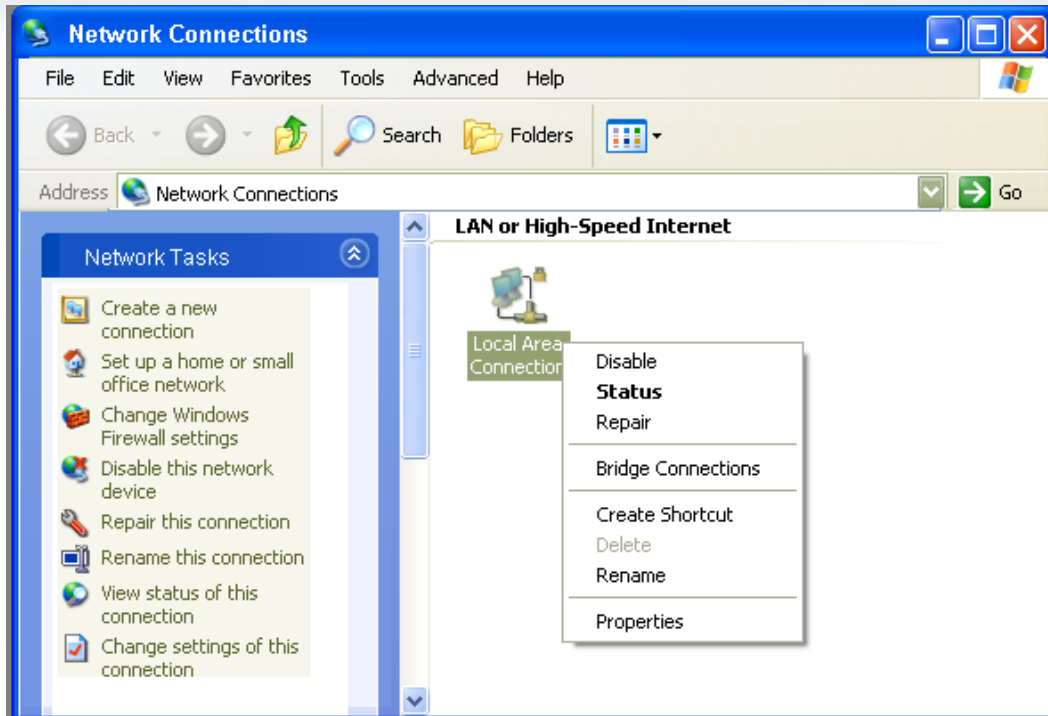
- In "**Local Area Connection Properties**" window, select "**Internet Protocol (TCP/IP)**" and click on **Properties** button.
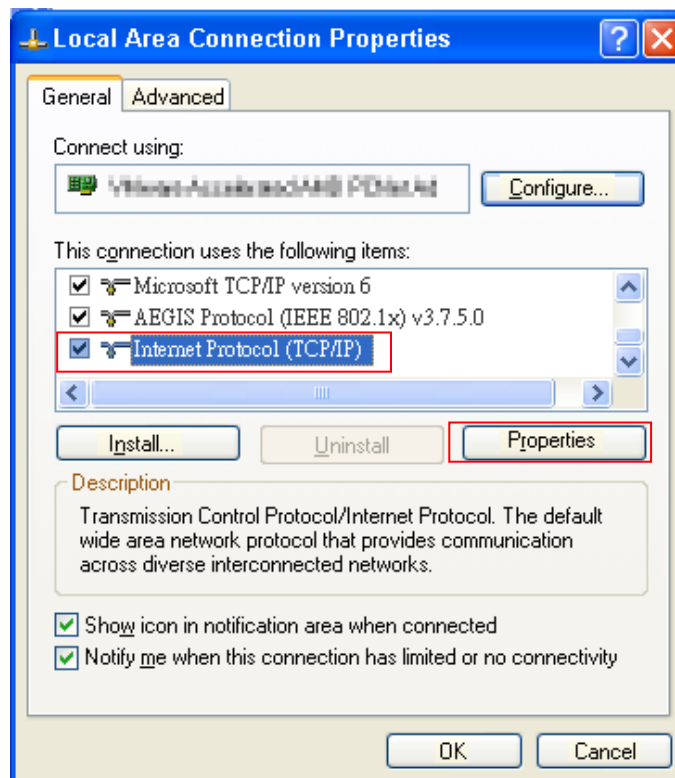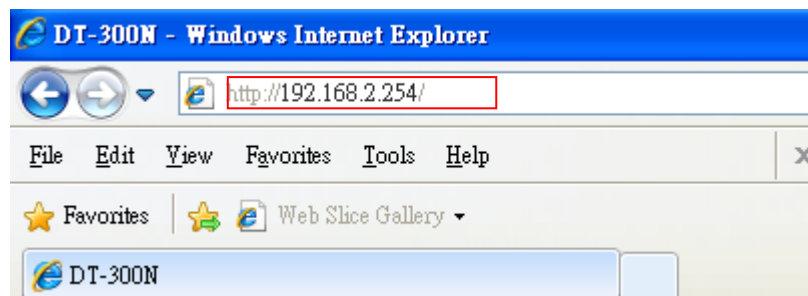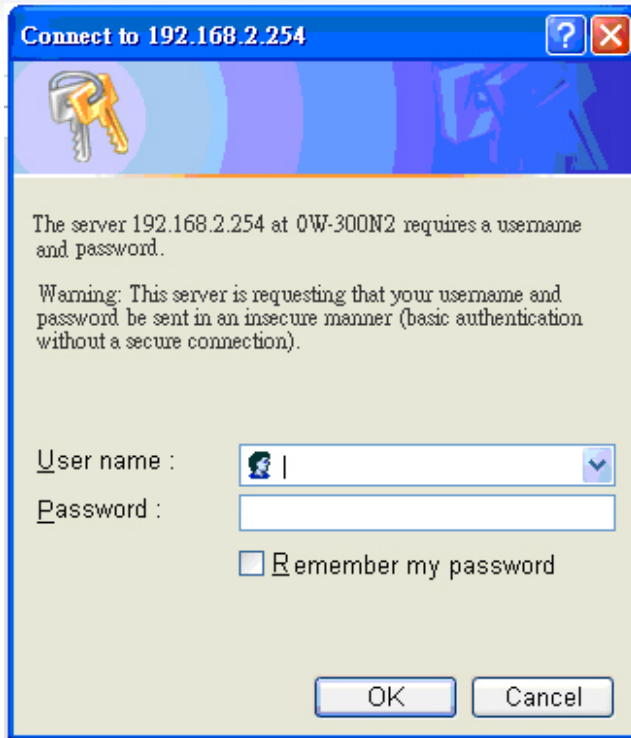

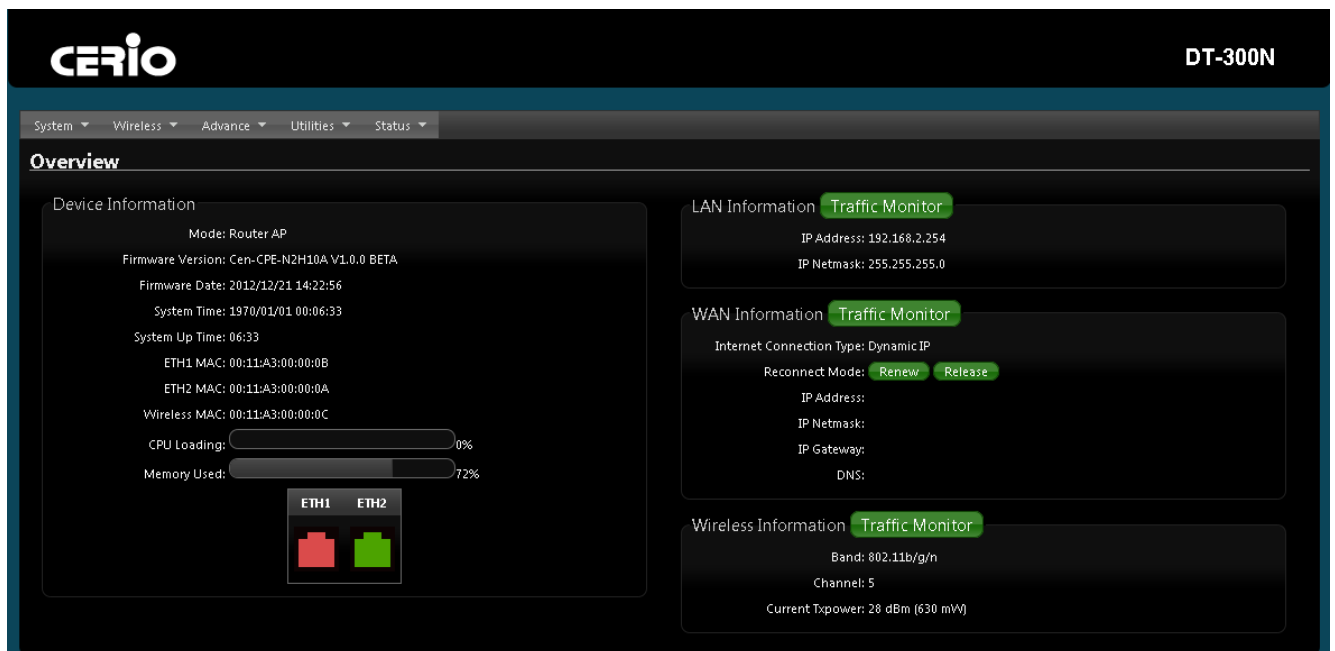- Select "**Use the following IP address**", and type in
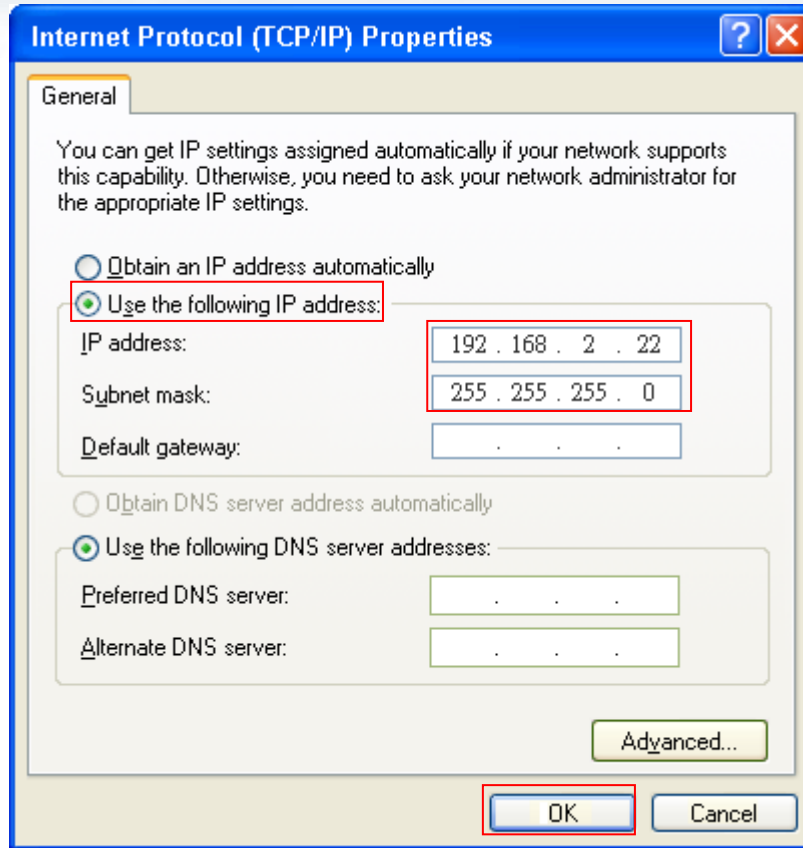
➢ **Launch Web Browser**

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**

> System Overview page will appear after successful login.

8. Wizard Setup

The setup wizard is designed to be an 'easy to use' utility that allows quick modification of the **OW-300N2** 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-300N2** 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-300N2 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
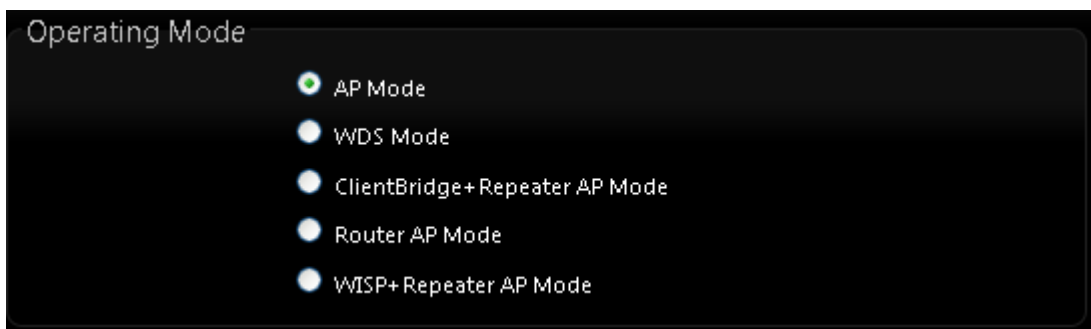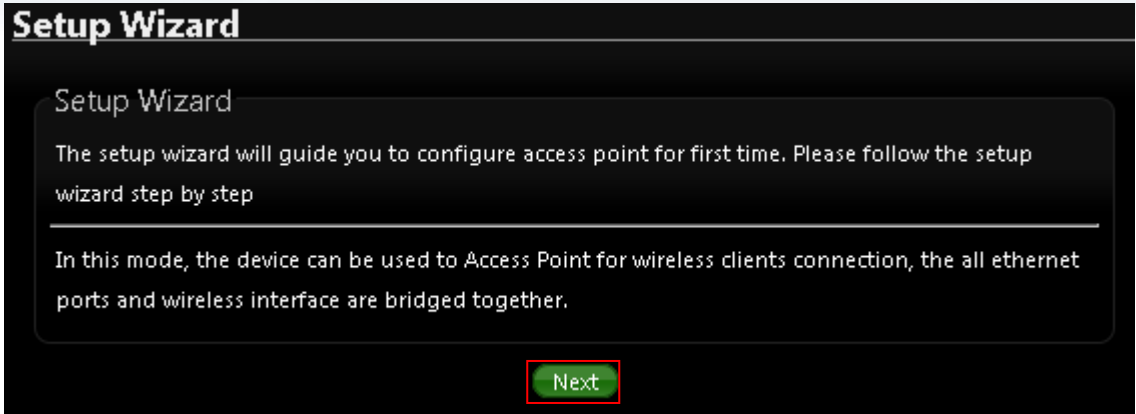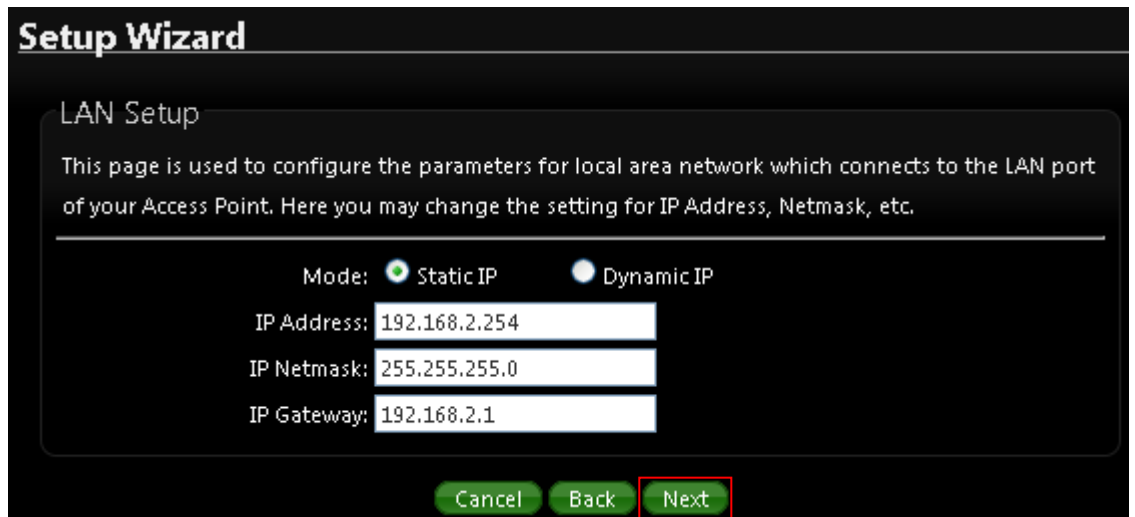

➢ **Wizard Guide**

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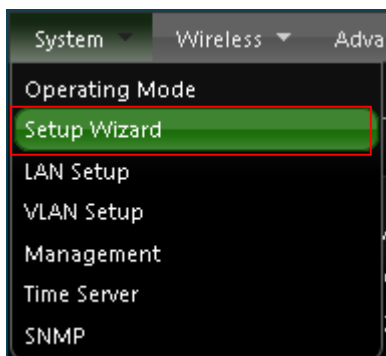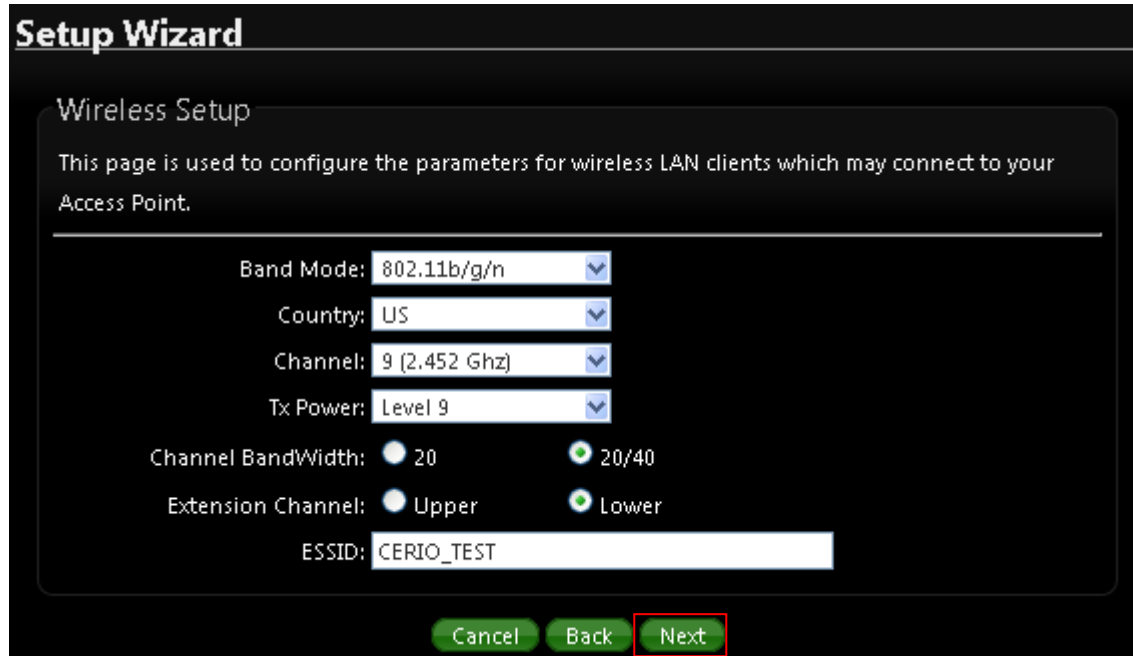

1) **Follow And Guide Continuing Setting**

2) **LAN setup** → Here are the instructions for setup your OW-300N2 local LAN IP address and netmask. If you don't want change the default OW-300N2 IP 192.168.2.254 address, please keep the default and go next setup.

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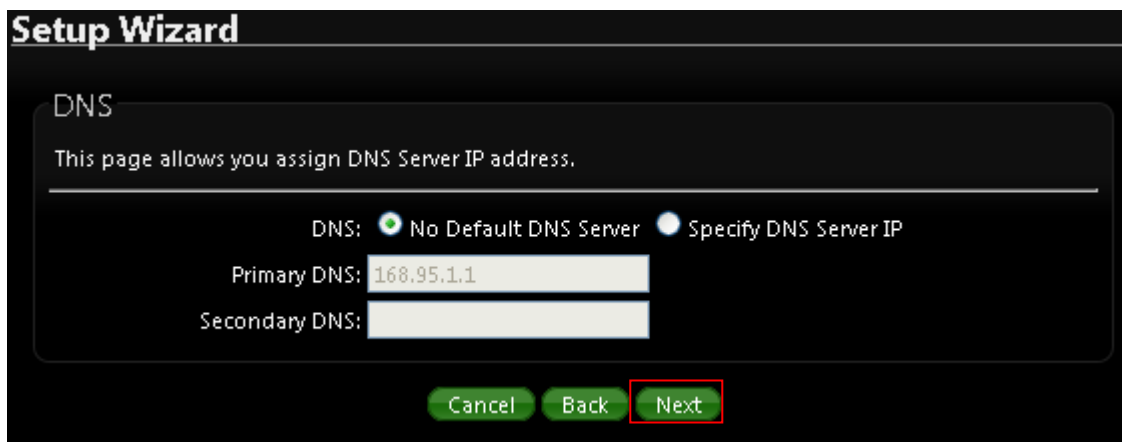
4) **Wireless Setup** → If you are not sure which setting to choose, Please then the default setting to best WiFi smart channel judgment for auto channel, and adjust the output power to level9 (100%) Extended service set ID indicated the SSID which the clients used to connect to the access point ESSID.

Setup Wizard

Wireless Setup

This page is used to configure the parameters for wireless LAN clients which 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: ○ 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.

6) Finishing Wizard

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