

# Quick Installation Guide

OWL400/410 v1.00

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## Preface

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The 802.11 n/a compliant **OWL400/410** is a Long Range Outdoor AP/ Bridge/ CPE device that can be used for dual purposes. First, it can be deployed as a traditional fixed wireless Access Point (AP). Secondly, it can be used as a Customer Premises Equipment (CPE) that connects to the outdoor wireless network of Wireless Internet Service Provider (WISP).

The metal sealed OWL400/410 is compact in size and weatherproof. Coming with a mounting kit, it can be mounted on a pole or wall. It is suitable for both indoor and outdoor usage with its 200mW output power, which is higher than a typical indoor AP (100mW).

This Quick Installation Guide (including FAQ Instruction Guide) provides instructions for getting started with OWL400/410.

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## Package Contents

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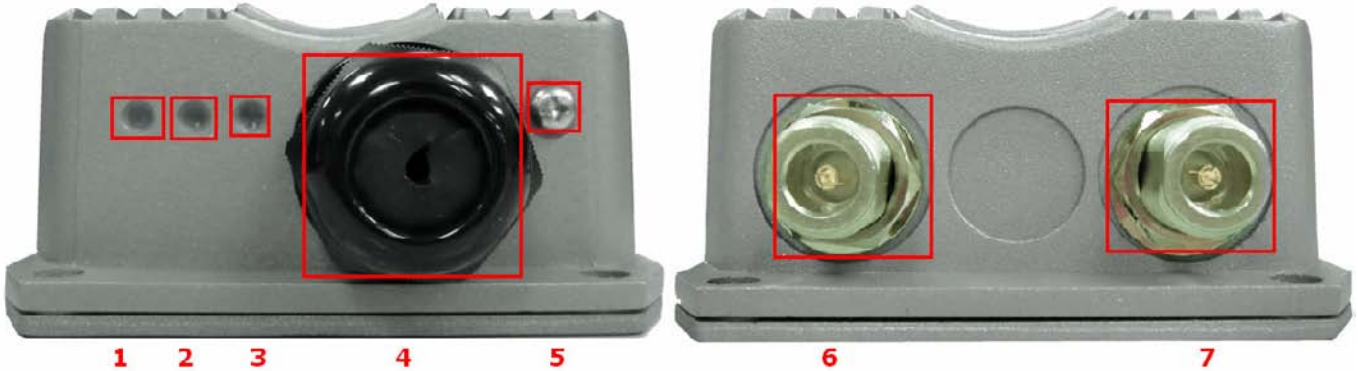
1. OWL400/410 x 1
2. Quick Installation Guide (QIG) x 1
3. CD-ROM (with User's Manual and QIG) x 1
4. Power Sourcing Equipment (PSE) with AC cable x 1
5. Mounting Kit x 1



*It is recommended to keep the original packing material for possible future shipment when repair or maintenance is required. Any returned product should be packed in its original packaging to prevent damage during delivery.*

## System Overview

### OWL400



1	<b>Power</b>	Green LED <b>ON</b> indicates power on, and <b>OFF</b> indicates power off
2	<b>WLAN</b>	Green LED <b>ON</b> indicates system ready
3	<b>LAN</b>	Green LED ON indicates connection; BLINKING indicates transmitting data; OFF indicates no connection
4	<b>PoE Connector</b>	For connecting to the Power Sourcing Equipment (PSE)
5	<b>Reset</b>	Press more than 5 seconds and release to reset the system to its default settings
6	<b>Primary N-type Antenna Connector</b>	For connecting to an antenna
7	<b>N-type Connector</b>	For connecting to an antenna

#### Reset Back to Factory Default:

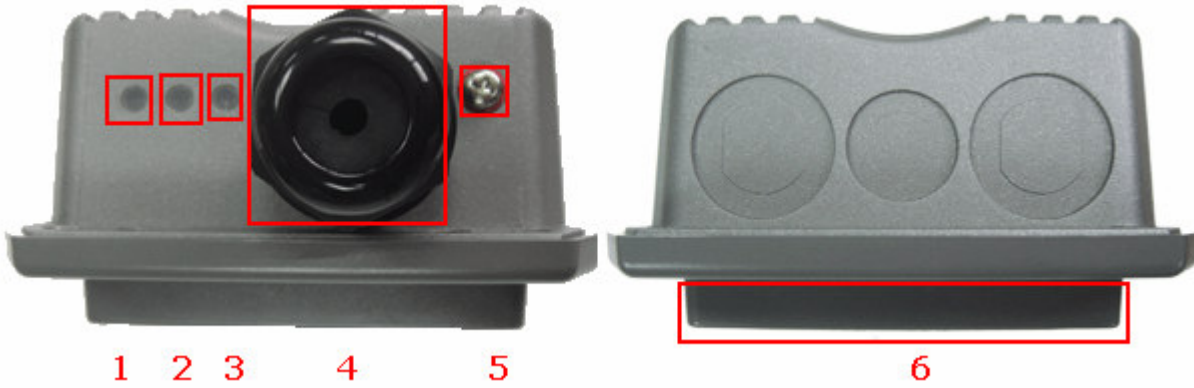


▶▶ **Note:**

Unscrew the screw beside the PoE hole. Press and hold the button for seconds. You can use a toothpick to help you reach the button.

The system is meant to be used in only one mode at a time. Before you start with any configuration, you should first decide which mode to use it in. Please prevent constant switching from one mode to another during usage as it is easy for users to misconfigure the settings.

**OWL410**

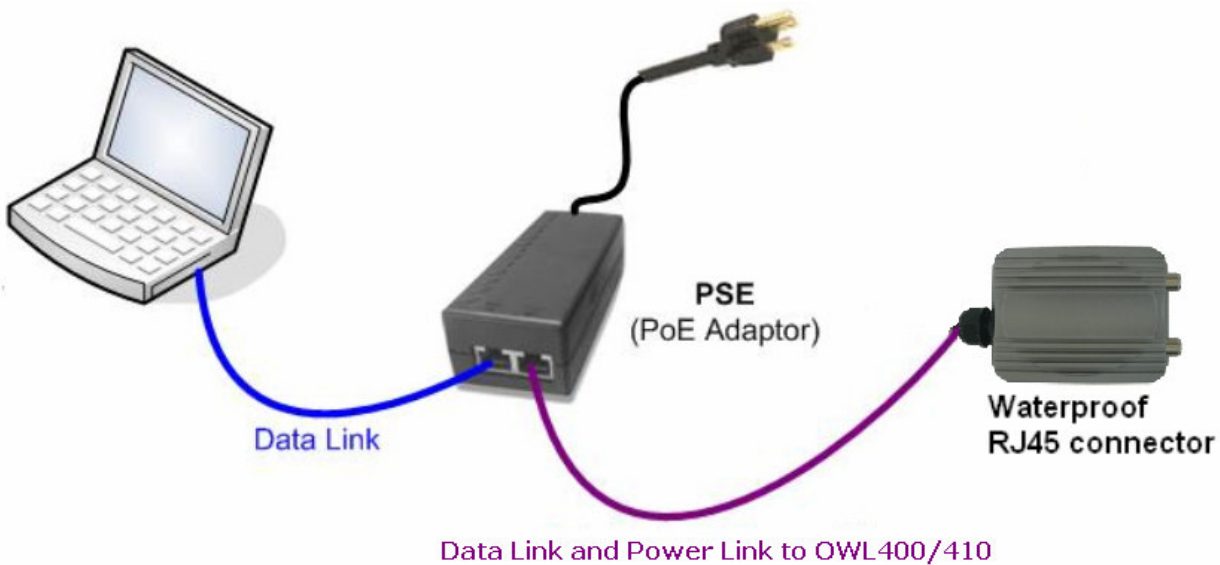
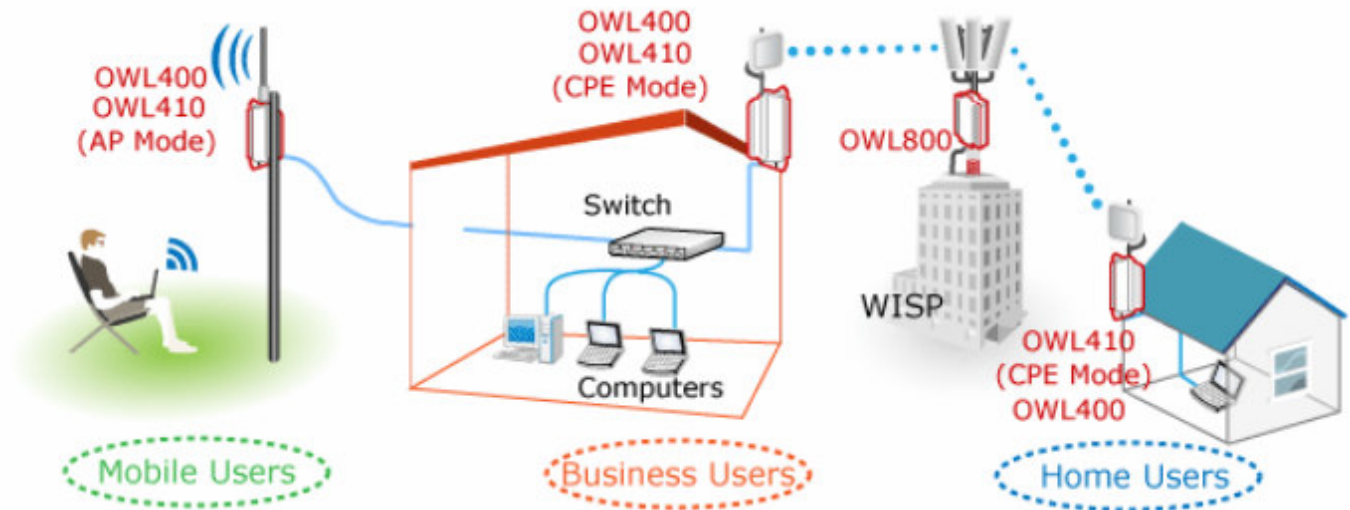


1	<b>Power</b>	Green LED <b>ON</b> indicates power on, and <b>OFF</b> indicates power off
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3	<b>LAN</b>	Green LED ON indicates connection; BLINKING indicates transmitting data; OFF indicates no connection
4	<b>PoE Connector</b>	For connecting to the Power Sourcing Equipment (PSE)
5	<b>Reset</b>	Press more than 5 seconds and release to reset the system to its default settings
6	<b>Built-in patch antenna</b>	10 dBi (Horizontal: 110 degree; Vertical: 60 degree)

## Hardware Installation

### OWL400/410

The following diagram is a **basic network topology** which can be used for testing and configuring the OWL400/410.



#### Installation Steps:

- Step 1.** Connect the antennas to the connectors.
- Step 2.** Connect the PSE (POWER & DATA OUT) to the PSE 1 connector on the lower panel.
- Step 3.** Connect one end of an Ethernet cable to the PSE 2 connector on the lower panel and the other end to a computer.
- Step 4.** Connect the power cord to the PSE.
- Step 5.** Power on the PSE in order to supply power to the OWL400/410.

## Getting Started

4ipnet OWL400/410 supports web-based configuration. OWL400/410 is a dual-mode system, **AP Mode** as the default mode for the first time entering the system, which also can be configured as either an access point (**AP Mode**) or a gateway (**CPE Mode**) based on your needs. It is required to follow the respective installation procedures provided to properly set up the desired mode for this system.

- **Default IP Address of Web Management Interface:**

The default IP address and Subnet Mask for the AP mode and CPE mode are as follows:

Mode	AP Mode	CPE Mode
IP Address	192.168.1.1	192.168.1.1
Subnet Mask	255.255.255.0	255.255.255.0

- **Default User Name and Password:**

There is only one management account for AP mode, **root**. In addition, there are two system management accounts for CPE mode to maintain the system, **root** and **admin**, and each has different levels of management capabilities. The **root** account is empowered with full privileges while the **admin** account is with partial ones.

The default user name and password for both the **root** and **admin** account are as follows:

Mode	AP Mode	CPE Mode	
Management Account	Root Account	Root Account	Admin Account
User Name	root	root	admin
Password	admin	admin	admin

## Step 1: IP Segment Setup for Administrator PC

Set a static IP address on the same subnet mask as OWL400/410 in TCP/IP of the administrator PC, such as the following example. Do not duplicate the IP address used here with the IP address of OWL400/410 or any other devices within the same network.

### >> Example of IP Segment:

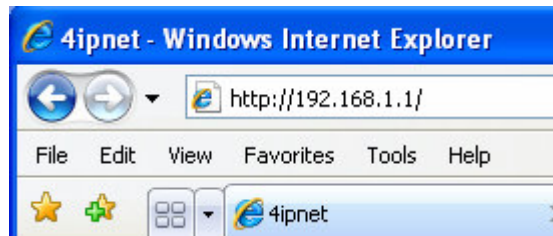
The valid range of IP address is 1 ~ 254. However, **1** must be avoided as it is already used by OWL400/410. Below depicts an example of using **100** (the underlined value can be changed as desired).

*IP Address: 192.168.1.100*

*Subnet Mask: 255.255.255.0*

## Step 2: Launch Web Browser

Launch a web browser to access the web management interface of AP mode by entering the default IP address, **http://192.168.1.1/**, in the URL field, and then press **Enter**.



*Using an incorrect default IP address will result in no Login page shown in the web browser. Please make sure a correct IP address is used for the desired mode.*

## Step 3: System Login

The system manager Login Page will then appear.

Enter “**root**” in the *User name* field and “**admin**” in the *Password* field, and then click **Login** to log in.





**Step 4: Login Success**

After a successful login to OWL400/410, a **System Overview** page of web management interface will appear, To logout, simply click on the **Logout** button at the upper right hand corner of the interface.

Home > Status > System Overview

### System Overview

**System**

System Name	OWL400
Firmware Version	1.00.00
Build Number	1.8-1.2628
Location	CA, US
Site	EN-A
Device Time	1999/12/31 16:10:40
System Up Time	0 days, 0:10:40
Operating Mode	AP

**Radio Status**

MAC Address	00:1F:D4:00:31:40
Band	802.11a
Channel	36
TX Power	Highest

**LAN Interface**

MAC Address	00:1F:D4:00:30:F9
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Gateway	192.168.1.254

**AP Status**

Profile Name	BSSID	ESSID	Security Type	Online Clients
VAP-1	00:1F:D4:00:31:40	OWL400-1	None	0

►► **Note:** By default, AP mode is enabled. Therefore, the administrator must access the system via the AP mode login page for the first time. The administrator is then able to switch between modes afterwards.

## Common Settings

### <AP Mode – Default Mode>

#### Step 1: Mode Confirmation

The screenshot shows the web interface with the following elements:

- Navigation menu: System, Wireless, Utilities, **Status** (highlighted).
- Sub-menu: Overview (highlighted), Clients, Repeater, Event Log.
- Breadcrumb: Home > Status > System Overview
- Section: System Overview
- System Information:
 

System Name	OWL400
Firmware Version	1.00.00
Build Number	1.8-1.2628
Location	CA, US
Site	EN-A
Device Time	1999/12/31 16:10:40
System Up Time	0 days, 0:10:40
Operating Mode	<b>AP</b>
- Radio Status:
 

MAC Address	00:1F:D4:00:31:40
Band	802.11a
Channel	36
TX Power	Highest
- AP Status:
 

Profile Name	BSSID	ESSID	Security Type	Online Clients
VAP-1	00:1F:D4:00:31:40	OWL400-1	None	0
- LAN Interface:
 

MAC Address	00:1F:D4:00:30:F9
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Gateway	192.168.1.254

- Ensure the *Operating Mode* is currently in **AP** mode.
- Click on the **Status** button and then select the **System Overview** tab. The *Operating Mode* is at the **System** section on the **System Overview** page.

## Step 2: Change Password

System Wireless Utilities Status

Change Password Network Utilities Config Save & Restore System Upgrade Reboot

Home > Utilities > Change Password

### Change Password

Name : root

Old Password :

New Password :  \*up to 32 characters

Re-enter New Password :

- Click on the **Utilities** button and then select the **Password** tab.
- Enter a new password in the *New Password* field and retype it in the *Re-enter New Password* field.
- Click **SAVE** to save the changes.

**Step 3: Network Settings**

System Information Operating Mode **Network** Management

Home > System > Network Interface

### Network Settings

Mode :  Static  DHCP

IP Address :  \*

Netmask :  \*

Default Gateway :  \*

Primary DNS Server :  \*

Alternate DNS Server :

Layer2 STP :  Disable  Enable

【 Settings here are for example only 】

- Click on the **System** button and then select the **Network** tab.
- Enable *Static*, and then enter the related information in the fields marked with red asterisks.
- Click **SAVE** to save the settings.

Step 4: SSID Settings

Home > Wireless > General

### General Settings

Band : 802.11a

Short Preamble :  Disable  Enable

Channel : 64

Max Transmit Rate : Auto

Transmit Power : Auto

Beacon Interval : 100 \*(100 - 500ms)

- Click on the **Wireless** button and then select the **General** tab.
- **Band:** Select an appropriate band from the drop-down list box.

Home > Wireless > VAP Config

### VAP Configuration

Profile Name : VAP-1

VAP :  Disable  Enable

Profile Name : VAP-1

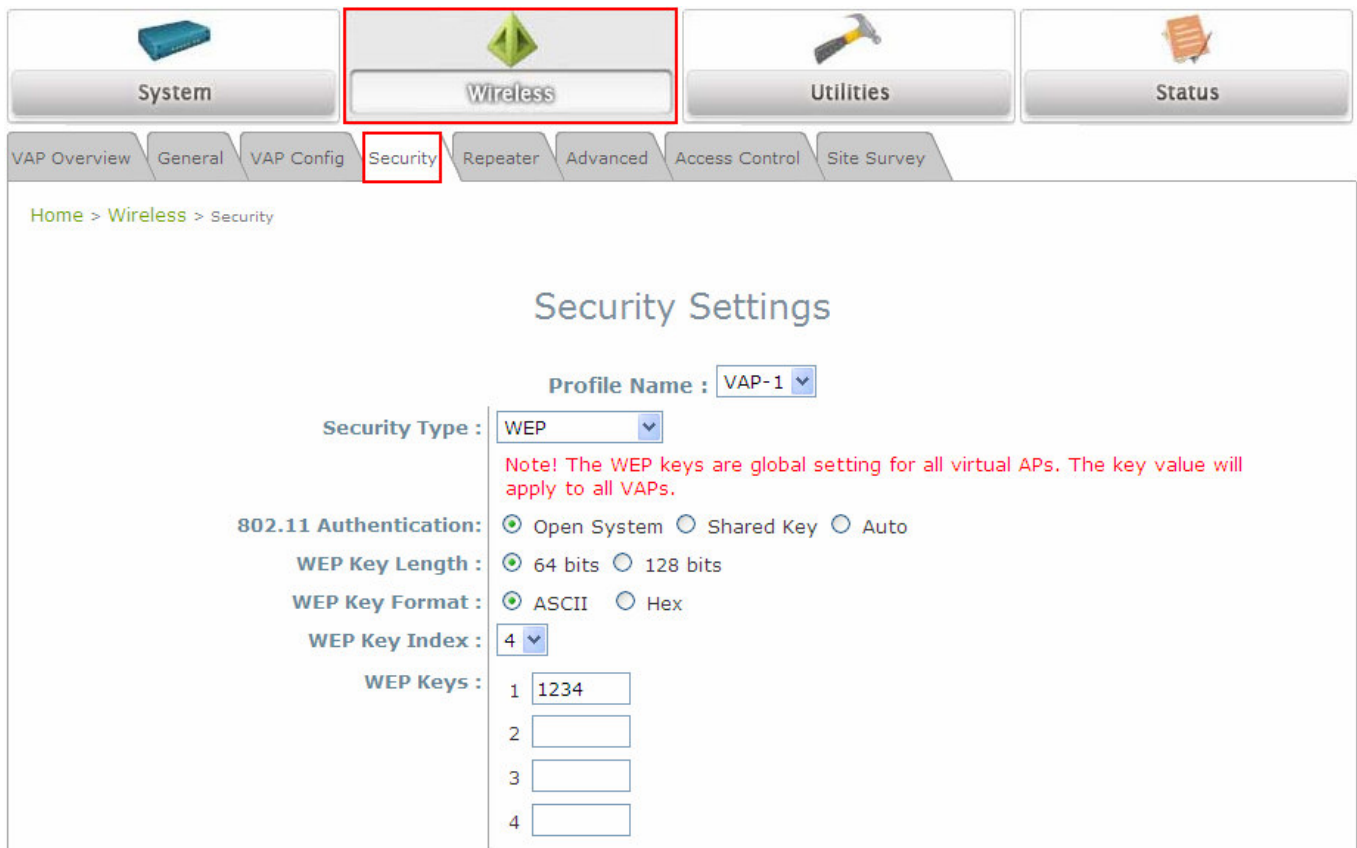
ESSID : OWL400-1

VLAN ID :  Disable  Enable

VLAN ID : \*( 1 - 4094 )

- Click on the **Wireless** button and then select the **VAP Config** tab.
- **ESSID:** Enter respective ESSID for each VAP in the *ESSID* field or use the default. **ESSID (Extended Service Set Identifier)** is a unique identifier used for networking devices to get associated with OWL400/410.
- Click **SAVE** to save the settings.

**Step 5: Security Settings**



Home > Wireless > Security

### Security Settings

Profile Name :

Security Type :

Note! The WEP keys are global setting for all virtual APs. The key value will apply to all VAPs.

802.11 Authentication:  Open System  Shared Key  Auto

WEP Key Length :  64 bits  128 bits


WEP Key Format :  ASCII  Hex

WEP Key Index :

WEP Keys :

1	<input type="text" value="1234"/>
2	<input type="text"/>
3	<input type="text"/>
4	<input type="text"/>

- Click on the **Wireless** button and then select the **Security** tab.
- Select the desired *VAP Profile and Security Type* from the drop-down list boxes. The above figure depicts an example of selecting VAP-1 and **WEP**.
- Enter the information required in the blank fields.

 You must use the same information provided here to configure the network devices that are to be associated with OWL400/410.

- Click **SAVE** to save all settings configured so far; all updated settings will take effect upon reboot.

**Congratulations!**

The AP mode is now successfully configured.

<CPE Mode>

Step 1: Mode Confirmation

Home > Status > System Overview

### System Overview

#### System

System Name	OWL400
Firmware Version	1.00.00
Build Number	1.8-1.2628
Location	CA, US
Site	EN-A
Device Time	2000/01/01 13:29:24
System Up Time	0 days, 21:29:24
Operating Mode	CPE

#### Radio Status

Status	Disable
SSID	N/A
MAC Address	N/A
Channel	56
Signal Strength	12
Security	None

#### LAN Interface

MAC Address	00:1F:D4:00:30:F9
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
DHCP Server	Enabled

#### WAN Interface

Mode	Static
MAC Address	00:1F:D4:00:31:40
IP Address	192.168.10.1
Subnet Mask	255.255.255.0
Gateway	192.168.10.254
Bandwidth	Down: Unlimited / UP: Unlimited

- Ensure the *Operating Mode* is currently in **CPE** mode.
- Click on the **Status** button and then select the **System Overview** tab. The *Operating Mode* is at the **System** section on the **System Overview** page.



**Step 2: Change Password**

Home > Utilities > Change Password

### Change Password

Name : root

Old Password :

New Password :  \*up to 32 characters

Re-enter New Password :

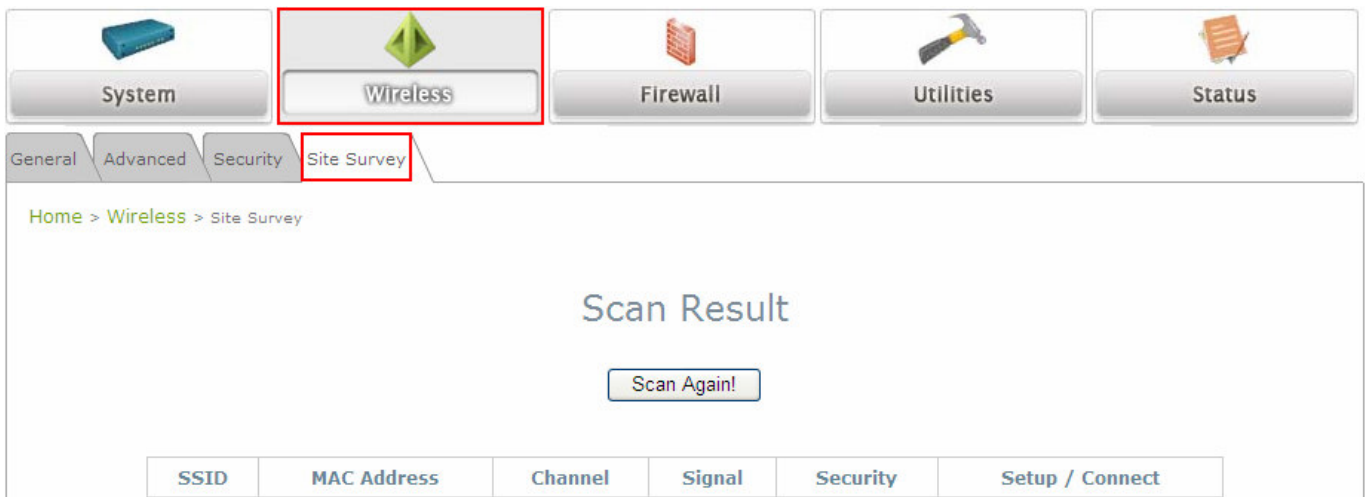
Name : admin

New Password :  \*up to 32 characters

Re-enter New Password :

- Click on the **Utilities** button and then select the **Password** tab.
- **Change Root Account Password**
  - Enter the old password in the *Old Password* field; default password is “**admin**”.
  - Enter a new password in the *New Password* field and retype it in the *Re-enter New Password* field.
- **Change Admin Account Password**
  - Enter a new password in the *New Password* field and retype it in the *Re-enter New Password* field.
- Click **SAVE** to save the changes.



**Step 3: Site Survey**

Home > Wireless > Site Survey

### Scan Result

[Scan Again!](#)

SSID	MAC Address	Channel	Signal	Security	Setup / Connect
------	-------------	---------	--------	----------	-----------------

【 The scan result displayed here is an example only. 】

- Click on the **Wireless** button and then select the **Site Survey** tab.
- The system will automatically scan and display all APs in its coverage area.
- Click **Scan Again** if the APs to be associated with are not listed on the **Scan Result** list.

**Step 4: Select AP to be Associated**

- Select an AP to be associated with from the **Scan Result** list provided in **Step 3**.

Step 5: Security Settings

Home > Wireless > Site Survey

### Scan Result

[Scan Again!](#)

SSID	MAC Address	Channel	Signal	Security	Setup / Connect
b0b24b	00:0B:6B:DD:A7:EE	36	20	WEP	<a href="#">Setup</a>
9595d5	00:0B:6B:DD:27:A6	36	34	WEP	<a href="#">Setup</a>
rh-OWL410-none	00:1F:D4:00:31:78	56	15	NONE	<a href="#">Connect</a>
471f2a	00:0B:6B:DD:27:B9	56	10	WEP	<a href="#">Setup</a>

- The above figure depicts an example of selecting one SSID (encrypted via one security type).
- Click **Setup**, and then a related encryption configuration box will appear.
- Enter the information required in the configuration box. Information to be entered must be exactly the same as configured in this selected AP.
- Click **Connect** to start the connection.

## Step 6: Network Interface Configuration

Home > System > Network Interface

### WAN Configuration

Mode :  Static  DHCP

IP Address :  \*

Netmask :  \*

Default Gateway :  \*

Primary DNS Server :  \*

Alternate DNS Server :

Bandwidth Limit : Download :  Upload :

### Dynamic DNS (DDNS)

DDNS :  Disable  Enable

Provider :

Host Name :

User Name / E-mail :

Password / Key :

### LAN Configuration

IP Address :  \*

Netmask :  \*

DHCP Server :  Disable  Enable

Start IP :  \*

End IP :  \*

Preferred DNS Server :  \*

Alternated DNS Server :

WINS Server IP :

Domain Name :

Lease Time :

【Settings here are for example only】

- Click on the **System** button and then select **Network** tab.
- For WAN configuration, determine the way to obtain the IP address. For example, enable *Static*, and then enter the related information in the fields marked with red asterisks.
- Click **Save** to save the settings.

**Step 7: LAN Configuration**

- Click on the **System** button and then select the **Network** tab.
- The **LAN Configuration** section is on the same page as the **WAN Configuration** section.
- Provide the information to the required field by entering IP address/Netmask of the LAN port.
- Click **SAVE** to save all settings configured so far; all updated settings will take effect upon reboot.

**Congratulations!**

The CPE mode is now successfully configured.



*After OWL400/410's network configuration completes, please remember to change the IP Address of your PC Connection Properties back to its original settings in order to ensure that your PC functions properly in its real network environments.*

- ***It is strongly recommended to make a backup copy of configuration settings.***
- ***For further configuration and backup information, please refer to the User's Manual.***

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