

**WRE6606** 

Dual-Band Wireless AC1300 Access Point

Version 1.00 (ABDU.0) Edition 1, 10/2016



# User's Guide

Defaul	t Login Details
Web Address	http://zyxelsetup http://DHCP-assigned IP http://192.168.1.2
Password	1234

#### **IMPORTANT!**

#### **READ CAREFULLY BEFORE USE.**

#### **KEEP THIS GUIDE FOR FUTURE REFERENCE.**

#### **Related Documentation**

• Quick Start Guide

The Quick Start Guide shows how to connect the WRE6606 and access the Web Configurator wizards.

• More Information

Go to **support.zyxel.com** to find other information on the WRE6606.



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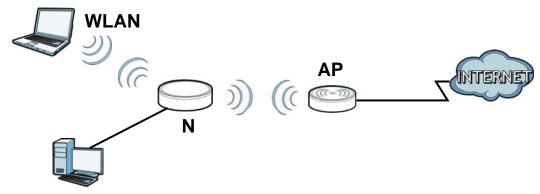
# PART I User's Guide

## Introduction

### 1.1 Overview

The WRE6606 allows you to easily extend existing IEEE 802.11 a/b/g/n/ac wireless networks fast and easy. Simply plug the WRE6606 directly into a power outlet and the LED signal strength indicator allows you to determine the ideal installation location. The one-click Wi-Fi Protected Setup (WPS Button on page 12) provides frustration-free wireless client setup and completes the instant network access setup. Also, the WRE6606 can elevate your network experiences with dual band and Wi-Fi Multimedia (WMM). You could use the 2.4GHz band for regular Internet surfing and downloading while using the 5GHz band for time sensitive traffic, such as high-definition video streaming, and big size file transfers. With WMM, it can automatically prioritize different types of network traffics to reach optimal performance.





Your can create the following connections using the WRE6606:

- LAN. You can connect network devices via the Ethernet port of the WRE6606 so that they can communicate with each other and access the Internet.
- WLAN. Wireless clients can connect to the WRE6606 to access network resources.

Use a (supported) web browser to manage the WRE6606.

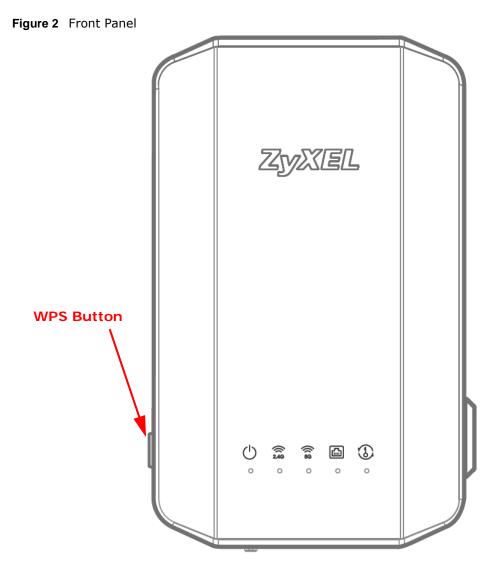


### 1.2 Securing the WRE6606

Do the following things regularly to make the WRE6606 more secure and to manage the WRE6606 more effectively.

- Change the password. Use a password that's not easy to guess and that consists of different types of characters, such as numbers and letters.
- Write down the password and put it in a safe place.
- Back up the configuration (and make sure you know how to restore it). Restoring an earlier working configuration may be useful if the device becomes unstable or even crashes. If you forget your password, you will have to reset the WRE6606 to its factory default settings. If you backed up an earlier configuration file, you would not have to totally re-configure the WRE6606. You could simply restore your last configuration.

### **1.3 Front Panel**



The following table describes the LEDs.

Table 1         Front Panel LEDs
----------------------------------

LED	COLOR	STATUS	DESCRIPTION
Power/WPS	Green	On	The WRE6606 is receiving power and functioning properly.
			This remains on for 5 minutes after a successful WPS connection has been established.
		Blinking	The WRE6606 is booting, resetting to factory defaults, the WRE6606 is waiting for another WPS device to connect, or firmware upgrade is in progress.
		Off	The WRE6606 is not receiving power, or there is no WPS connection established.
2.4G	Green	On	In AP mode, it means WLAN signal is detected.
		Blinking	In AP mode, Client mode, and Repeater mode, it signifies data is transmitting.
			Different LED colors indicate the Wi-Fi signal strength.
			<ul> <li>Green: signifies a signal strength of 50% ~ 100%</li> <li>Orange: signifies a signal strength of 21% ~ 49%</li> <li>Red: signifies a signal strength under 20%</li> </ul>
		Off	In AP mode, Client mode, and Repeater mode, the 2.4 GHz wireless LAN is not enabled. There is no signal detected or the WRE6606 is not connected to a wireless router/AP, or the LEDs are turned off using the WPS button.
5G	Green	On	In AP mode, it means WLAN signal is detected.
		Blinking	In AP mode, Client mode, and Repeater mode, it signifies data is transmitting.
			Different LED colors indicate the Wi-Fi signal strength.
			<ul> <li>Green: signifies a signal strength of 50% ~ 100%</li> <li>Orange: signifies a signal strength of 21% ~ 49%</li> <li>Red: signifies a signal strength under 20%</li> </ul>
		Off	In AP mode, Client mode, and Repeater mode, the 5 GHz wireless LAN is not enabled. There is no signal detected or the WRE6606 is not connected to a wireless router/AP, or the LEDs are turned off using the WPS button.
LAN	Green/	On	LAN connection is successful.
	Orange	Blinking	Data is transmitting.
		Off	LAN connection is off.
			Different LED colors indicate the Ethernet transfer speed.
			<ul> <li>Green: signifies the Ethernet speed has reached 1000 Mbps.</li> <li>Orange: signifies the Ethernet speed has reached 10/100 Mpbs.</li> </ul>
WPS	Green	On	WPS connection has accomplished.
		Blinking	WPS connection is in process.
		Off	WPS connection is disabled or failed.

### 1.4 WPS Button

The WPS button can be used to begin Wi-Fi Protected Setup (WPS), reboot the WRE6606 while keeping it's configuration or reboot the WRE6606 to factory default configuration.

ACTION	RESULT		
Press three times within 5 seconds	Turn off or turn on all LEDs.		
AP Mode			
Push the WPS button once	The WRE6606 begins connecting to a wireless client via WPS. See Section 1.4 on page 12.		
Hold for 5 to 10 seconds	The WRE6606 keeps its configuration and reboots.		
Hold for more than 10 seconds	The WRE6606 resets its configuration to factory defaults and reboots. Also, power LED will be blinking. See Section 2.4 on page 18.		
Repeater Mode			
Push the WPS button once	The WRE6606 begins connecting to upper router via WPS.		
Push twice within 5 seconds	The WRE6606 begins connecting to a wireless client via WPS. See Section 1.4 on page 12.		
Hold for 5 to 10 seconds	The WRE6606 keeps its configuration and reboots.		
Hold for more than 10 seconds	The WRE6606 resets its configuration to factory defaults and reboots. Also, power LED will be blinking. See Section 2.4 on page 18.		
Client Mode			
Push the WPS button once	The WRE6606 begins connecting to access point via WPS.		
Hold for 5 to 10 seconds	The WRE6606 keeps its configuration and reboots.		
Hold for more than 10 seconds	The WRE6606 resets its configuration to factory defaults and reboots. Also, power LED will be blinking. Also, power LED will be blinking. See Section 2.4 on page 18.		

Table 2 WPS Button Functions

#### 1.4.1 Wi-Fi Protected Setup

Your WRE6606 supports Wi-Fi Protected Setup (WPS), which is an easy way to set up a secure wireless network. WPS is an industry standard specification, defined by the Wi-Fi Alliance.

WPS allows you to quickly set up a wireless network with strong security, without having to configure security settings manually. Each WPS connection works between two devices. Both devices must support WPS (check each device's documentation to make sure).

Depending on the devices you have, you can either press a button (recommended) on the device itself, or in its configuration utility or enter a PIN (a unique Personal Identification Number that allows one device to authenticate the other) in each of the two devices. When WPS is activated on a device, it has two minutes to find another device that also has WPS activated. Then, the two devices connect and set up a secure network by themselves.

For more information on using WPS, see Section 10.10 on page 72.

# **The Web Configurator**

### 2.1 Overview

This chapter describes how to access the WRE6606 Web Configurator and provides an overview of its screens.

The Web Configurator is an HTML-based management interface that allows easy setup and management of the WRE6606 via Internet browser. Use Internet Explorer 6.0 and later versions, Mozilla Firefox 3 and later versions, or Safari 2.0 and later versions. The recommended screen resolution is 1024 by 768 pixels.

In order to use the Web Configurator you need to allow:

- Web browser pop-up windows from your device.
- JavaScript (enabled by default).
- Java permissions (enabled by default).

Refer to Chapter 14 Troubleshooting to see how to make sure these functions are allowed in Internet Explorer.

### 2.2 Accessing the Web Configurator

- 1 Make sure your WRE6606 hardware is properly connected and prepare your computer or computer network to connect to the WRE6606 (refer to the Quick Start Guide).
- 2 Launch your web browser.
- 3 Open a web browser such as Internet Explorer and type "http://zyxelsetup" or "http://192.168.1.2" as the web address in your web browser.

#### 2.2.1 Login Screen

The Web Configurator initially displays the following login screen.



The following table describes the labels in this screen.

Table 3 Login Scre	
LABEL	DESCRIPTION
Password	Type "1234" (default) as the password.
Language	Select the language you want to use to configure the Web Configurator. Click Login.
<b>00:03:13</b> 1970-01-01	This shows the time (hh:mm) and date (yyyy:mm:dd) of the time zone you select in the <b>Maintenance</b> > <b>Time</b> screen (see Section 13.5 on page 83). The time is in 24-hour format, for example 15:00 is 3:00 PM.

#### Table 3 Login screen

#### 2.2.2 Password Screen

You should see a screen asking you to change your password (highly recommended) as shown next.

Figure 4 Change Password Screen

ι	se this screen to change the password.		
The Wizard setup walks you through the most common configuration settings. We suggest you use this mode if it is the first time you are setting up your router or if you need to make basic configuration changes.			
	Use Advanced mode if you need access to more advanced features not included in Wizard mode.		
	New Password: Retype to Confirm:		
	Apply Ignore		

The following table describes the labels in this screen.

LABEL	DESCRIPTION	
New Password	Type a new password.	
Retype to Confirm	Retype the password for confirmation.	
Apply	Click <b>Apply</b> to save your changes back to the WRE6606.	
Ignore	Click Ignore if you do not want to change the password this time.	

Table 4	Change	Password	Screen
	Change	1 433 101 4	Jucch

#### 2.2.3 Home Screen

If you have previously logged into the Web Configurator but did not click **Logout**, you may be redirected to the **Home** screen.

You can also open this screen by clicking **Home** (

The Home screen displays as follows.

ZyXEL	
	WRE6606 Welcome to the device configuration interface. Please cick 'GO' and go to Basic Mode. GO Language : English
<b>00:08:14</b> 1970-01-01	

#### Figure 5 Home Screen

The following table describes the labels in this screen.

#### Table 5 Home Screen

LABEL	DESCRIPTION	
GO	Click this to return to the previous screen.	
Language	Select a language to go to the Web Configurator in that language and click <b>GO</b> .	
00:08:14 Ø <sup>1570-01-01</sup>	(This is just an example). This shows the time (hh:mm:ss) and date (yyyy:mm:dd) of the time zone you select in Section 2.2.3.1 on page 16 or Section 13.5 on page 83.	

#### 2.2.3.1 Time/Date Edit

One time zone can cover more than one country. You can choose a particular country in which the WRE6606 is located and have the WRE6606 display and use the current time and date for its logs.



Click the of icon to change the time and date display.

### Figure 6 Change Time Zone



The following table describes the labels in this screen.

Table	6	Change	Time	Zone
10010	•	change	11110	20110

LABEL	DESCRIPTION		
Change time zone	Select the specific country whose current time and date you want the WRE6606 to display.		
Finish	Click this to apply the settings and refresh the weather display.		

### 2.3 Navigating the Web Configurator

The following summarizes how to navigate the web configurator from the Status screen.

TATUS			Refresh Int	erval : None	▼ Ref	iresh Now
Device Information	C	System Status				
tem	Data	Item			Data	
Host Name :	WRE6606	System Up Time :			00d:00h:12m	590
Firmware Version :	V1.00(ABDU.0)B6	Current Date/Time			1970-01-01 /	
Sys OP Mode :	Repeater Mode	System Resource :			13/0-01-01/	00.12.00
LAN Information :	Repeater mode	- CPU Usage :				3%
- MAC Address :	00:74:76:E2:45:01	- Memory Usage :				65%
- IP Address :	192.168.1.2	moniory couge .				0070
- IP Subnet Mask :	255.255.255.0					
- Default Gateway :		Interface Status				
- DHCP :	Client	Interface	Status	Rate		
WLAN 2.4G Information :		LAN	Up	1000Mbp	s Full-Duplex	
- MAC Address :	00:74:76:E2:45:02	WLAN 2.4G	Up	400M		
- SSID :	ZyXELE24502	WLAN 5G	Up	866M		
- Channel :	Channel-05 2432MHz					
- Security :	WPA2-PSK	Association List 2	2.4G			
- To AP Connection :	Disconnect	# MAC Address	3	Associa	ation Time	
- To AP SSID :						
- To AP Security :		Association List 5	iG			
WLAN 5G Information :		# MAC Address	3	Associa	ation Time	
- MAC Address :	00:74:76:E2:45:03					
- SSID :	ZyXELE24502.speed					
- Channel :	Channel-40 5200MHz					
- Security :	WPA2-PSK					
- To AP Connection :	Disconnect					

The Web Configurator's main screen is divided into these parts:

- A Title Bar
- **B** Navigation Panel
- C Main Window

#### 2.3.1 Title Bar

The title bar provides some useful links that always appear over the screens below, regardless of how deep into the Web Configurator you navigate.

Figure 8 Title Bar

Welcome: admin | Logout A Home About (# eaZy123

The icons provide the following functions.

Table 7 T	ïtle Bar:	Web	Configurator	Icons
-----------	-----------	-----	--------------	-------

LABEL	DESCRIPTION
Logout	Click this at any time to exit the Web Configurator.
Home	Click this to open the home screen. See Section 2.2.3 on page 15.
About	Click this icon to view copyright and a link for related product information.
eaZy123	Click this icon to open the wizard. See Chapter 7 on page 37.

#### 2.3.2 Navigation Panel

Use the menu items on the navigation panel to open screens to configure WRE6606 features.

The following table describes the icons shown in the navigation panel.

Table 8	Navigation	Panel	Menu	Icons
	Nuvigution	runci	nulu	100113

ICON	DESCRIPTION
	Click this icon to see the <b>Status</b> page. The information in this screen depends on the device mode you select.
	Click this icon to see the <b>Monitor</b> navigation menu.
<u></u>	Click this icon to see the <b>Configuration</b> navigation menu.
	Click this icon to see the Maintenance navigation menu.

### 2.4 Resetting the WRE6606

If you forget your password or IP address, or you cannot access the Web Configurator, press the **WPS** button for more than 10 seconds to reload the factory-default configuration file. This means that you will lose all configurations that you had previously saved, the password will be reset to **1234**.

- 1 Make sure the power LED is on.
- 2 Press and hold the **WPS** button. After 10 seconds, the power LED begins flashing.
- 3 Release the **WPS** button. The WRE6606 reloads factory defaults and begins to reboot.

# WRE6606 Modes

### 3.1 Overview

This chapter introduces the different modes available on your WRE6606.

• Sys OP mode. This is the operating mode of your WRE6606, or simply how the WRE6606 is being used in the network.

#### 3.1.1 Device Modes

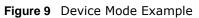
This refers to the operating mode of the WRE6606, which can act as a:

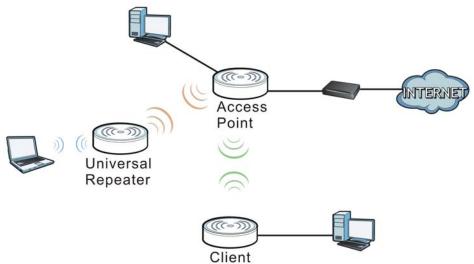
• Access Point: Use this mode if you want to extend your network by allowing network devices to connect to the WRE6606 wirelessly. Go to Section 4.4 on page 22 to view the Status screen in this mode.

In this mode, you can also set the WRE6606 to work as an AP only, a wireless bridge to establish wireless links with other APs (WDS bridge), or an AP and bridge simultaneously (WDS repeater). See Section 4.2 on page 21 for more information.

- Client: Use this mode if there is an existing wireless router or access point in the network to which you want to connect your local network. Go to Section 5.4 on page 28 to view the Status screen in this mode. In Client mode, you should know the SSID and wireless security details of the access point to which you want to connect.
- **Repeater**: In this mode, the WRE6606 can be an access point and a wireless client at the same time. Go to Section 6.4 on page 33 to view the **Status** screen in this mode. Use this mode if there is an existing wireless router or access point in your network and you also want to allow clients to connect to the WRE6606 wirelessly.

The following figure is an illustration of the device configuration modes of the WRE6606.





Note: Choose your device mode carefully to avoid having to change it later.

Under Repeater mode, the WRE6606 supports three WPS behaviors: Normal mode, Range boost mode, and Speed boost mode. These behaviors are only available in Repeater mode through the **Maintenance** screen.

#### 3.1.1.1 Changing Operating Mode

Push the **AP** (A)/Client (C)/Repeater (R) mode switch on the WRE6606's side panel to the **AP** position to have the WRE6606 act as an access point. Push the switch to the **Client** position to have the WRE6606 work as a wireless client. Push the switch to the **Repeater** position to have the WRE6606 work as a universal repeater.

The WRE6606 restarts automatically after you change operating modes.

# **Access Point Mode**

### 4.1 Overview

In Access Point (AP) mode your WRE6606 bridges a wired network (LAN) and wireless LAN (WLAN) in the same subnet. See the figure below for an example.

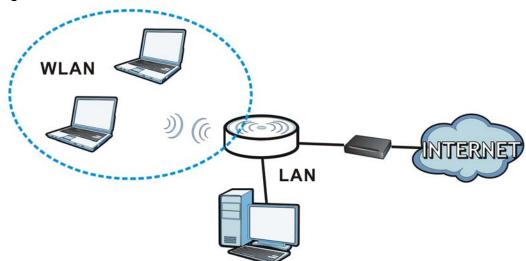


Figure 10 Wireless Internet Access in Access Point Mode

Note: See Chapter 8 on page 45 for an example of setting up a wireless network in Access Point mode.

### 4.2 What You Can Do

- Use the **Status** screen (Section 4.4 on page 22) to view read-only information about your WRE6606.
- Use the LAN screen (Chapter 11 on page 78) to set the IP address for your WRE6606 acting as an access point.
- Use the **Wireless LAN** screens (Chapter 10 on page 56) to configure the wireless settings and wireless security between the wireless clients and the WRE6606.

### 4.3 What You Need to Know

With the exception of the **Scheduling** and **Guest WLAN** screens, other configuration screens in Access Point mode are similar to the ones in repeater mode. See Chapter 3 on page 19 of this User's Guide.

#### 4.3.1 Setting your WRE6606 to AP Mode

By default, AP mode in the WRE6606 is not configured with a static IP address. To setup your WRE6606 in AP mode for the first time, the directly-connected router must have the DHCP server function enabled.

- 1 To use your WRE6606 as an access point, See Section 3.1.1.1 on page 20.
- 2 Connect one end of an Ethernet cable to the Ethernet port on the WRE6606 and the other end to your router.
- 3 Connect your computer to your network, make sure both the WRE6606 and computer are under the same subnet.
- 4 Open a web browser window and type "http://zyxelsetup" in the web address. The login screen displays.
- 5 Enter "1234" (default) as the password and click Login.
- **6** Type a new password and retype it to confirm, then click **Apply**. Otherwise, click **Ignore**.

The WRE6606 Web Configurator displays, which allows you to configure the AP mode.

#### 4.3.2 Configuring your WLAN, LAN and Maintenance Settings

- See Chapter 10 on page 56 and Chapter 11 on page 78 for information on configuring your wireless network and LAN settings.
- See Chapter 13 on page 82 for information on configuring your Maintenance settings.

### 4.4 AP Mode Status Screen

Click 🚺 to open the Status screen.

STATUS				Refresh Interval : None   Refresh No			esh Now
Device Information		Sys	tem Status				
Item	Data	Item				Data	
Host Name :	WRE6606	Syste	em Up Time :			00d:00h:07m:0	lOs
Firmware Version :	V1.00(ABDU.0)B6	Curre	ent Date/Time :			1970-01-01/0	0:06:59
Sys OP Mode :	AP Mode	Syste	em Resource :				
LAN Information :		- CF	PU Usage :				3%
- MAC Address :	00:74:76:E2:45:01	- Me	emory Usage :				65%
- IP Address :	192.168.1.2						
- IP Subnet Mask :	255.255.255.0	Into	rface Status				
- Default Gateway :	-						
- DHCP :	Client	Inter	face	Status	Rate		
WLAN 2.4G Information :		LAN		Up	1000Mbp	s Full-Duplex	
- MAC Address :	00:74:76:E2:45:02	WLA	N 2.4G	Up	400M		
- SSID :	ZyXELE24502	WLA	N 5G	Up	866M		
- Channel :	Channel-05 2432MHz -(Auto Channel)	-					
- Security :	WPA2-PSK	-	ociation List 2.4G				
WLAN 5G Information :		#	MAC Address		Associa	ation Time	
- MAC Address :	00:74:76:E2:45:03	-					
- SSID :	ZyXELE24502.speed	Ass	ociation List 5G				
- Channel :	Channel-40 5200MHz -(Auto Channel)	#	MAC Address		Associa	ation Time	
- Security :	WPA2-PSK						

Figure 11 Status Screen: Access Point Mode

The following table describes the labels shown in the **Status** screen.

 Table 9
 Status Screen: Access Point Mode

LABEL	DESCRIPTION
Refresh Interval None •	Select a number of seconds or <b>None</b> from the drop-down list box to refresh all screen statistics automatically at the end of every time interval or to not refresh the screen statistics.
Refresh Now	Click this button to refresh the status screen statistics.
Device Information	
Host Name	This is the WRE6606's system name you configure in the <b>Maintenance &gt; General</b> screen.
Firmware Version	This is the firmware version and the date created.
Sys OP Mode	This is the device mode (Section 3.1.1 on page 19) to which the WRE6606 is set - <b>AP Mode</b> .
LAN Information	
MAC Address	This shows the LAN Ethernet adapter MAC Address of your device.
IP Address	This shows the LAN port's IP address.
IP Subnet Mask	This shows the LAN port's subnet mask.
Default Gateway	This shows the LAN port's gateway IP address.
DHCP	This shows the LAN port's DHCP role - Client or None.
WLAN 2.4G Information	
MAC Address	This shows the wireless adapter MAC Address of your device.
SSID	This shows a descriptive name used to identify the WRE6606 in the wireless LAN.
Channel	This shows the channel number which you select manually or the WRE6606 automatically scans and selects.
Security	This shows the level of wireless security the WRE6606 is using.
WLAN 5G Information	

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LABEL	DESCRIPTION
MAC Address	This shows the wireless adapter MAC Address of your device.
SSID	This shows a descriptive name used to identify the WRE6606 in the wireless LAN.
Channel	This shows the channel number which you select manually or the WRE6606 automatically scans and selects.
Security	This shows the level of wireless security the WRE6606 is using.
System Status	
Item	This column shows the type of data the WRE6606 is recording.
Data	This column shows the actual data recorded by the WRE6606.
System Up Time	This is the total time the WRE6606 has been on.
Current Date/Time	This field displays your WRE6606's present date and time.
System Resource	
CPU Usage	This displays what percentage of the WRE6606's processing ability is currently used. When this percentage is close to 100%, the WRE6606 is running at full load, and the throughput is not going to improve anymore. If you want some applications to have more throughput, you should turn off other applications (for example, using bandwidth management.
Memory Usage	This shows what percentage of the heap memory the WRE6606 is using.
Interface Status	
Interface	This displays the WRE6606 port types. The port types are: LAN and WLAN.
Status	For the LAN port, this field displays <b>Down</b> (line is down) or <b>Up</b> (line is up or connected).
	For the WLAN, it displays ${\bf Up}$ when the WLAN is enabled or ${\bf Down}$ when the WLAN is disabled.
Rate	For the LAN ports, this displays the port speed and duplex setting or is left blank when the line is disconnected.
	For the WLAN, it displays the maximum transmission rate when the WLAN is enabled and is left blank when the WLAN is disabled.
Association List 2.4G	
#	This is the index number of an associated wireless client.
MAC Address	This field displays the MAC address of an associated wireless client.
Association Time	This field displays the time a wireless station first associated with the WRE6606's WLAN network.
Association List 5G	
#	This is the index number of an associated wireless client.
MAC Address	This field displays the MAC address of an associated wireless client.
Association Time	This field displays the time a wireless station first associated with the WRE6606's WLAN network.

 Table 9
 Status Screen: Access Point Mode (continued)

#### 4.4.1 Navigation Panel

Use the menu in the navigation panel to configure WRE6606 features in Access Point mode.

The following screen and table show the features you can configure in Access Point mode.

Figure 12	Menu:	Access	Point	Mode
-----------	-------	--------	-------	------



The following table describes the sub-menus.

Table 10	Navigation	Panel:	Access	Point	Mode
----------	------------	--------	--------	-------	------

LINK	ТАВ	FUNCTION
Status	Status	This screen shows the WRE6606's general device, system and interface status information.
MONITOR		
Monitor		
Packet Statistics	Packet Statistics	Use this screen to view port status, packet specific statistics, the "system up time" and so on.
CONFIGURATIO	N	
Network		
Wireless LAN 2.4G	General	Use this screen to configure general wireless LAN and wireless security settings.
	MAC Filter	Use this screen to configure the WRE6606 to block access to devices or block the devices from accessing the WRE6606.
	Advanced	Use this screen to configure advanced wireless settings.
	QoS	Use this screen to enable Wi-Fi MultiMedia Quality of Service (WMMQoS).
	WPS	Use this screen to enable and configure WPS.
	WPS Device	Use this screen to add a wireless station using WPS.
	Scheduling	Use this screen to schedule the times the Wireless LAN is enabled or disabled.
	Guest WLAN	Use this screen to configure multiple BSSs on the WRE6606.
Wireless LAN 5G	General	Use this screen to configure general wireless LAN settings.
29	MAC Filter	Use this screen to configure the WRE6606 to block access to devices or block the devices from accessing the WRE6606.
	Advanced	Use this screen to configure advanced wireless settings.
	QoS	Use this screen to enable Wi-Fi MultiMedia Quality of Service (WMMQoS).
	WPS	Use this screen to enable and configure WPS.
	WPS Device	Use this screen to add a wireless station using WPS.
	Scheduling	Use this screen to schedule the times the Wireless LAN is enabled or disabled.
	Guest WLAN	Use this screen to configure multiple BSSs on the WRE6606.
LAN	IP	Use this screen to configure LAN IP address and subnet mask.
OneConnect	OneConnect	Use this screen to enable or disable Wi-Fi auto-configuration.
MAINTENANCE		
General	General	Use this screen to view and change administrative settings such as system and domain names.

LINK	ТАВ	FUNCTION	
Password	Password Setup	Use this screen to change the password of your WRE6606.	
Time	Time Setting	Use this screen to change your WRE6606's time and date.	
Firmware Upgrade	Firmware Upgrade	Use this screen to upload firmware to your WRE6606.	
Backup Restore	Backup Restore	Use this screen to backup and restore the configuration or reset your WRE6606 to the factory defaults.	
Restart	Restart	Use this screen to reboot the WRE6606 without turning the power off.	

 Table 10
 Navigation Panel: Access Point Mode

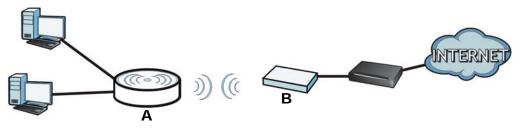
# **Client Mode**

### 5.1 Overview

Your WRE6606 can act as a wireless client. In wireless client mode, it can connect to an existing network via an access point. Use this mode if you already have an access point or wireless router in your network.

In the example below, one WRE6606 (**A**) is configured as a wireless client and another is used as an access point (**B**). The WRE6606 has two clients that need to connect to the Internet. The WRE6606 wirelessly connects to the available access point (**B**).





After the WRE6606 and the access point connect, the WRE6606 acquires its WAN IP address from the access point. The clients of the WRE6606 can now surf the Internet.

### 5.2 What You Can Do

- Use the **Status** screen (Section 5.4 on page 28) to view read-only information about your WRE6606.
- Use the LAN screen (Chapter 11 on page 78) to set the IP address for your WRE6606.
- Use the Wireless LAN screens (Chapter 10 on page 56) to associate your WRE6606 (acting as a wireless client) with an existing access point.

### 5.3 What You Need to Know

With the exception of the **Wireless LAN**, **LAN**, **Monitor**, **Configuration** and **Maintenance** screens, other configuration screens in Client mode are similar to the ones in Access Point Mode. See Chapter 3 on page 19 of this User's Guide.

#### 5.3.1 Setting your WRE6606 to Client Mode

- 1 To use your WRE6606 as a wireless client, see Section 3.1.1.1 on page 20.
- 2 Connect your computer to the LAN port of the WRE6606.
- 3 Open a web browser such as Internet Explorer and type "http://zyxelsetup" as the web address in your web browser.
- 4 Enter "1234" (default) as the password and click Login.
- 5 Type a new password and retype it to confirm, then click **Apply**. Otherwise, click **Ignore**.
  - Note: You have to log into the Web Configurator again when you change modes. As soon as you do, your WRE6606 is already in Client mode.
  - Note: The client mode IP address is always the same as the access point mode IP address. If you changed the IP address of your WRE6606 while in access point mode, use this IP address in client mode.

### 5.4 Client Mode Status Screen



Click to open the Status screen.

#### Figure 14 Status Screen: Client Mode

STATUS		Refresh I	nterval : None   Refresh Now
Device Information		System Status	
		-	
Item	Data	Item	Data
Host Name :	WRE6606	System Up Time :	00d:00h:04m:37s
Firmware Version :	V1.00(ABDU.0)B6	Current Date/Time :	1970-01-01 / 00:04:36
Sys OP Mode :	Client Mode	System Resource :	
LAN Information :		- CPU Usage :	3%
- MAC Address :	00:74:76:E2:45:01	- Memory Usage :	62%
- IP Address :	192.168.1.2		
- IP Subnet Mask :	255.255.255.0		
- Default Gateway :			
- DHCP :	Client		
WLAN 2.4G Information :			
- To AP Connection :	Disconnect		
- To AP SSID :			
- To AP Security :			
WLAN 5G Information :			
- To AP Connection :	Disconnect		
- To AP SSID :			
- To AP Security :			

The following table describes the labels shown in the **Status** screen.

DESCRIPTION
Select a number of seconds or <b>None</b> from the drop-down list box to refresh all screen statistics automatically at the end of every time interval or to not refresh the screen statistics.
Click this button to refresh the status screen statistics.
This is the WRE6606's system name you configure in the <b>Maintenance</b> > <b>General</b> screen.
This is the firmware version and the date created.
This is the device mode (Section 3.1.1 on page 19) to which the WRE6606 is set - Client Mode.
This shows the LAN Ethernet adapter MAC Address of your device.
This shows the LAN port's IP address.
This shows the LAN port's subnet mask.
This shows the LAN port's gateway IP address.
This shows the LAN port's DHCP role - Client or None.
This displays whether the WRE6606 is connected to an AP or not.
This displays the SSID of the connected AP.
Click the <b>Release_Configuration</b> button to remove all configured wireless and wireless security settings for WPS connections on the WRE6606.
This displays the type of established security protocol with the AP.
This displays whether the WRE6606 is connected to an AP or not.
This displays the SSID of the connected AP.
Click the <b>Release_Configuration</b> button to remove all configured wireless and wireless security settings for WPS connections on the WRE6606.
This displays the type of established security protocol with the AP.
This column shows the type of data the WRE6606 is recording.
This column shows the actual data recorded by the WRE6606.
This is the total time the WRE6606 has been on.
This field displays your WRE6606's present date and time.
This displays what percentage of the WRE6606's processing ability is currently used. When this percentage is close to 100%, the WRE6606 is running at full load, and the throughput is not going to improve anymore. If you want some applications to have more throughput, you should turn off other applications (for example, using bandwidth management.
This shows what percentage of the heap memory the WRE6606 is using.

 Table 11
 Status Screen: Access Point Mode

#### 5.4.1 Navigation Panel

Use the menu in the navigation panel to configure WRE6606 features in Client mode.

The following screen and table show the features you can configure in Client mode.

Figure 15 Menu: Client Mode

MONITOR	CONFIGURATION	MAINTENANCE
open all   close all	open all   close all	open all   close all
Monitor     Packet Statistics	Network     Wireless LAN 2.4G	Maintenance     General
<u>R</u>	Wireless LAN 5G     LAN	Password     Time
	OneConnect	<ul> <li>Firmware Upgrade</li> <li>Backup Restore</li> <li>Restart</li> </ul>

The following table describes the sub-menus.

LINK	ТАВ	FUNCTION
Status	Status	This screen shows the WRE6606's general device, system and interface status information.
MONITOR	·	
Monitor		
Packet Statistics	Packet Statistics	Use this screen to view port status, packet specific statistics, the "system up time" and so on.
CONFIGURATIO	N	
Network		
Wireless LAN 2.4G	AP Select	Use this screen to choose an access point that you want the WRE6606 to connect to.
Wireless LAN 5G	AP Select	Use this screen to choose an access point that you want the WRE6606 to connect to.
LAN	IP	Use this screen to configure LAN IP address and subnet mask.
OneConnect	OneConnect	Use this screen to enable or disable Wi-Fi auto-configuration.
MAINTENANCE	•	
General	General	Use this screen to view and change administrative settings such as system and domain names.
Password	Password Setup	Use this screen to change the password of your WRE6606.
Time	Time Setting	Use this screen to change your WRE6606's time and date.
Firmware Upgrade	Firmware Upgrade	Use this screen to upload firmware to your WRE6606.
Backup Restore	Backup Restore	Use this screen to backup and restore the configuration or reset your WRE6606 to the factory defaults.
Restart	Restart	Use this screen to reboot the WRE6606 without turning the power off.

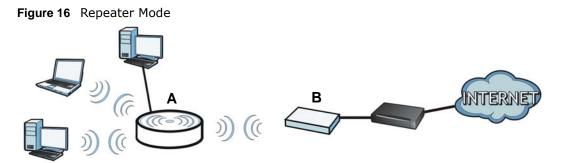
Table 12	Navigation	Panel:	Access	Point	Mode
	rigation	i unch	ACCCSS	1 Onite	nouc

# **Repeater Mode**

### 6.1 Overview

In repeater mode, your WRE6606 can act as an access point and wireless client at the same time. The WRE6606 can connect to an existing network through another access point and also lets wireless clients connect to the network through it. This helps you expand wireless coverage when you have an access point or wireless router already in your network.

In the example below, the WRE6606 (**A**) is configured as a repeater. It has three clients that want to connect to the Internet. The WRE6606 wirelessly connects to the available access point (**B**).



After the WRE6606 and the access point connect, the WRE6606 acquires its IP address from the access point. The clients of the WRE6606 can now surf the Internet.

### 6.2 What You Can Do

- Use the **Status** screen (Section 6.4 on page 33) to view read-only information about your WRE6606.
- Use the LAN screen (Chapter 11 on page 78) to set the IP address for your WRE6606.
- Use the Wireless LAN > WPS screen (Section 10.10 on page 72) to configure WPS on the WRE6606 to associate to another access point.
- Use the Wireless LAN > AP Select screen (Section 10.6 on page 65) to scan for available access points within transmission range and connect to an AP.
- Use other **Wireless LAN** screens (Section 10.4 on page 59) to configure the wireless settings and wireless security between the wireless clients and the WRE6606.

### 6.3 What You Need to Know

With the exception of the **AP Select** and **System Mode** screen, other configuration screens in Repeater mode are similar to the ones in Access Point Mode. See Chapter 3 on page 19 of this User's Guide.

#### 6.3.1 Setting your WRE6606 to Repeater Mode

- 1 To use your WRE6606 as a repeater, see Section 3.1.1.1 on page 20.
- 2 Connect your computer to the LAN port of the WRE6606.
- **3** Open a web browser such as Internet Explorer and type "http://zyxelsetup" or "http://192.168.1.2" as the web address in your web browser.
- 4 Enter "1234" (default) as the password and click Login.
- 5 Type a new password and retype it to confirm, then click **Apply**. Otherwise, click **Ignore**.
  - Note: You have to log in to the Web Configurator again when you change modes. As soon as you do, your WRE6606 is already in Repeater mode.
  - Note: If a client is connected to the WRE6606 through the wired Ethernet connection, the client can only access the 2.4 GHz Wi-Fi. In the following figure, the LAN Client is only able to communicate with devices in the 2.4 GHz wireless network.





#### 6.3.2 Configuring your WLAN, LAN and Maintenance Settings

- See Chapter 10 on page 56 and Chapter 11 on page 78 for information on configuring your wireless network and LAN settings.
- See Chapter 13 on page 82 for information on configuring your Maintenance settings.

### 6.4 Repeater Mode Status Screen



Click **Click** to open the **Status** screen.

#### Figure 18 Status: Repeater Mode

STATUS			🛃 Refresh Interva	I: None	Refresh I	Now
						10
Device Information		System Status				
Item	Data	Item			Data	
Host Name :	WRE6606	System Up Time :			00d:00h:12m:58s	
Firmware Version :	V1.00(ABDU.0)B6	Current Date/Time :			1970-01-01/00:12:58	
Sys OP Mode :	Repeater Mode	System Resource :				
LAN Information :		- CPU Usage :				3%
- MAC Address :	00:74:76:E2:45:01	- Memory Usage :				65%
- IP Address :	192.168.1.2					
- IP Subnet Mask :	255.255.255.0	Interface Status				
- Default Gateway :						
- DHCP :	Client	Interface	Status	Rate		
WLAN 2.4G Information :		LAN	Up	1000Mbps	Full-Duplex	
- MAC Address :	00:74:76:E2:45:02	WLAN 2.4G	Up 400M			
- SSID :	ZyXELE24502	WLAN 5G	Up	866M		
- Channel :	Channel-05 2432MHz					22
- Security :	WPA2-PSK	Association List 2.4G				
- To AP Connection :	Disconnect	# MAC Address Assoc		Associat	sociation Time	
- To AP SSID :						
- To AP Security :		Association List 5G				
WLAN 5G Information :		# MAC Address Asso		Associat	ssociation Time	
- MAC Address :	00:74:76:E2:45:03					
- SSID :	ZyXELE24502.speed					
- Channel :	Channel-40 5200MHz					
- Security :	WPA2-PSK					
- To AP Connection :	Disconnect					
- To AP SSID :						
- To AP Security :						

The following table describes the labels shown in the Status screen.

Table 13 Status Screen: Repeater Mode

LABEL	DESCRIPTION	
Refresh Interval None •	Select a number of seconds or <b>None</b> from the drop-down list box to refresh all screen statistics automatically at the end of every time interval or to not refresh the screen statistics.	
Refresh Now	Click this button to refresh the status screen statistics.	
Device Information	· · · · · · · · · · · · · · · · · · ·	
Host Name	This is the WRE6606's system name you configure in the <b>Maintenance</b> > <b>General</b> screen.	
Firmware Version	This is the firmware version and the date created.	
Sys OP Mode	This is the device mode (Section 3.1.1 on page 19) to which the WRE6606 is set - <b>Repeater Mode</b> .	
LAN Information		
MAC Address	This shows the LAN Ethernet adapter MAC Address of your device.	
IP Address	This shows the LAN port's IP address.	
IP Subnet Mask	This shows the LAN port's subnet mask.	
Default Gateway	This shows the LAN port's gateway IP address.	

LABEL	DESCRIPTION	
DHCP	This shows the LAN port's DHCP role - Client or None.	
WLAN 2.4G Information		
MAC Address	This shows the wireless adapter MAC Address of your WRE6606.	
SSID	This shows a descriptive name used to identify the WRE6606 in the wireless LAN.	
Channel	This shows the channel number which you select manually or the WRE6606 automatically scans and selects.	
Security	This shows the level of wireless security the WRE6606 is using.	
To AP Connection	This displays whether the WRE6606 is connected to an AP or not.	
To AP SSID	This displays the SSID of the connected AP.	
	Click the <b>Release_Configuration</b> button to remove all configured wireless and wireless security settings for WPS connections on the WRE6606.	
To AP Security	This displays the type of established security protocol with the AP.	
WLAN 5G Information		
MAC Address	This shows the wireless adapter MAC Address of your WRE6606.	
SSID	This shows a descriptive name used to identify the WRE6606 in the wireless LAN.	
Channel	This shows the channel number which you select manually or the WRE6606 automatically scans and selects.	
Security	This shows the level of wireless security the WRE6606 is using.	
To AP Connection	This displays whether the WRE6606 is connected to an AP or not.	
To AP SSID	This displays the SSID of the connected AP.	
	Click the <b>Release_Configuration</b> button to remove all configured wireless and wireless security settings for WPS connections on the WRE6606.	
To AP Security	This displays the type of established security protocol with the WRE6606.	
System Status		
Item	This column shows the type of data the WRE6606 is recording.	
Data	This column shows the actual data recorded by the WRE6606.	
System Up Time	This is the total time the WRE6606 has been on.	
Current Date/Time	This field displays your WRE6606's present date and time.	
System Resource		
CPU Usage	This displays what percentage of the WRE6606's processing ability is currently used. When this percentage is close to 100%, the WRE6606 is running at full load, and the throughput is not going to improve anymore. If you want some applications to have more throughput, you should turn off other applications (for example, using bandwidth management.	
Memory Usage	This shows what percentage of the heap memory the WRE6606 is using.	
Interface Status		
Interface	This displays the WRE6606 port types. The port types are: LAN and WLAN.	
Status	For the LAN port, this field displays <b>Down</b> (line is down) or <b>Up</b> (line is up or connected).	
	For the WLAN, it displays ${\bf Up}$ when the WLAN is enabled or ${\bf Down}$ when the WLAN is disabled.	

 Table 13
 Status Screen: Repeater Mode

LABEL	DESCRIPTION	
Rate	For the LAN ports, this displays the port speed and duplex setting or is left blank when the line is disconnected.	
	For the WLAN, it displays the maximum transmission rate when the WLAN is enabled and is left blank when the WLAN is disabled.	
Association List 2.4G		
#	This is the index number of an associated wireless station.	
MAC Address	This field displays the MAC address of an associated wireless station.	
Association Time	This field displays the time a wireless station first associated with the WRE6606's WLAN network.	
Association List 5G		
#	This is the index number of an associated wireless station.	
MAC Address	This field displays the MAC address of an associated wireless station.	
Association Time	This field displays the time a wireless station first associated with the WRE6606's WLAN network.	

 Table 13
 Status Screen: Repeater Mode

#### 6.4.1 Navigation Menus

Use the menu in the navigation panel to configure WRE6606 features in Repeater mode.

The following screen and table show the features you can configure in Repeater mode.

Figure 19 Menus: Repeater Mode



The following table describes the sub-menus.

Table 14 Menus: Repeater Mod
------------------------------

LINK	ТАВ	FUNCTION	
Status	Status	This screen shows the WRE6606's general device, system and interface status information.	
MONITOR			
Monitor			
Packet Statistics	Packet Statistics	Use this screen to view port status, packet specific statistics, the "system up time" and so on.	
CONFIGURATION			
Network			

LINK	ТАВ	FUNCTION	
Wireless LAN 2.4G	General	Use this screen to configure general wireless LAN and wireless security settings.	
	AP Select	Use this screen to choose an access point that you want the WRE6606 to connect to.	
	MAC Filter	Use this screen to configure the WRE6606 to block access to devices or block the devices from accessing the WRE6606.	
	Advanced	Use this screen to configure advanced wireless settings.	
	QoS	Use this screen to enable Wi-Fi MultiMedia Quality of Service (WMMQoS).	
	WPS	Use this screen to enable WPS.	
	WPS Device	Use this screen to add a wireless station using WPS.	
Wireless LAN	General	Use this screen to configure general wireless LAN settings.	
5G	AP Select	Use this screen to choose an access point that you want the WRE6606 to connect to.	
	MAC Filter	Use this screen to configure the WRE6606 to block access to devices or block the devices from accessing the WRE6606.	
	Advanced	Use this screen to configure advanced wireless settings.	
	QoS	Use this screen to enable Wi-Fi MultiMedia Quality of Service (WMMQoS).	
	WPS	Use this screen to enable WPS.	
	WPS Device	Use this screen to add a wireless station using WPS.	
LAN	IP	Use this screen to configure LAN IP address and subnet mask.	
OneConnect	OneConnect	Use this screen to enable or disable Wi-Fi auto-configuration.	
MAINTENANCE	•		
General	General	Use this screen to view and change administrative settings such as system and domain names.	
Password	Password Setup	Use this screen to change the password of your WRE6606.	
Time	Time Setting	Use this screen to change your WRE6606's time and date.	
Firmware Upgrade	Firmware Upgrade	Use this screen to upload firmware to your WRE6606.	
Backup Restore	Backup Restore	Use this screen to backup and restore the configuration or reset your WRE6606 to the factory defaults.	
Restart	Restart	Use this screen to reboot the WRE6606 without turning the power off.	
System Mode	System Mode	Use this screen to select how you want to use your WRE6606.	
	1	1	

#### Table 14 Menus: Repeater Mode

## eaZy123 Wizard Setup

## 7.1 Overview

This chapter provides information on the wizard setup screens in the Web Configurator.

The Web Configurator's wizard setup helps you configure your device.

## 7.2 Accessing the Wizard

Launch your web browser and type "http://zyxelsetup" or "http://192.168.1.2" as the website address. See Section 2.2 on page 13 for detailed information.

Note: The wizard appears when the WRE6606 is accessed for the first time or when you reset the WRE6606 to its default factory settings.

The wizard screen opens.

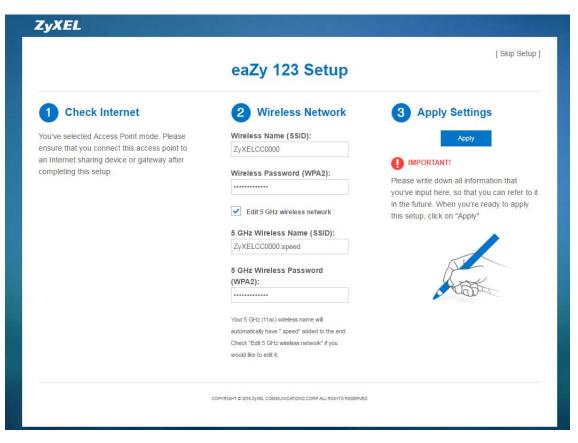
Note: If you have already configured the wizard screens and want to open it again, click the eaZy123 icon ( @ esZy123 ) on the upper right corner of any Web Configurator screen.

## 7.3 Using the Wizard

The eaZy123 wizard for the WRE6606 is available in AP mode, Client mode, and Repeater mode.

#### 7.3.1 AP Mode

1 Configure the wireless settings between the WRE6606 and its wireless clients. The WRE6606 automatically copies the SSID of the associated AP and appends ".speed" to the 5GHz SSID. Click Apply.



2 The eaZy 123 setup wizard is complete. Verify the WRE6606's wireless network settings and click **GO** to log into the web configurator again.

eaZy 12	23 Setup	
Congra	tulations	
You've completed setting up your WRE65	05 v2. Go for further network configuration.	
(	GO	
New 2.4 GHz Wi-Fi Network	New 5 GHz Wi-Fi Network	
Wireless Name: ZyXEL	Wireless Name: ZyXEL.speed	
Wireless Password: 12345678	Wireless Password: 12345678	
COPYRIGHT © 2016 Zyxel COMMUN	CATIONS CORP. ALL RIGHTS RESERVED	
	Congra You've completed setting up your WRE65 New 2.4 GHz Wi-Fi Network Wireless Name: ZyXEL Wireless Password: 12345678	New 2.4 GHz Wi-Fi Network         New 5 GHz Wi-Fi Network           Wireless Name: ZyXEL         Wireless Name: ZyXELspeed

#### 7.3.2 Client Mode

1 The wizard scans for available Wi-Fi networks and displays the network list. Select a 2.4 GHz Wi-Fi network to which you want the WRE6606 to connect to extend the network. Click **Continue**.

If the wireless router or AP you want to connect to is not listed, click **Choose Network Manually** and go to step 3 to configure the SSID and security settings manually.

If you don't want to associate with a 2.4 GHz network, click Skip 2.4 GHz.

		eaZy 123 Setup		[ Skip Setu
	se a 2.4 GHz Wi-Fi			
hoose your 2.4 Select	GHz Wi-Fi network you wi Signal	sh to extend. We recommend to have at least 70% Wi-Fi Network	signal strength Security	Wireless
0	100%	ZyXEL_WI-Fi	WPA2-PSK	b/g/n
0	100%	SVD_85021	WPA2-PSK	b/g/n
•	100%	EMG2926_24GGGGGGGG	WPA2-PSK	b/g/n
	100%	REON Digital	WPA2-MIXED	b/g/n
0	100%	ZyXEL	No Security	b/g/n
•	100%	NBG4604_Kelly	WPA2-PSK	b/g/n
۲	100%	ZyXELD3018C	WPA2-PSK	b/g/n
	Continue	Scan Again Choose Network Manua	lly Skip 2.4 GHz	l

2 Type the selected network's Wi-Fi password (key) if wireless security is enabled. Click Continue.

Z <sub>y</sub> XEL	
eaZy 123 Setup	[ Skip Setup ]
2 Enter 2.4 GHz Wi-Fi Network's Password	
Please enter in the 2.4 GHz wireless network's password that you're extending	
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**3** If you click **Choose Network Manually**, the following screen displays. Enter the SSID and security settings of your wireless router or AP. Click **Continue**.

yXEL		
	eaZy 123 Setup	[ Skip Setup
2 Manually enter in the	2.4 GHz wireless network settings	
	Wireless Name (SSID):	
	Enter Wi-Fi network here	
	No Security	
	Enter Wi-Fi password here	
	Continue	
	COPYRIGHT © 2016 ZyxEL COMMUNICATIONS CORP. ALL RIGHTS RESERVED	

- **4** The 5 GHz setup screen displays. Repeat previous steps to select and connect to a 5 GHz Wi-Fi network.
- 5 The eaZy 123 setup wizard is complete. Click **GO** to log into the web configurator again.

ZyXEL	
	eaZy 123 Setup
	Congratulations
	You've completed setting up your WRE6606. Go for further network configuration.
	GO
	Connecting Success.
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#### 7.3.3 Repeater Mode

1 The wizard scans for available Wi-Fi networks and displays the network list. Select a 2.4 GHz Wi-Fi network to which you want the WRE6606 to connect to extend the network. Click **Continue**.

If the wireless router or AP you want to connect to is not listed, click **Choose Network Manually** and go to step 3 to configure the SSID and security settings manually.

If you don't want to associate with a 2.4 GHz network, click Skip 2.4 GHz.

		eaZy 123 Setup		[ Skip Setup
	se a 2.4 GHz Wi-Fi		· · · ·	
hoose your 2.4 Select	GHz WI-FI network you wi Signal	sh to extend. We recommend to have at least 70% Wi-Fi Network	signal strength Security	Wireless
٢	100%	ZyXEL_WI-Fi	WPA2-PSK	b/g/n
0	100%	SVD_85021	WPA2-PSK	b/g/n
0	100%	EMG2926_24GGGGGGGG	WPA2-PSK	b/g/n
	100%	REON Digital	WPA2-MIXED	b/g/n
۲	100%	ZyXEL	No Security	b/g/n
•	100%	NBG4604_Kelly	WPA2-PSK	b/g/n
۲	100%	ZyXELD3018C	WPA2-PSK	b/g/n
	Continue	Scan Again Choose Network Manual	ly Skip 2.4 GHz	ĺ

2 Type the selected network's Wi-Fi password (key) if wireless security is enabled. Click **Continue**.

ZyXEL	
eaZy 123 Setup	[ Skip Setup ]
2 Enter 2.4 GHz Wi-Fi Network's Password	
Please enter in the 2.4 GHz wireless network's password that you're extending	
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**3** If you click **Choose Network Manually**, the following screen displays. Enter the SSID and security settings of your wireless router or AP. Click **Continue**.

		[ Skip Setup
	eaZy 123 Setup	
2 Manually enter in th	e 2.4 GHz wireless network settings	
	Wireless Name (SSID):	
	Enter Wi-Fi network here	
	No Security	
	Enter Wi-Fi password here	
	Continue	

- **4** The 5 GHz setup screen displays. Repeat previous steps to select and connect to a 5 GHz Wi-Fi network.
- 5 Configure the wireless settings between the WRE6606 and its wireless clients. The WRE6606 automatically copies the SSID of the associated AP and appends ".speed" to the 5GHz SSID. Click Apply.

ZyXEL				
	eaZy 12	23 Setup	[ Skip Setup ]	
3 Set	Your Extender's Wireless Network			
	2.4 GHz Wireless Name (SSID):	5 GHz Wireless Name (SSID):		
	ZyXEL	ZyXEL.speed		
	2.4 GHz Wireless Password:	5 GHz Wireless Password:		
	IMPORTANT!			
	Please write down all information that	at you've input here iso that you can		
	refer to it in the future. When you're			
	"Apply"			
	K-	$\prec$		
		Der		
	Ap	pply		
	COPYRIGHT © 2016 ZYKEL COMMUNIC	CATIONS CORP ALL RIGHTS RESERVED		

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6 The eaZy 123 setup wizard is complete. Verify the WRE6606's wireless network settings and click **GO** to log into the web configurator again.

	eaZy 12	23 Setup		
	Congra	tulations		
You've co	You've completed setting up your WRE6505 v2. Go for further network configuration.			
Nau 2	4 GHz Wi-Fi Network	GO		
	ss Name: ZyXEL	Wireless Name: ZyXEL.speed		
	ss Password: 12345678	Wireless Password: 12345678		
	COPYRIGHT © 2016 2YXEL COMMUNI	CATIONS CORP. ALL RIGHTS RESERVED		

## **Tutorials**

## 8.1 Overview

This chapter provides tutorials for your WRE6606 as follows (in access point or repeater mode) as follows:

- Connecting to the Internet from an Access Point
- Connecting to a Wireless Network Using WPS
- Connecting the WRE6606 to an AP

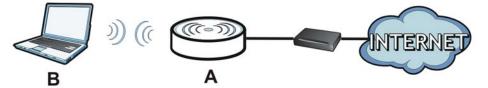
This chapter provides tutorials for your WRE6606 (in client mode) as follows:

• Connecting the WRE6606 (in Client Mode) to an AP or Wireless Router

## 8.2 Connecting to the Internet from an Access Point

This section gives you an example of how to set up an access point (AP) and wireless client (a notebook (B), in this example) for wireless communication. **B** can access the Internet through the access point (A) wirelessly.

Figure 20 Wireless Access Point Connection to the Internet



## 8.3 Connecting to a Wireless Network Using WPS

This section gives you an example of how to set up wireless network using WPS. The following example uses the WRE6606 as the AP and NWD-211AN as the wireless client which connects to a notebook.

Note: The wireless client must be a WPS-aware device (for example, a WPS USB adapter or PCI card).

The following WPS methods for creating a secure connection are described in the tutorial.

- **Push Button Configuration (PBC)** create a secure wireless network simply by pressing a button. See Section 8.3.1 on page 46.This is the easier method.
- **PIN Configuration** create a secure wireless network simply by entering a wireless client's PIN (Personal Identification Number) in the WRE6606's interface. See Section 8.3.2 on page 47. This is the more secure method, since one device can authenticate the other.

#### 8.3.1 Push Button Configuration (PBC)

The push button configuration function found in the interfaces is available both in AP mode and Repeater mode. The WPS button, see Section 1.3 on page 10, can also be used for PBC configurations in either AP or Repeater mode.

- 1 Make sure that your WRE6606 is turned on and set to work in AP mode and that it is connected to your network.
- 2 Launch your wireless client's configuration utility.
- 3 In the wireless client utility, find the WPS settings. Enable WPS and press the WPS button (Start or WPS button).
- Log into WRE6606's Web Configurator. Make sure WPS is enabled in the Network > Wireless LAN
   > WPS screen.
- 5 Navigate to Network > Wireless LAN 2.4G or Wireless LAN 5G > WPS Device and press the WPS button.
  - Note: Your WRE6606 has a WPS button located on its panel, as well as a WPS button in its configuration utility. Both buttons have exactly the same function; you can use one or the other.
  - Note: It doesn't matter which button is pressed first. You must press the second button within two minutes of pressing the first one.

The WRE6606 sends the proper configuration settings to the wireless client. This may take up to two minutes. Then the wireless client is able to communicate with the WRE6606 securely.

The following figure shows you how to set up wireless network and security by pressing a button on both WRE6606 and wireless client (the NWD-211AN in this example).

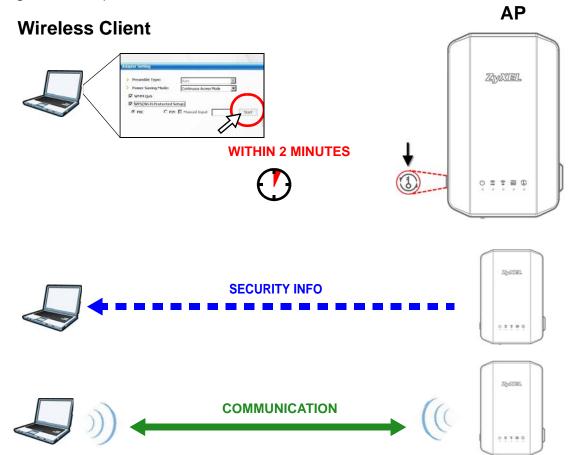


Figure 21 Example WPS Process: PBC Method

#### 8.3.2 PIN Configuration

When you use the PIN configuration method, you need to use both WRE6606's configuration interface and the client's utilities.

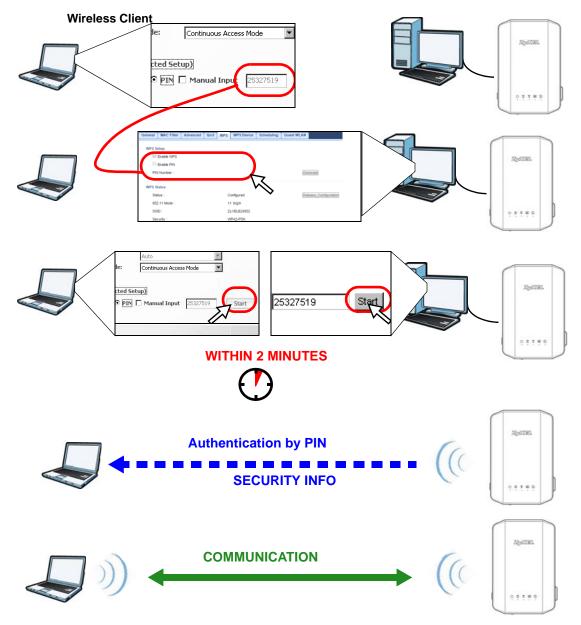
The push button configuration function is available both in AP mode and Repeater mode.

- 1 Launch your wireless client's configuration utility. Go to the WPS Station settings and select the PIN method to get a PIN number.
- 2 On the WRE6606, navigate to the Network > Wireless LAN 2.4G or Wireless LAN 5G > WPS screen.
- **3** Obtain the PIN number for the WRE6606 or press the **Generate** button to create a new PIN number. See Section 10.10 on page 72
- 4 Enter the WRE6606 PIN number in the wireless station's utility screen.

The WRE6606 authenticates the wireless client and sends the proper configuration settings to the wireless client. This may take up to two minutes. Then the wireless client is able to communicate with the WRE6606 securely.

The following figure shows an example of how to set up wireless network and security on WRE6606 and wireless client (ex. NWD210N in this example) by using PIN method.





## 8.4 Connecting the WRE6606 to an AP

Repeater mode allows you to extend the original AP coverage.

• Selecting an AP from an Automatically Detected List - create a secure wireless network simply by selecting an AP from a list of detected APs. See Section 8.4.1 on page 49. This is the easier method.

• Selecting an AP by Manually Entering Security Information - create a secure wireless network by manually entering the AP's wireless security settings in the WRE6606's interface. See Section 8.4.2 on page 50. This is useful when the AP is hidden.

#### 8.4.1 Selecting an AP from an Automatically Detected List

This section demonstrates the procedures in Repeater mode. Follow the steps below to create a secure wireless network by selecting an AP from a list of detected APs.

The AP select function is available both in Client mode and Repeater mode. See Section 3.1.1 on page 19.

The instructions require that your hardware is connected (see the Quick Start Guide) and you are logged into the Web Configurator through your LAN connection (see Section 2.2 on page 13).

1 Open the **Network** > **Wireless LAN 2.4G** or **Wireless LAN 5G** > **AP Select** screen. Select an AP form the **Select** column and click **Continue**.

AP Select							
NO.	Select	SSID	MAC	Channel	Mode	Security Mode	Strength
1	0	ZyXEL_Wi-Fi	B0:B2:DC:70:C0:24	1	690	WPA2-PSK	100%
2	$\bigcirc$	Nebula_AP_CSO1	58:8B:F3:91:4B:C7	6	690	WPA2-PSK	100%
3	$\bigcirc$	SVD_85021	FC:F5:28:E5:DC:94	5	690	WPA2-PSK	100%
4	$\bigcirc$	4615v2	EE:43:F6:DA:77:30	10	690	WPA2-PSK	100%
5	$\bigcirc$	VL web	A2:E0:CB:7C:FB:97	1	690	No Security	100%
6	$\bigcirc$	VL user	A0:E4:CB:7C:FB:97	1	690	WPA2-1X/AES	100%
7	$\bigcirc$	NBG6816-2.4G-83224	A0:E4:CB:5A:34:2C	6	690	WPA2-PSK	100%
8	$\bigcirc$	EMG2926_24GGGGGGGG	00:AA:BB:CC:DD:00	11	690	WPA2-PSK	100%
9	$\bigcirc$	83368	A0:E4:CB:5A:34:80	5	690	WPA2-PSK	100%
10	$\bigcirc$	ZyXEL	A0:E4:CB:84:BA:37	6	690	No Security	93%
11	$\bigcirc$	Greenspot I Guest	FE:F0:28:C9:A1:8D	9	690	WPA2-PSK	93%
12	$\bigcirc$	DELSAD4532C	28:28:5D:D4:53:2C	8	690	WPA2-MIXED	92%
13	$\bigcirc$	ZyXEL_Vic	B0:B2:DC:6E:7E:B9	6	690	No Security	92%

Figure 23 Tutorial: Selecting an automatically detected AP

2 Type the Wi-Fi key if wireless security is enabled on the selected AP and click **Continue**.

Figure 24 Tutorial: The KEY field

General AP Select	MAC Filter Advanced	QoS WPS WPS Dev	ice
Enter 2.4 GHz Wi-Fi I Please enter in the	Network's Password 2.4 GHz wireless network's	password that you're extend	ing :
		Con	tinue

3 Configure the wireless settings between the WRE6606 and its wireless clients. The WRE6606 automatically copies the SSID of the associated AP and appends ".speed" to the 5GHz SSID. Click Apply to save settings and restart the WRE6606.

Figure 25	Tutorial:	Configure	WRE6606's	WLAN

General	AP Select	MAC Filter	Advanced	QoS	WPS	WPS Device	
Set You	ur Extender's	Wireless Netw	vork				
2.4	GHz Wireless	Name (SSID):		ZyXEL			
2.4	GHz Wireless	Password:					
imp	ORTANT!						
Ple	ease write do	wn all informa	tion that you	've inpu	t here, s	so that you can	efer to it in the future. When you're ready to apply this setup, click on "Apply"
						App	ū
						App	<u>y</u>

4 You have successfully set up your WRE6606 to connect to an AP. Click **GO** to go to the **Status** screen.

Figure	igure 26 Tutorial: Saving settings						
General	AP Select	MAC Filter	Advanced	QoS	WPS	WPS Device	
Congra	tulations						
You	ve completed	setting up your	WRE6505 v2	Go for f	urther ne	etwork configuration.	
Nev	v 5 GHz Wi-Fi	Network					
Win	eless Name:	Zy×EL	speed				
Win	eless Passwo	rd: 12345	67890				
						GO	

#### 8.4.2 Selecting an AP by Manually Entering Security Information

This example shows you how to configure wireless security settings with the following parameters on your WRE6606.

SSID	ZyXEL
Security	WPA(2)-PSK
Wi-Fi Key	1234567890

Follow the steps below to create a secure wireless network by manually entering the AP's wireless security settings in the WRE6606's interface.

The instructions require that your hardware is connected (see the Quick Start Guide) and you are logged into the Web Configurator through your LAN connection (see Section 2.2 on page 13).

1 Open the Network > Wireless LAN 2.4G or Wireless LAN 5G > AP Select screen. Select Choose Network Manually.

AP Selec	t.						
NO.	Select	SSID	MAC	Channel	Mode	Security Mode	Strength
1	$\bigcirc$	ZyXEL_Wi-Fi	B0:B2:DC:70:C0:24	1	690	WPA2-PSK	100%
2	$\bigcirc$	Nebula_AP_CSO1	58:8B:F3:91:4B:C7	6	690	WPA2-PSK	100%
3	$\bigcirc$	SVD_85021	FC:F5:28:E5:DC:94	5	690	WPA2-PSK	100%
4	$\bigcirc$	4615v2	EE:43:F6:DA:77:30	10	690	WPA2-PSK	100%
5	$\bigcirc$	VL web	A2:E0:CB:7C:FB:97	1	690	No Security	100%
6	$\bigcirc$	VL user	A0:E4:CB:7C:FB:97	1	690	WPA2-1X/AES	100%
7	0	NBG6816-2.4G-83224	A0:E4:CB:5A:34:2C	6	690	WPA2-PSK	100%
8	$\bigcirc$	EMG2926_24GGGGGGGG	00:AA:BB:CC:DD:00	11	690	WPA2-PSK	100%
9	$\bigcirc$	83368	A0:E4:CB:5A:34:80	5	690	WPA2-PSK	100%
10	$\bigcirc$	ZyXEL	A0:E4:CB:84:BA:37	6	690	No Security	93%
11	$\bigcirc$	Greenspot I Guest	FE:F0:28:C9:A1:8D	9	690	WPA2-PSK	93%
12	$\bigcirc$	DELSAD4532C	28:28:5D:D4:53:2C	8	690	WPA2-MIXED	92%
13	0	ZyXEL_Vic	B0:B2:DC:6E:7E:B9	6	690	No Security	92%

2 Type the SSID of the AP into the Wireless Name (SSID) field, set the security settings and click Continue.

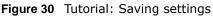
Figure 28 Tutorial: Typing an SSID

3 Configure the wireless settings between the WRE6606 and its wireless clients. The WRE6606 automatically copies the SSID of the associated AP and appends ".speed" to the 5GHz SSID. Click **Apply** to save settings and restart the WRE6606.

Figure 29 Tutorial: Configure WRE6606's WLAN

General AP Select MAC Filter Advance	ed QoS WPS WPS Device
Set Your Extender's Wireless Network	
2.4 GHz Wireless Name (SSID):	ZyXEL
2.4 GHz Wireless Password:	
MPORTANT!	
Please write down all information that	you've input here, so that you can refer to it in the future. When you're ready to apply this setup, click on "Apply"
	Apply

4 You have successfully set up your WRE6505 v2 to connect to an AP. Click GO to go to the Status screen.





## 8.5 Connecting the WRE6606 (in Client Mode) to an AP or Wireless Router

If you have an access point or wireless router with Internet access deployed in your network already, and you want to use the WRE6606 as a wireless client to connect to the existing AP or wireless router, set the WRE6606 to client mode. The WRE6606 then acts as a wireless client. Your device, such as a computer, can connect to the WRE6606 through a wired connection to access the Internet.

- 1 Set your WRE6606 to work as a wireless client. See Section 2.1.1.1 on page 14.
- 2 Connect your computer to the LAN port of the WRE6606 using an Ethernet cable.
- **3** Open a web browser such as Internet Explorer and type "http://zyxelsetup" as the web address in your web browser.
- 4 Enter "1234" (default) as the password and click Login.
- 5 Type a new password and retype it to confirm, then click **Apply**. Otherwise, click **Ignore**.
- **6** To connect to a specific wireless network, you can manually create a wireless profile or use the site survey tool to associate with it.

# PART II Technical Reference



## 9.1 Overview

This chapter discusses read-only information related to the device state of the WRE6606.

## 9.2 What You Can Do

• use the **Packet Statistics** screen (Section 9.3 on page 54) to view port status, packet specific statistics, the "system up time" and so on.

## 9.3 Packet Statistics Screen

Click **Monitor** > **Packet Statistics**. Read-only information here includes port status, packet specific statistics and the "system up time". The **Poll Interval(s)** field is configurable and is used for refreshing the screen.

Figure 31	Monitor :	> Pac	ket Statistics

Packet Statistics	Otatus	TuDita	DuDite	Oellisians	To be 6	Du lib /s
Port	Status	TxPkts	RxPkts	Collisions	Tx kb/s	Rx kb/s
LAN	Down	6407	5821	0	0.00	0.00
WLAN 2.4G	300M	5844	64211	0	2.66	150.42
WLAN 5G	433M	401	84545	0	0.00	269.16
stem Up Time: 00d:00	0h:14m:53s Refresh No	W				

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Port	This is the WRE6606's port type.
Status	For the LAN ports, this displays the port speed or <b>Down</b> when the line is disconnected.
	For the WLAN, it displays the maximum transmission rate when the WLAN is enabled and <b>Down</b> when the WLAN is disabled.
TxPkts	This is the number of transmitted packets on this port.
RxPkts	This is the number of received packets on this port.
Collisions	This is the number of collisions on this port.
Tx kb/s	This displays the transmission speed in kilobits per second on this port.
Rx kb/s	This displays the reception speed in kilobits per second on this port.
System Up Time	This is the total time the WRE6606 has been on.
Poll Interval(s)	Select the time interval in seconds for refreshing statistics in this field.
Refresh Now	Click this button to update the screen statistics immediately.

Table 15	Monitor	>	Packet	Statistics
	Monitor	-	racket	Statistics

## **Wireless LAN**

## 10.1 Overview

This chapter discusses how to configure the wireless network settings in your WRE6606. See Section 1.1 on page 9 for an overview of wireless networks.

### 10.2 What You Can Do

- Use the **General** screen to enable the Wireless LAN (2.4G/5G), enter the SSID and select the wireless security mode (Section 10.4 on page 59).
- Use the AP select screen to choose an access point that you want the WRE6606 (in Client mode and Repeater mode) to connect to. You should know the security settings of the target AP (Section 10.6 on page 65).
- Use the MAC Filter screen to allow or deny wireless stations based on their MAC addresses from connecting to the WRE6606 (Section 10.7 on page 69).
- Use the Advanced screen to allow intra-BSS networking and set the RTS/CTS Threshold (Section 10.8 on page 70).
- Use the QoS screen to enable Wi-Fi MultiMedia Quality of Service (WMMQoS). This allows the WRE6606 to automatically set priority levels to services, such as e-mail, VoIP, chat, and so on (Section 10.9 on page 71).
- Use the **WPS** screen to enable WPS to quickly set up a wireless network with strong security, without having to configure security settings manually (Section 10.10 on page 72).
- Use the WPS Device screen to add a wireless station using WPS (Section 10.11 on page 73).
- Use the **Scheduling** screen to set the times your wireless LAN is turned on and off (Section 10.12 on page 74). This screen is available only when the WRE6606 is in AP mode.
- Use the **Guest WLAN** screen to configure multiple BSSs on the WRE6606 (Section 10.13 on page 75). This screen is available only when the WRE6606 is in AP mode.

## 10.3 What You Should Know

Every wireless network must follow these basic guidelines.

- Every wireless client in the same wireless network must use the same SSID.
   The SSID is the name of the wireless network. It stands for Service Set IDentity.
- If two wireless networks overlap, they should use different channels.

Like radio stations or television channels, each wireless network uses a specific channel, or frequency, to send and receive information.



• Every wireless client in the same wireless network must use security compatible with the AP.

Security stops unauthorized devices from using the wireless network. It can also protect the information that is sent in the wireless network.

#### **10.3.1 Wireless Security Overview**

The following sections introduce different types of wireless security you can set up in the wireless network.

#### 10.3.1.1 MAC Address List

Every wireless client has a unique identification number, called a MAC address.<sup>1</sup> A MAC address is usually written using twelve hexadecimal characters<sup>2</sup>; for example, 00A0C5000002 or 00:A0:C5:00:00:02. To get the MAC address for each wireless client, see the appropriate User's Guide or other documentation.

You can use the MAC Address List to tell the AP which wireless clients are allowed to use the wireless network. If a wireless client is allowed to use the wireless network, it still has to have the correct settings (SSID, channel, and security). If a wireless client is not allowed to use the wireless network, it does not matter if it has the correct settings.

This type of security does not protect the information that is sent in the wireless network. Furthermore, there are ways for unauthorized devices to get the MAC address of an authorized wireless client. Then, they can use that MAC address to use the wireless network.

#### 10.3.1.2 Encryption

Wireless networks can use encryption to protect the information that is sent in the wireless network. Encryption is like a secret code. If you do not know the secret code, you cannot understand the message.

	NO AUTHENTICATION
Weakest	No Security
<b></b>	Static WEP
₩	WPA-PSK
Strongest	WPA2-PSK

Table 16 Types of Encryption for Each Type of Authentication

For example, if users do not log in to the wireless network, you can choose no authentication, if users do log on to the wireless network, you can choose **No Security**, **Static WEP**, **WPA-PSK**, or **WPA2-PSK**.

Usually, you should set up the strongest encryption that every wireless client in the wireless network supports. Suppose the wireless network has two wireless clients. Device A only supports WEP, and device B supports WEP and WPA-PSK. Therefore, you should set up **Static WEP** in the wireless network.

<sup>1.</sup> Some wireless devices, such as scanners, can detect wireless networks but cannot use wireless networks. These kinds of wireless devices might not have MAC addresses.

<sup>2.</sup> Hexadecimal characters are 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, and F.

Note: It is recommended that wireless networks use WPA-PSK, or stronger encryption. IEEE 802.1x and WEP encryption are better than none at all, but it is still possible for unauthorized devices to figure out the original information pretty quickly.

Many types of encryption use a key to protect the information in the wireless network. The longer the key, the stronger the encryption. Every wireless client in the wireless network must have the same key.

#### 10.3.1.3 WPS

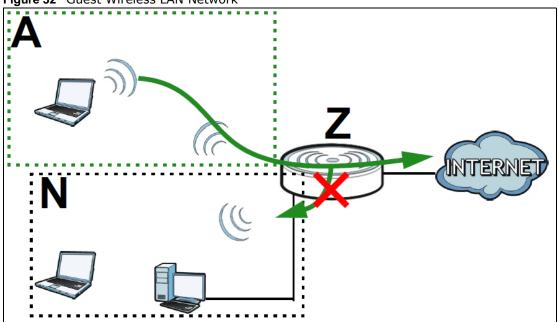
Wi-Fi Protected Setup (WPS) is an industry standard specification, defined by the Wi-Fi Alliance. WPS allows you to quickly set up a wireless network with strong security, without having to configure security settings manually. Depending on the devices in your network, you can either press a button (on the device itself, or in its configuration utility) or enter a PIN (Personal Identification Number) in the devices. Then, they connect and set up a secure network by themselves. See how to set up a secure wireless network using WPS in the Section 8.3 on page 45.

#### 10.3.2 Guest WLAN

Guest WLAN allows you to set up a wireless network where users can access to Internet via the WRE6606 (Z), but not other networks connected to the Z. In the following figure, a guest user can access the Internet from the guest wireless network A via Z but not the home or company network N.

Note: Note: The home or company network **N** and Guest WLAN network are independent networks.

Note: Note: Only AP mode supports Guest WLAN.





## **10.4 General Wireless LAN Screen**

Use this screen to enable the Wireless LAN, enter the SSID and select the wireless security mode.

Note: If you are configuring the WRE6606 from a computer connected to the wireless LAN and you change the WRE6606's SSID, channel or security settings, you will lose your wireless connection when you press **Apply** to confirm. You must then change the wireless settings of your computer to match the WRE6606's new settings.

Click Network > Wireless LAN 2.4G or Wireless LAN 5G to open the General screen.

General	AP Select	MAC Filter	Advanced	QoS	WPS	WPS Device		
Wireley	Window Solum							
WITCHCS	Wireless Setup							
Wir	eless LAN :				Ena	able 🔍 Disable		
Net	twork Name(S	SID):			ZyXEl	LCC0000		
	Hide SSID							
Ор	erating Channe	el :			Chann	nel-11 2462MHz		
Net	twork Mode :				2.4 G	Hz (802.11b/g/n)	T	
Cha	annel Bandwid	th :			0 20	○ 40		
Securi	Security							
Sec	urity Mode :				WPA2	2-PSK 🔻		
	WPA Compatible							
Pre	-Shared Key :				B71D4	4F242D194		
Gro	oup Key Updat	e Timer :			3600	seconds		
	Note: No Security and WPA2-PSK can be configured when WPS enabled							
					A	Apply Reset		

**Figure 33** Network > Wireless LAN 2.4G/5G > General (Repeater Mode)

Figure 34 Network > Wireless LA	
General MAC Filter Advanced QoS WP	S WPS Device Scheduling Guest WLAN
Wireless Setup	
Wireless LAN :	Enable Disable
Network Name(SSID) :	ZyXELE24502
Hide SSID	
Channel Selection :	Channel-11 2462MHz 🔻 🗹 Auto Channel Selection
Operating Channel :	Channel-05 2432MHz
Network Mode :	2.4 GHz (802.11b/g/n) V
Channel Bandwidth :	20 40 20/40
Security	
Security Mode :	WPA2-PSK V
WPA Compatible	
Pre-Shared Key :	767179C7A2BFF
Group Key Update Timer :	3600 seconds
Note: No Security and WPA2-PSK can be	e configured when WPS enabled
	Apply Reset

The following table describes the general wireless LAN labels in this screen.

LABEL	DESCRIPTION					
Wireless Setup						
Wireless LAN	This is turned on by default. Click <b>Disable</b> to turn off the wireless LAN function.					
Network Name (SSID)	The SSID (Service Set IDentity) identifies the Service Set with which a wireless client is associated. Enter a descriptive name (up to 32 printable characters found on a typical English language keyboard) for the wireless LAN.					
Hide SSID	Select this check box to hide the SSID in the outgoing beacon frame so a wireless client cannot obtain the SSID through scanning using a site survey tool.					
Channel	Set the operating frequency/channel depending on your particular region.					
Selection	Select a channel from the drop-down list box. The options vary depending on the frequency band and the country you are in.					
	This option is only available when the WRE6606 is in AP mode and <b>Auto Channel Selection</b> is disabled.					
Auto Channel	This option is available only when the WRE6606 is in AP mode.					
Selection	Select this option to have the WRE6606 automatically scan for and select a channel which is not used by another device.					
Operating Channel	This displays the channel the WRE6606 is currently using.					

 Table 17
 Network > Wireless LAN 2.4G/5G > General

LABEL	DESCRIPTION						
Network Mode	2.4 GHz is the frequency used by IEEE 802.11b/g/n wireless clients.						
	5 GHz is the frequency used by IEEE 802.11ac/a/n wireless clients.						
	Select <b>2.4 GHz (802.11b)</b> to allow only IEEE 802.11b compliant WLAN devices to associate with the WRE6606.						
	Select <b>2.4 GHz (802.11g)</b> to allow only IEEE 802.11g compliant WLAN devices to associate with the WRE6606.						
	Select <b>2.4 GHz (802.11n)</b> to allow only IEEE 802.11n compliant WLAN devices to associate with the WRE6606.						
	Select <b>2.4 GHz (802.11b/g)</b> to allow both IEEE802.11b and IEEE802.11g compliant WLAN devices to associate with the WRE6606. The transmission rate of your WRE6606 might be reduced.						
	Select <b>2.4 GHz (802.11b/g/n)</b> to allow both IEEE802.11b, IEEE802.11g and IEEE802.11n compliant WLAN devices to associate with the WRE6606. The transmission rate of your WRE6606 might be reduced.						
	Select <b>5 GHz (802.11a)</b> to allow only IEEE 802.11a compliant WLAN devices to associate with the WRE6606.						
	Select <b>5 GHz (802.11a/n)</b> to allow both IEEE802.11a and IEEE802.11n compliant WLAN devices to associate with the WRE6606. The transmission rate of your WRE6606 might be reduced.						
	Select <b>5 GHz (802.11a/n/ac)</b> to allow both IEEE802.11a, IEEE802.11n and IEEE802.11ac compliant WLAN devices to associate with the WRE6606. The transmission rate of your WRE6606 might be reduced.						
Channel	Select the channel bandwidth you want to use for your wireless network.						
Bandwidth	Select <b>20</b> MHz if you want to lessen radio interference with other wireless devices in your neighborhood.						
	Select <b>40</b> MHz if you want to lessen radio interference with other wireless devices in your neighborhood.						
	Select $20/40$ MHz to allow the WRE6606 to choose the channel bandwidth (20 or 40 MHz) that has least interference.						
	Select <b>20/40/80</b> MHz to allow the WRE6606 to choose the channel bandwidth (20 or 40 or 80 MHz) that has least interference. This option is available only when you select <b>5 GHz (802.11a/n/ac)</b> in the <b>Network Mode</b> field.						
Security							
Security Mode	If the WRE6606 is in repeater mode, select <b>No Security</b> or the available modes to match as provided by the source AP or wireless router.						
	If the WRE6606 is in AP mode, select <b>WPA2-PSK</b> , <b>WPA-PSK</b> or <b>Static WEP</b> to add security on this wireless network. The wireless clients which want to associate to this network must have same wireless security settings as this device. After you select to use a security, additional options appears in this screen. See Section 10.5 on page 62 for detailed information on different security modes. Or you can select <b>No Security</b> to allow any client to associate this network without authentication.						
	Note: If the WPS function is enabled (default), only <b>No Security</b> and <b>WPA2-PSK</b> are available in this field.						
WPA	This field appears when you choose WPA2-PSK as the Security Mode.						
Compatible	Check this field to allow wireless devices using <b>WPA-PSK</b> security mode to connect to your WRE6606.						

 Table 17
 Network > Wireless LAN 2.4G/5G > General (continued)

LABEL	DESCRIPTION				
Pre-Shared	WPA-PSK/WPA2-PSK uses a simple common password for authentication.				
Key	Type a pre-shared key from 8 to 63 case-sensitive keyboard characters.				
Group Key Update Timer	The <b>Group Key Update Timer</b> is the rate at which the AP sends a new group key out to all clients.				
	The default is <b>3600</b> seconds (60 minutes).				
Apply	Click Apply to save your changes back to the WRE6606.				
Reset	Click <b>Reset</b> to return to the previous menu without saving.				

 Table 17
 Network > Wireless LAN 2.4G/5G > General (continued)

## **10.5 Wireless Security**

The screen varies depending on what you select in the **Security Mode** field.

#### 10.5.1 No Security

Select **No Security** to allow wireless clients to communicate with the access point without any data encryption.

Note: If you do not enable any wireless security on your WRE6606, your network is accessible to any wireless networking device that is within range.

Figure 35	Network >	Wireless LAN 2.4G	/5G >	General: No 9	Security
i iguie 55	NCLWORK >		/ 50 /		Jecurity

General	MAC Filter	Advanced	QoS	WPS	WPS Device	Scheduling	Guest WLAN			
Wireles	ss Setup									
						Enable Disal				
VVI	reless LAN :				۲	Enable Ulisal	ble			
Ne	twork Name(SS	SID) :			Zy	XELE24502				
	Hide SSID									
Ch	annel Selection	:			С	hannel-11 2462N	/Hz ▼ ✔ Auto Channel Selection			
Ор	erating Channe	el :			Ch	Channel-05 2432MHz				
Ne	Network Mode :					2.4 GHz (802.11b/g/n) ▼				
Ch	Channel Bandwidth :					○ 20 ○ 40 ● 20/40				
Securi	ty									
Se	curity Mode :				Ν	o Security 🔻				
	Note: No Sec	urity and WPA	2-PSK o	an be c	onfigured when	WPS enabled				
						Apply	Reset			

The following table describes the labels in this screen.

Table 18 Network > Wireless LAN 2.4G/5G > General: No Security

LABEL	DESCRIPTION
Security Mode	Choose <b>No Security</b> from the drop-down list box.

LABEL	DESCRIPTION
Apply	Click Apply to save your changes back to the WRE6606.
Reset	Click <b>Reset</b> to reload the previous configuration for this screen.

 Table 18
 Network > Wireless LAN 2.4G/5G > General: No Security (continued)

#### **10.5.2 WEP Encryption**

WEP encryption scrambles the data transmitted between the wireless stations and the access points to keep network communications private. It encrypts unicast and multicast communications in a network. Both the wireless stations and the access points must use the same WEP key.

Your WRE6606 allows you to configure up to four 64-bit or 128-bit WEP keys but only one key can be enabled at any one time.

Select Static WEP from the Security Mode list.

Figure 36 Network > Wireless LAN 2.4G/5G > General: Static WEP

Wreless Satup   Wireless LAN:   Network Name(SSID):	General MAC Filter	Advanced	QoS	WPS	WPS Device	Scheduling	Guest WLAN		
Network Name(SSID): ZyXELE24502   Hide SSID Channel Selection :   Channel Selection : Channel-112462MHz I Auto Channel Selection   Operating Channel : Channel-052432MHz   Network Mode : 2.4 GHz (802.11blg/n) I   Channel Bandwidth : 20   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40   20 40	Wireless Setup								
Hide SSID   Channel Selection :   Operating Channel :   Channel Selection :   Channel Selection :   Channel Selection :   Channel :   Channel Selection :   Security   Security Mode :   Security Mode :   Security Mode :   Security   Security Mode :   Security	Wireless LAN :				۲	Enable 🔍 Disa	ble		
Channel Selection : Channel-11 2462MHz ▼ ▲ Auto Channel Selection   Operating Channel : Channel-05 2432MHz   Network Mode : 2.4 GHz (802.11b/g/n) ▼   Channel Bandwidth : 20 ● 40 ● 20/40   Security   Security   Security Mode :   PassPhrase   WEP Encryption   64-bits ▼   Authentic ation Method   Auto   Note :   64-bit WEP: Enter 5 ASCII characters or 10 hexadecimal characters ("0-9", "A-F") for each Key (1-4).   (Select one WEP key as an active key to encrypt wireless data transmission.)   O ASCII ● Hex   ● Key 1   ● Key 3   ● Key 3   ● Key 4	Network Name(SSI	D):		Zy	ZyXELE24502				
Operating Channel: Channel-05 2432MHz   Network Mode : 2.4 GHz (802.11b/g/n) ▼   Channel Bandwidth : 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Hide SSID								
Network Mode : 2.4 GHz (802.11b/g/n) ▼   Channel Bandwidth : 20 0 0 0 0 0 20/40   Security   Security Mode :   PassPhrase   WEP Encryption   64-bits ▼   Authentic ation Method   Image: Comparison of the state	Channel Selection :				С	Channel-11 2462MHz 🔻 🗹 Auto Channel Selection			
Channel Bandwidth : Channel Bandwidth :	Operating Channel	:			Ch	Channel-05 2432MHz			
Security   Security Mode : Static WEP ▼   PassPhrase Generate   WEP Encryption 64-bits ▼   Autonetic ation Method T   Note : 64-bit WEP: Enter 5 A SCII characters or 10 hexadecimal characters ("0-9", "A-F") for each Key (1-4).   128-bit WEP: Enter 13 A SCII characters or 26 hexadecimal characters ("0-9", "A-F") for each Key (1-4).   (cleace one WEP key as an active key to encrypt wireless data transmission.) <ul> <li>ACII → Hex</li> <li>Key 1</li> <li>Key 2</li> <li>Key 3</li> <li>Key 4</li> </ul>	Network Mode :				2	2.4 GHz (802.11b/g/n) V			
Security Mode : Static WEP  PassPhrase PassPhrase WEP Encryption Generate WEP Encryption Ge4-bits Authentic ation Method Auto Note : Generate Gener	Channel Bandwidth	:			$\odot$	20 🔍 40 💌	20/40		
PassPhrase  WEP Encryption 64-bits WEP Encryption Authentic ation Method Auto Note: 64-bit WEP: Enter 5 A SCII characters or 10 hexadecimal characters ("0-9", "A-F") for each Key (1-4). 128-bit WEP: Enter 13 A SCII characters or 26 hexadecimal characters ("0-9", "A-F") for each Key (1-4). (Select one WEP key as an active key to encrypt wireless data transmission.) ASCII  ASCII  Key 1 Key 2 Key 3 Key 4 Key 4	Security								
WEP Encryption G4-bits Authentic ation Method Auto C Authentic ation Method G4-bits Authentic ation Method C Auto	Security Mode :				s	tatic WEP 🔻			
Authentic ation Method   Auto   Authentic ation Method   Auto   Rey 1   Key 1   Key 3   Key 4   Key 4	PassPhrase						Generate	]	
Note : 64-bit WEP: Enter 5 A SCII characters or 10 hexadecimal characters ("0-9", "A-F") for each Key (1-4). 128-bit WEP: Enter 13 A SCII characters or 26 hexadecimal characters ("0-9", "A-F") for each Key (1-4). (Select one WEP key as an active key to encrypt wireless data transmission.) ASCII • Hex Key 1 Key 2 Key 3 Key 4	WEP Encryption				6	4-bits ▼			
64-bit WEP: Enter 5 ASCII characters or 10 hexadecimal characters ("0-9", "A-F") for each Key (1-4). 128-bit WEP: Enter 13 ASCII characters or 26 hexadecimal characters ("0-9", "A-F") for each Key (1-4). (Select one WEP key as an active key to encrypt wireless data transmission.) ASCII ASCII Hex Key 1 Key 2 Key 3 Key 4	Authentic ation Meth	od			A	uto 🔻			
128-bit WEP: Enter 13 ASCII characters or 26 hexadecimal characters ("0-9", "A-F") for each Key (1-4). (Select one WEP key as an active key to encrypt wireless data transmission.) ASCII  Hex Key 1 Key 2 Key 3 Key 4	Note :								
(Select one WEP key as an active key to encrypt wireless data transmission.) ASCII  ASCII  Hex  Key 1 Key 2 Key 3 Key 4 Key 4	64-bit WEP: E	64-bit WEP: Enter 5 A SCII characters or 10 hexadecimal characters ("0-9", "A-F") for each Key (1-4).							
ASCII      Hex      ASCII     Key 1      Key 2      Key 3      Key 4	128-bit WEP:	128-bit WEP: Enter 13 A SCII characters or 26 hexadecimal characters ("0-9", "A-F") for each Key (1-4).							
Key 1     Key 2     Key 3     Key 4	(Select one W	/EP key as an	active k	ey to ei	ncrypt wireless	data transmiss	ion.)		
Key 2           Key 3           Key 4			$\bigcirc$	ASCII (	Hex				
Key 3     Key 4	۲	Key 1							
Key 4	0	Key 2							
	0	Key 3							
Note: No Security and WPA2-PSK can be configured when WPS enabled		Key 4							
	Note: No Secu	rity and WPA	2-PSK ca	an be co	onfigured when	WPS enabled			
Apply Reset						Apply	Reset		

The following table describes the wireless LAN security labels in this screen.

LABEL	DESCRIPTION					
Security Mode	Select Static WEP to enable data encryption.					
PassPhrase	Enter a Passphrase (up to 26 printable characters) and click Generate.					
	A passphrase functions like a password. In WEP security mode, it is further converted by the WRE6606 into a complicated string that is referred to as the "key". This key is requested from all devices wishing to connect to a wireless network.					
WEP Encryption	Select 64-bits or 128-bits.					
	This dictates the length of the security key that the network is going to use.					
Authentication	Select Auto or Shared Key from the drop-down list box.					
Method	This field specifies whether the wireless clients have to provide the WEP key to login to the wireless client. Keep this setting at <b>Auto</b> unless you want to force a key verification before communication between the wireless client and the WRE6606 occurs.					
	Select <b>Shared Key</b> to force the clients to provide the WEP key prior to communication.					
ASCII	Select this option in order to enter ASCII characters as WEP key.					
Hex	Select this option in order to enter hexadecimal characters as a WEP key.					
	The preceding "0x", that identifies a hexadecimal key, is entered automatically.					
Key 1 to Key 4	The WEP keys are used to encrypt data. Both the WRE6606 and the wireless stations must use the same WEP key for data transmission.					
	If you chose <b>64-bits</b> , then enter any 5 ASCII characters or 10 hexadecimal characters ("0-9", "A-F").					
	If you chose <b>128-bits</b> , then enter 13 ASCII characters or 26 hexadecimal characters ("0 9", "A-F").					
	You must configure at least one key, only one key can be activated at any one time. The default key is key 1.					
Apply	Click Apply to save your changes back to the WRE6606.					
Reset	Click <b>Reset</b> to reload the previous configuration for this screen.					

 Table 19
 Network > Wireless LAN 2.4G/5G > General: Static WEP

#### 10.5.3 WPA-PSK/WPA2-PSK

Select WPA-PSK or WPA2-PSK from the Security Mode list.

Wireless Setup         Wireless LAN : <ul> <li>Enable</li> <li>Disable</li> </ul> Network Name(SSID) :              ZyXELE24502           Hide SSID            Channel Selection :              Channel-11 2462MHz          Operating Channel :              Channel-05 2432MHz          Network Mode :              2.4 GHz (802.11b/g/n)          Channel Bandwidth :              20          Security									
Wireless LAN : <ul> <li>Enable</li> <li>Disable</li> </ul> Network Name(SSID) : <ul> <li>ZyXELE24502</li> <li>Hide SSID</li> <li>Channel Selection :</li> <li>Channel-11 2462MHz</li> <li>Auto Channel Operating Channel :</li> <li>Channel-05 2432MHz</li> <li>Network Mode :</li> <li>2.4 GHz (802.11b/g/n) ▼</li> <li>Channel Bandwidth :</li> <li>20 40 20/40</li> </ul>	Mirologo Sotup								
Network Name(SSID) :       ZyXELE24502         Hide SSID       Channel Selection :         Channel Selection :       Channel-11 2462MHz ▼ ✓ Auto Channel         Operating Channel :       Channel-05 2432MHz         Network Mode :       2.4 GHz (802.11b/g/n) ▼         Channel Bandwidth :       20 0 40 0 20/40									
Hide SSID         Channel Selection :         Operating Channel :         Channel-05 2432MHz         Network Mode :         Channel Bandwidth :									
Channel Selection :       Channel-11 2462MHz ▼ ♥ Auto Channel         Operating Channel :       Channel-05 2432MHz         Network Mode :       2.4 GHz (802.11b/g/n) ▼         Channel Bandwidth :       20 ● 40 ● 20/40	ZyXELE24502								
Operating Channel :         Channel-05 2432MHz           Network Mode :         2.4 GHz (802.11b/g/n) ▼           Channel Bandwidth :         20 ● 40 ● 20/40									
Network Mode :         2.4 GHz (802.11b/g/n) ▼           Channel Bandwidth :         0 20 0 40 ● 20/40	annel Selection								
Channel Bandwidth : 0 20 0 40 0 20/40	Channel-05 2432MHz								
	2.4 GHz (802.11b/g/n) ▼								
Security	20 40 20/40								
Security Mode : WPA2-PSK V									
WPA Compatible									
Pre-Shared Key : 767179C7A2BFF									
Group Key Update Timer : 3600 seconds									
Note: No Security and WPA2-PSK can be configured when WPS enabled									
Apply Reset									

#### Figure 37 Network > Wireless LAN 2.4G/5G > General: WPA-PSK/WPA2-PSK

The following table describes the labels in this screen.

Table 20	Network >	Wireless	LAN 2.4G/	5G >	General:	WPA-PSK/WPA2-PSK
----------	-----------	----------	-----------	------	----------	------------------

LABEL	DESCRIPTION
Security Mode	Select WPA-PSK or WPA2-PSK to enable data encryption.
WPA Compatible	This field appears when you choose WPA2-PSK as the Security Mode.
	Check this field to allow wireless devices using <b>WPA-PSK</b> security mode to connect to your WRE6606.
Pre-Shared Key	WPA-PSK/WPA2-PSK uses a simple common password for authentication.
	Type a pre-shared key from 8 to 63 case-sensitive keyboard characters.
Group Key Update Timer	The <b>Group Key Update Timer</b> is the rate at which the AP sends a new group key out to all clients.
	The default is <b>3600</b> seconds (60 minutes).
Apply	Click Apply to save your changes back to the WRE6606.
Reset	Click <b>Reset</b> to reload the previous configuration for this screen.

## 10.6 AP Select Screen

Use this screen (available both in Client mode and Repeater mode.) to choose an access point that you want the WRE6606 to connect to. You should know the security settings of the target AP.

To open this screen, click Network > Wireless LAN 2.4G or Wireless LAN 5G > AP Select.

AP Sele	et						
NO.	Select	SSID	MAC	Channel	Mode	Security Mode	Strength
1	0	ZyXEL_Wi-Fi	B0:B2:DC:70:C0:24	1	690	WPA2-PSK	100%
2	0	Nebula_AP_CSO1	58:8B:F3:91:4B:C7	6	690	WPA2-PSK	100%
3	0	SVD_85021	FC:F5:28:E5:DC:94	5	690	WPA2-PSK	100%
4	$\bigcirc$	4615v2	EE:43:F6:DA:77:30	10	690	WPA2-PSK	100%
5	$\bigcirc$	VL web	A2:E0:CB:7C:FB:97	1	690	No Security	100%
6	$\bigcirc$	VL user	A0:E4:CB:7C:FB:97	1	690	WPA2-1X/AES	100%
7	$\bigcirc$	NBG6816-2.4G-83224	A0:E4:CB:5A:34:2C	6	690	WPA2-PSK	100%
8	$\bigcirc$	EMG2926_24GGGGGGGG	00:AA:BB:CC:DD:00	11	690	WPA2-PSK	100%
9	$\bigcirc$	83368	A0:E4:CB:5A:34:80	5	690	WPA2-PSK	100%
10	$\bigcirc$	ZyXEL	A0:E4:CB:84:BA:37	6	690	No Security	93%
11	$\bigcirc$	Greenspot I Guest	FE:F0:28:C9:A1:8D	9	690	WPA2-PSK	93%
12	0	DELSAD4532C	28:28:5D:D4:53:2C	8	690	WPA2-MIXED	92%
13	0	ZyXEL_Vic	B0:B2:DC:6E:7E:B9	6	690	No Security	92%

**Figure 38** Network > Wireless LAN 2.4G/5G > AP Select (Repeater Mode)

**Figure 39** Network > Wireless LAN 2.4G/5G > AP Select (Client Mode)

AP Selec	ct						
NO.	Select	SSID	MAC	Channel	Mode	Security Mode	Strength
1	0	83368_6817	1C:74:0D:10:00:0C	3	690	WPA2-PSK	98%
2	0	EMG3425-24G	E8:37:7A:86:6F:40	10	690	WPA2-PSK	97%
3	0	ZyXEL_CSO_24G	B2:B0:DC:6A:9F:05	1	690	WPA2-PSK	96%
4	0	Nebula_AP_SSID1	58:8B:F3:91:4B:CA	1	690	WPA2-PSK	96%
5	0	ZyXEL_CSO	50:67:F0:37:FD:6C	1	690	WPA2-PSK	95%
6	$\bigcirc$	ZyXEL	90:EF:68:FA:EC:73	11	690	WPA2-PSK	93%
7	0	ZyXEL_Wi-Fi	B0:B2:DC:70:C0:24	1	690	WPA2-PSK	92%
8	$\bigcirc$	ZyXEL_CSO_24G	52:60:F0:37:FD:6C	1	690	WPA2-PSK	92%
9	0	ZyXEL_UXD	FC:F5:28:D3:45:FC	6	690	WPA2-MIXED	91%
10	0	Aumento Guest	FE:F0:28:C9:A1:93	1	690	WPA2-PSK	90%
11	$\bigcirc$	0ZyxelDo	E8:37:7A:86:75:68	10	690	WPA2-PSK	90%
12	0	test_HT	5A:8B:84:49:96:C0	10	690	WPA2-PSK	90%
13	0	WeiWeiWeiWeiWei	90:EF:68:C1:26:2E	1	690	WPA2-PSK	87%

The following table describes the labels in this screen.

 Table 21
 Network > Wireless LAN 2.4G/5G > AP Select (Client Mode and Repeater Mode)

LABEL	DESCRIPTION
Select	Use the radio button to select the wireless device to which you want to connect.
SSID	This displays the Service Set IDentity of the wireless device. The SSID is a unique name that identifies a wireless network. All devices in a wireless network must use the same SSID.

LABEL	DESCRIPTION
MAC	This displays the MAC address of the wireless device.
Channel	This displays the channel number used by this wireless device.
Mode	This displays which IEEE 802.11b/g/n wireless networking standards the wireless device supports.
Security Mode	This displays the type of security configured on the wireless device. When <b>No Security</b> is shown, no security is configured and you can connect to it without a password.
Strength	This displays the strength of the wireless signal. The signal strength mainly depends on the antenna output power and the distance between your WRE6606 and this device.
Continue	Click <b>Continue</b> to start the next step in the AP setup process.
Scan Again	Click <b>Scan Again</b> to search for available wireless devices within transmission range and update this table.
Choose Network Manually	Select this to set up the AP manually.
WPS	This button is configurable only when you enable WPS in the Wireless LAN 2.4G/5G > WPS screen.
	Click this button to connect to the selected AP via WPS.

 Table 21
 Network > Wireless LAN 2.4G/5G > AP Select (Client Mode and Repeater Mode)

#### Enter a Wi-Fi key

If wireless security is enabled on the selected AP, the following screen displays after you click Continue in the AP Select screen. Enter the AP's Wi-Fi key and click Continue.

**Figure 40** Network > Wireless LAN 2.4G/5G > AP Select (Repeater Mode)

General	AP Select	MAC Filter	Advanced	QoS	WPS	WPS Device	
Enter 2	.4 GHz Wi-Fi	Network's Pas	ssword				
Plea	ase enter in th	e 2.4 GHz wire	less network's	passwore	d that ye	ou're extending :	
						Continue	
Figure	11 Notu	work > W	Viroloss			/5G > AP	Select (Client Mode)

**Figure 41** Network > Wireless LAN 2.4G/5G > AP Select (Client Mode)

AP Select
Enter 2.4 GHz Wi-Fi Network's Password
Please enter in the 2.4 GHz wireless network's password that you're extending :
Continue

#### Set up the WRE6606's WLAN for clients

The following screen is available in Repeater mode only. Use this screen to configure the wireless settings between the WRE6606 and its wireless clients. The WRE6606 automatically copies the SSID of the associated AP. You can set the SSID and Wi-Fi key of the WRE6606's WLAN to be the same as those on the AP to which the WRE6606 wants to connect. Click Apply to save your settings.

Figure 42 Network > Wireles	s LAN 2.4G/5G > AP Select (Repeater Mode)
General AP Select MAC Filter Advanced	QoS WPS WPS Device
Set Your Extender's Wireless Network	
2.4 GHz Wireless Name (SSID):	ZyXEL
2.4 GHz Wireless Password:	
MPORTANT!	
Please write down all information that yo	u've input here, so that you can refer to it in the future. When you're ready to apply this setup, click on "Apply"
	Apply

#### **Choose AP network manually**

Use this screen to manually enter the SSID, security mode and Wi-Fi key of the AP to which you want the WRE6606 to connect. This is useful when the AP's SSID is hidden. Click **Continue** to configure the wireless settings between the WRE6606 and its wireless clients (see Set up the WRE6606's WLAN for clients on page 67).

Figure 43 Network > Wireless LAN 2.4G/5G > AP Select (Repeater Mode)

General	AP Select	MAC Filter	Advanced	QoS	WPS	WPS Device
Manu	ally enter in the	e 2.4 GHz wire	less network	settings		
w	/ireless Name (S	SSID):				
S	ecurity Mode :		W	PA-PSK	¥	
K	ey:					
						Continue
						Continue

#### **Figure 44** Network > Wireless LAN 2.4G/5G > AP Select (Client Mode)

AF Select		
Manually enter in the 2.4 GHz wirel	ss network settings	
Wireless Name (SSID):	ZyXEL_CSO	
Security Mode :	WPA-PSK T	
Key :	1357924680	
	Continue	

#### Complete the AP and WLAN setup

This screen displays when you have successfully set up your WRE6606 to connect to an AP. Verify the WRE6606's wireless network settings and click **GO** to open the **Status** screen.

Figure 45 Network > Wireless LAN 2.4G/5G > AP Select (Repeater M
------------------------------------------------------------------

-Igure 43 Networ	K > Wireless LAN 2.46/36 > AF Select (Repeater Mode)
General AP Select MA	C Filter Advanced QoS WPS WPS Device
Construittions	
Congratulations	
You've completed setting	g up your WRE6505 v2. Go for further network configuration.
New 5 GHz Wi-Fi Netwo	ork
Wireless Name:	ZyXEL,speed
Wireless Password:	1234567890
	GO
	rk > Wireless LAN 2.4G/5G > AP Select (Client Mode)
AP Select	
Congratulations	
U U	
You've completed setting	up your WRE6606. Go for further network configuration.

GO

## 10.7 MAC Filter

The MAC Filter screen allows you to specify which devices are allowed to access the WRE6606, while denying access to all unspecified devices. Every Ethernet device has a unique MAC (Media Access Control) address. The MAC address is assigned at the factory and consists of six pairs of hexadecimal characters, for example, 00:A0:C5:00:00:02. You need to know the MAC address of the devices to configure this screen.

To change your WRE6606's MAC Address List settings, click **Network** > **Wireless LAN 2.4G** or **Wireless LAN 5G** > **MAC Filter**. The screen appears as shown.

General	AP Select	MAC Filter	Advanced	QoS		WPS Device			
Access	Policy								
SSI	D for MAC Filt	er:			ZyX	ELCC0001 V			
Poli	icy:				Disa	able 🔻			
Add	a station Mac	Address :					Add		
N	MAC Filter Su	immary							
	Delete		1	MAC Ad	dress		Delete	MAC Address	
	Ť		00:A0:C	5:01:23:	45				
						Apply Res	et		

Figure 47 Network > Wireless LAN 2.4G/5G > MAC Filter

The following table describes the labels in this menu.

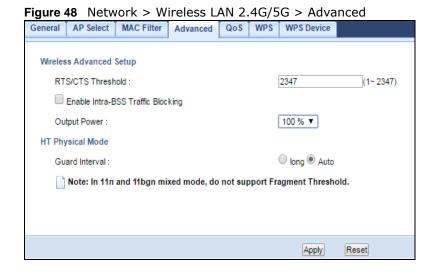
Table 22	Network >	Wireless LAN 2.40	G/5G> MAC Filter
----------	-----------	-------------------	------------------

LABEL	DESCRIPTION
SSID for MAC Filter	Select the SSID for which you want to configure MAC filtering.
Policy	Define the filter action for the list of MAC addresses in the <b>MAC Address</b> table.
	Select <b>Disable</b> to deactivate the MAC filtering rule you configure below.
	Select <b>Allow</b> to permit access to the WRE6606, MAC addresses not listed will be denied access to the WRE6606.
	Select <b>Reject</b> to block access to the WRE6606, MAC addresses not listed will be allowed to access the WRE6606
Add a station Mac Address	Enter the MAC addresses of the wireless station that are allowed or denied access to the WRE6606 and click <b>Add</b> . Enter the MAC addresses in a valid MAC address format, that is, six hexadecimal character pairs, for example, 12:34:56:78:9a:bc.
MAC Filter Sum	mary
Delete	Click the delete icon to remove the MAC address from the list.
MAC Address	This is the MAC address of the wireless station that are allowed or denied access to the WRE6606.
Apply	Click Apply to save your changes back to the WRE6606.
Reset	Click <b>Reset</b> to reload the previous configuration for this screen.

## **10.8 Wireless LAN Advanced Screen**

Use this screen to configure advanced wireless LAN parameters.

Click **Network** > **Wireless LAN 2.4G** or **Wireless LAN 5G** > **Advanced**. The screen appears as shown.





LABEL	DESCRIPTION
RTS/CTS Threshold	Data with its frame size larger than this value will perform the RTS (Request To Send)/ CTS (Clear To Send) handshake.
	Enter a value between 1 and 2347.
Enable Intra-BSS Traffic Blocking	A Basic Service Set (BSS) exists when all communications between wireless clients or between a wireless client and a wired network client go through one access point (AP).
	Intra-BSS traffic is traffic between wireless clients in the BSS. When Intra-BSS traffic blocking is not enabled, wireless clients can access the wired network and communicate with each other. When Intra-BSS traffic blocking is enabled, wireless clients can still access the wired network but cannot communicate with each other.
Output Power	Set the output power of the WRE6606 in this field. If there is a high density of APs in an area, decrease the output power of the WRE6606 to reduce interference with other APs. Select one of the following <b>100%</b> , <b>50%</b> or <b>25%</b> . See the product specifications for more information on your WRE6606's output power.
HT (High Throughp	ut) Physical Mode
Guard Interval	Select <b>Auto</b> to increase data throughput. However, this may make data transfer more prone to errors.
	Select <b>Long</b> to prioritize data integrity. This may be because your wireless network is busy and congested or the WRE6606 is located in an environment prone to radio interference.
Apply	Click <b>Apply</b> to save your changes to the WRE6606.
Reset	Click <b>Reset</b> to reload the previous configuration for this screen.

The following table describes the labels in this screen.

 Table 23
 Network > Wireless LAN 2.4G/5G > Advanced

## 10.9 Quality of Service (QoS) Screen

The QoS screen allows you to automatically give a service (such as VoIP and video) a priority level.

Click Network > Wireless LAN 2.4G or Wireless LAN 5G > QoS. The following screen appears.

Figure 49 Net	work >	Wireless	LAN 2	2.4G/5G >	OoS
---------------	--------	----------	-------	-----------	-----

	-/	
General AP Select MAC Filter Advanced	QoS WPS WPS Device	
WMM Configuration		
Enable WMM QoS		
	Apply Reset	

The following table describes the labels in this screen.

Table 24Network > Wireless LAN 2.4G/5G > QoS

LABEL	DESCRIPTION
Enable WMM QoS	Check this to have the WRE6606 automatically give a service a priority level according to the ToS value in the IP header of packets it sends. WMM QoS (Wifi MultiMedia Quality of Service) gives high priority to voice and video, which makes them run more smoothly.

Table 24	Vetwork >	Wireless	LAN 2.4G/	5G >	QoS (	(continued)	)
----------	-----------	----------	-----------	------	-------	-------------	---

LABEL	DESCRIPTION
Apply	Click Apply to save your changes to the WRE6606.
Reset	Click <b>Reset</b> to reload the previous configuration for this screen.

## 10.10 WPS Screen

Use this screen to enable/disable WPS, view or generate a new PIN and check current WPS status. To open this screen, click **Network** > **Wireless LAN 2.4G** or **Wireless LAN 5G** > **WPS** tab.

Note: Wireless clients cannot use WPS to set up a wireless network with the WRE6606 in universal repeater mode.

**Figure 50** Network > Wireless LAN 2.4G/5G > WPS (Repeater Mode)

		·					- (p	
General	AP Select	MAC Filter	Advanced	QoS	WPS	WPS Device		
WPS Se	etup							
<b>~</b>	Enable WPS							
	Enable PIN							
PIN	Number :							Generate
WPS St	atus							
Sta	tus :			Configu	ired			
802	.11 Mode :			11 a/n/	ac			
SSI	D :			ZyXEL	E24502.s	speed		
Sec	urity :			WPA2-	PSK			
						Apply	Reset	
					10/			

Figure 51 Network > Wireless LAN 2.4G/5G > WPS (AP Mode)

General	MAC Filter	Advanced	QoS	WPS	WPS Device	Scheduling	Guest WLAN	
WPS Se	etup							
	Enable WPS							
	Enable PIN							
PIN	Number :						Ge	nerate
WPS St	atus							
Sta	tus :			C	onfigured		Re	lease_Configuration
802	2.11 Mode :			11	1 b/g/n			
SSI	D :			Zy	VXELE24502			
Sec	urity :			W	PA2-PSK			
						Apply	Reset	

LABEL	DESCRIPTION	
WPS Setup	•	
Enable WPS	Select this to enable the WPS feature.	
Enable PIN	nable PIN Select this to enable the PIN number.	
PIN Number This displays a PIN number last time system generated. Click <b>Generate</b> to generate new PIN number.		
WPS Status	·	
Status	This displays <b>Configured</b> when the WRE6606 has connected to a wireless network using WPS or when <b>Enable WPS</b> is selected and wireless or wireless security settings have been changed. The current wireless and wireless security settings also appear in the screen.	
	This displays <b>Unconfigured</b> if WPS is disabled and there are no wireless or wireless security changes on the WRE6606 or click <b>Release Configuration</b> (AP mode only) to remove the configured wireless and wireless security settings.	
Release	This button is only available when the WPS status displays <b>Configured</b> .	
Configuration (AP mode only)	Click this button to remove all configured wireless and wireless security settings for WPS connections on the WRE6606.	
802.11 Mode	This is the 802.11 mode used. Only compliant WLAN devices can associate with the WRE6606.	
SSID	This is the name of the wireless network (the WAP3205 v2's first SSID).	
Security	This is the type of wireless security employed by the network.	
Apply	Click Apply to save your changes back to the WRE6606.	
Reset	Click <b>Reset</b> to reload the previous configuration for this screen.	

Table 25	Network >	Wireless	I AN 2 4G	/5G > WPS
	NELWOIK /	WII CIC33	LAN 2.40	/JU / WFJ

## 10.11 WPS Device Screen

Use this screen when you want to add a wireless station using WPS. To open this screen, click **Network > Wireless LAN 2.4G** or **Wireless LAN 5G > WPS Device**.

Note: After you click **WPS** on this screen, you have to press a similar button in the wireless station utility within 2 minutes. To add the second wireless station, you have to press these buttons on both device and the wireless station again after the first 2 minutes.

iguic				11 2.10	/ 50 /	111.0	Devi		(cpcu		ouc)		
General	AP Select	MAC Filter	Advanced	QoS WP	S WPS D	evice							
Add De	vice using W	/PS											
Clic	k WPS below	to add WPS st	ations to your wi	reless networ	k. Button to	add WP	Sdevices	s to wire	eless netv	work.			
WF	S												
	Note:												
	1. Usina W	PS requires pr	essing a buttor	n on both vo	ur Device a	nd the l	WRE650	5 v2 wit	thin 120 :	seconds			
	in comg th	o roquiroo pr	ooonig a battor										
			(		(F.C. )	ALD C	Derect			-1 - )			 
General	MAC Filter	VORK > W	/ireless LA							de)			 
Selleral	MAC FILLEI	Auvanceu	QUS WPS	WPS Devi	ce Sched	Juling	Guest	VVLAN					
Add De	vice using W	DC											
	_												
	_	to add VVPS sta	ations to your wir	eless networi	. Button to a	ad vvPs	devices	s to wire	less netw	Ork.			
WP:	5												
Orin	nput your devi	ices PIN numbe	er :				Go						
	Note:												
	1. Using WP	S requires pre	essing a button	on both yo	ur Device ar	nd the V	VRE6606	6 within	120 sec	onds.			
	2. The PIN f	or your device	e is normally for	und within '	Settings'								

**Figure 52** Network > Wireless LAN 2.4G/5G > WPS Device (Repeater Mode)

Table 26 Network > Wireless LAN 2.4G/5G > WPS Device

LABEL	DESCRIPTION
WPS	Use this button when you use the PBC (Push Button Configuration) method to configure wireless stations's wireless settings. See Section 8.3.1 on page 46.
	Click this to start WPS-aware wireless station scanning and the wireless security information synchronization.
Or input your devices PIN	Use this button when you use the PIN Configuration method to configure wireless station's wireless settings. See Section 8.3.2 on page 47.
number (AP mode only)	Type the same PIN number generated in the wireless station's utility. Then click <b>Go</b> to associate to each other and perform the wireless security information synchronization.

## 10.12 Scheduling Screen

Use this screen (available in AP mode only) to set the times your wireless LAN is turned on and off. Wireless LAN scheduling is disabled by default. The wireless LAN can be scheduled to turn on or off on certain days and at certain times. To open this screen, click **Network > Wireless LAN 2.4G** or **Wireless LAN 5G > Scheduling** tab.

Wireless LAN Scheduling	U Ena	able   Disable
Scheduling		
WLAN status	Day	For the following times (24-Hour Format)
On Off	🗹 Everyday	00 ▼ (hour) 00 ▼ (min) ~ 23 ▼ (hour) 59 ▼ (min)
On  Off	Mon	00 v (hour) 00 v (min) ~ 23 v (hour) 59 v (min)
On  Off	Tue	00 v (hour) 00 v (min) ~ 23 v (hour) 59 v (min)
On  Off	Wed	00 v (hour) 00 v (min) ~ 23 v (hour) 59 v (min)
On  Off	🗆 Thu	00 v (hour) 00 v (min) ~ 23 v (hour) 59 v (min)
On  Off	🗆 Fri	00 v (hour) 00 v (min) ~ 23 v (hour) 59 v (min)
🔍 On 🖲 Off	Sat Sat	00 v (hour) 00 v (min) ~ 23 v (hour) 59 v (min)
🔍 On 🖲 Off	Sun	00 v (hour) 00 v (min) ~ 23 v (hour) 59 v (min)

**Figure 54** Network > Wireless LAN 2.4G/5G > Scheduling

LABEL	DESCRIPTION				
Wireless LAN Scheduling					
Wireless LAN Scheduling	j.				
Scheduling					
WLAN Status	Select <b>On</b> or <b>Off</b> to specify whether the Wireless LAN is turned on or off. This field works in conjunction with the <b>Day</b> and <b>For the following times</b> fields.				
Day	Select <b>Everyday</b> or the specific days to turn the Wireless LAN on or off. If you select <b>Everyday</b> you can not select any specific days. This field works in conjunction with the <b>For the following times</b> field.				
For the following times (24-Hour Format)	Select a begin time using the first set of <b>hour</b> and minute ( <b>min</b> ) drop down boxes and select an end time using the second set of <b>hour</b> and minute ( <b>min</b> ) drop down boxes. If you have chosen <b>On</b> earlier for the WLAN Status the Wireless LAN will turn on between the two times you enter in these fields. If you have chosen <b>Off</b> earlier for the WLAN Status the Wireless LAN will turn off between the two times you enter in these fields.				
Apply	Click <b>Apply</b> to save your changes back to the WRE6606.				
Reset	Click <b>Reset</b> to reload the previous configuration for this screen.				

## 10.13 Guest WLAN Screen

This screen (available in AP mode only) allows you to enable and configure multiple wireless networks and guest wireless network settings on the WRE6606.

You can configure up to four SSIDs to enable multiple BSSs (Basic Service Sets) on the WRE6606. This allows you to use one access point to provide several BSSs simultaneously. You can then

assign varying security types and to different SSIDs. Wireless clients can use different SSIDs to associate with the same access point.

General MAC Filter Advanced QoS WPS WPS De	vice Scheduling Guest WLAN		
Guest WLAN Setup			
Guest WLAN :	Enable Disable		
Network Name(SSID) :	ZyGuest1E24502		
Hide SSID			
Guest IP Address :	192.168.170.1		
Guest Subnet Mask :	255.255.255.0		
Guest Start IP :	192.168.170.33		
Guest End IP :	192.168.170.84		
Security			
Security Mode :	WPA2-PSK V		
WPA Compatible			
Pre-Shared Key :	767179C7A2BFF		
Group Key Update Timer :	3600 seconds		
Note: No Security and WPA2-PSK can be configured when WPS enabled			
	Apply Reset		

Figure 55 Network > Wireless LAN 2.4G/5G > Guest WLAN

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Guest WLAN Setup	
Guest WLAN	Select Enable to activate the guest wireless LAN. Select Disable to turn it off.
Network Name (SSID)	The SSID (Service Set IDentity) identifies the Service Set with which a wireless client is associated. Enter a descriptive name (up to 32 printable characters found on a typical English language keyboard) for the wireless LAN.
Hide SSID	Select this check box to hide the SSID in the outgoing beacon frame so a station cannot obtain the SSID through scanning using a site survey tool.
Guest IP Address	Type an IP address for the devices on the Guest WLAN using this as the gateway IP address.
Guest Subnet Mask	Type the subnet mask for the guest wireless LAN.
Guest Start IP	This field displays the first IP address of guest wireless LAN.
Guest End IP	This field displays the last IP address of guest wireless LAN.
Security	
Security Mode	Select Static <b>WEP</b> , <b>WPA-PSK</b> , and <b>WPA2-PSK</b> to add security on this wireless network. The wireless clients which want to associate to this network must have the same wireless security settings as this device. After you select to use a security, additional options appears in this screen. See Chapter 10 on page 62 for detailed information on different security modes. Or you can select <b>No Security</b> to allow any client to associate this network without authentication Note: If the WPS function is enabled (default), only <b>No Security</b> and <b>WPA2-PSK</b> are
	available in this field.

Table 28Network > Wireless LAN 2.4G/5G > Guest WLAN

LABEL	DESCRIPTION		
WPA Compatible This field appears when you choose <b>WPA2-PSK</b> as the <b>Security Mode</b> .			
	Check this field to allow wireless devices using <b>WPA-PSK</b> security mode to connect to your WRE6606.		
Pre-Shared Key	Pre-Shared Key WPA-PSK/WPA2-PSK uses a simple common password for authentication.		
	Type a pre-shared key from 8 to 63 case-sensitive keyboard characters.		
Group Key Update Timer	The <b>Group Key Update Timer</b> is the rate at which the AP sends a new group key out to all clients.		
	The default is <b>3600</b> seconds (60 minutes).		
Apply	Click <b>Apply</b> to save your changes back to the WRE6606.		
Reset	Click <b>Reset</b> to reload the previous configuration for this screen.		

 Table 28
 Network > Wireless LAN 2.4G/5G > Guest WLAN

# LAN

## 11.1 Overview

This screen allows you to assign the WRE6606 a fixed or dynamic management IP address. The default IP address of the WRE6606 is 192.168.1.2. Alternatively, you can connect to the WRE6606 using the default domain name, http://zyxelsetup.

## 11.2 LAN IP Screen

Use this screen to change the WRE6606's management IP address and configure the DNS server information that the WRE6606 sends to the DHCP clients. Click Network > LAN.

Note: If you change the IP address of the WRE6606 in the screen below, you will need to log into the WRE6606 again using the new IP address.

Figure 56 Network > LAN > IP

IP	
LAN TCP/IP	
Get from DHCP Server	
Use Defined LAN IP Address	
IP Address :	192.168.1.2
IP Subnet Mask :	255.255.255.0
Default Gateway :	
DNS Assignment	
First DNS Server :	From ISP V
Second DNS Server :	From ISP V
	Apply Reset

The following table describes the labels in this screen.

Table 29 Network 2	> LAN > IP
LABEL	DESCRIPTION
LAN TCP/IP	

Table 29	Network > LAN > IP	

LABEL	DESCRIPTION
LAN TCP/IP	
Get from DHCP Server	Select this to have the WRE6606 get a dynamic IP address from a DHCP server.
Use Defined LAN IP Address	Click this to enable the manual IP configuration.

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LABEL	DESCRIPTION
IP Address	Enter the IP address of your WRE6606 in dotted decimal notation.
IP Subnet Mask	Enter the subnet mask of your WRE6606 in dotted decimal notation.
Default Gateway	Enter the gateway of your WRE6606 in dotted decimal notation.
DNS Assignment	
First DNS Server Second DNS Server	Select <b>From ISP</b> if your ISP or router to which the WRE6606 connects dynamically assigns DNS server information (and the WRE6606's IP address). The field to the right displays the (read-only) DNS server IP address that the ISP assigns. Select <b>User-Defined</b> if you have the IP address of a DNS server. Enter the DNS server's IP address in the field to the right. Select <b>None</b> if you do not want to configure DNS servers. If you do not configure a DNS
	server, you must know the IP address of a computer in order to access it.
Apply	Click <b>Apply</b> to save your changes back to the WRE6606.
Reset	Click <b>Reset</b> to reload the previous configuration for this screen.

**Table 29**Network > LAN > IP (continued)

# **One Connect**

## 12.1 Overview

One Connect is a ZyXEL-proprietary feature. It complies with the IEEE 1905.1 standard and allows auto-detection and auto-configuration.

If your wireless router supports ZyXEL One Connect, WRE6606 for example, you can download and install the ZyXEL One Connect App in your mobile device to check the connection status, do speed test, turn on or turn off the devices in your network, block or allow a device's access and set up a guest Wi-Fi network from the mobile device. You can even use the App to access the WRE6606's web configurator. The mobile device with the App installed must be connected to the WRE6606 wirelessly.

Figure 57 ZyXEL One Connect App



#### 12.1.1 What You Can Do

Use the **One Connect** screen to enable or disable Wi-Fi auto-configuration (Section 12.2 on page 80).

### 12.2 One Connect Screen

Use this screen to enable or disable Wi-Fi auto-configuration on the WRE6606.

Click **Configuration** > **Network** > **OneConnect** to open the following screen.

Figure 58 Configuration > Network > OneConnect

OneConnect	
One Connect Auto-configuration :	C Enable  Disable
	Apply Reset

LABEL	DESCRIPTION
One Connect	
Auto-configuration	Select <b>Enable</b> to allow the WRE6606 to automatically update the wireless settings on the APs or wireless repeaters (which also support ZyXEL One Connect) in its network. Select <b>Disable</b> to turn this feature off if you want to have the APs or repeaters in the network use different wireless settings.
Apply	Click <b>Apply</b> to save your changes back to the WRE6606.
Reset	Click <b>Reset</b> to reload the previous configuration for this screen.

**Table 30**Configuration > Network > OneConnect

## **Maintenance**

### 13.1 Overview

This chapter provides information on the Maintenance screen.

### 13.2 What You Can Do

- Use the General screen to set the system and domain names (Section 13.3 on page 82).
- Use the **Password** screen to set the password (Section 13.4 on page 83).
- Use the Time screen to change your WRE6606's time and date (Section 13.5 on page 83).
- Use the Firmware Upgrade screen to update firmware (Section 13.6 on page 85).
- Use the **Backup Restore** screen to backup and restore device configurations (Section 13.7 on page 87).
- Use the **Restart** screen to reboot the WRE6606 without turning the power off (Section 13.8 on page 89).
- ٠
- Use the **System Mode** screen to select how you want to use your WRE6606 (Section 13.9 on page 90).

### 13.3 General

Use this screen to set the system and domain names and the timeout period of the management session. Click **Maintenance** > **General**. The following screen displays.

#### Figure 59 Maintenance > General

General		
System Setup		
System Name :	WRE6505 v2	
Domain Name :	zyxelsetup	
Administrator Inactivity Timer :	30 (minutes, 0 means no timeout)	
	Apply Reset	

LABEL	DESCRIPTION
System Name	Enter a descriptive name to identify the WRE6606 in an Ethernet network.
Domain Name	This is the domain name of the WRE6606.
Administrator Inactivity Timer	Type how many minutes a management session can be left idle before the session times out. After it times out you have to log in with your password again. Very long idle timeouts may have security risks. A value of "0" means a management session never times out, no matter how long it has been left idle (not recommended).
Apply	Click Apply to save your changes back to the WRE6606.
Reset	Click <b>Reset</b> to reload the previous configuration for this screen.

 Table 31
 Maintenance > General

## 13.4 System Password Screen

Use this screen to set the web configurator password. Click **Maintenance** > **System**. The following screen displays.

#### Figure 60 Maintenance > Password

Password Setup	
Password Setup Old Password :	
New Password : Retype to Confirm :	
Negge to commit	
	Apply Reset

The following table describes the labels in this screen.

LABEL	DESCRIPTION	
Old Password	Type the default password or the existing password you use to access the system in this field.	
New Password	Type your new system password (up to 30 characters). Note that as you type a password, the screen displays an asterisk (*) for each character you type.	
Retype to Confirm	Type the new password again in this field.	
Apply	Click Apply to save your changes back to the WRE6606.	
Reset	Click <b>Reset</b> to reload the previous configuration for this screen.	

 Table 32
 Maintenance > System > Password

## 13.5 Time Screen

Use this screen to configure the WRE6606's time based on your local time zone. To change your WRE6606's time and date, click **Maintenance** > **Time**. The screen appears as shown.

Time Setting	
Current Time and Date	
Current Time :	22:11:27
Current Date :	1970-01-05
Current Time and Date	
O Manual	
New Time(hh:mm:ss) :	13 : 57 : 56
New Date(yyyy/mm/dd) :	2016 / 6 / 13
Get from Time Server	
Auto	
User Defined Time Server Address :	pool.ntp.org
Time Zone Setup	
Time Zone :	(GMT)Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London ▼
Daylight Savings	
Start Date :	First 🔻 Sunday 🔻 January 🔻 (2016-01-03) at 0 🔻 o'clock
End Date :	First 🔻 Sunday 🔻 January 🔻 (2016-01-03) at 0 🔻 o'clock
	Apply Reset

#### Figure 61 Maintenance > Time

The following table describes the labels in this screen.

LABEL	DESCRIPTION
Current Time and Dat	te
Current Time	This field displays the time of your WRE6606.
	Each time you reload this page, the WRE6606 synchronizes the time with the time server.
Current Date	This field displays the date of your WRE6606.
	Each time you reload this page, the WRE6606 synchronizes the date with the time server.
Manual	Select this radio button to enter the time and date manually. If you configure a new time and date, Time Zone and Daylight Saving at the same time, the new time and date you entered has priority and the Time Zone and Daylight Saving settings do not affect it.
New Time	This field displays the last updated time from the time server or the last time
(hh:mm:ss)	configured manually.
	When you select Manual, enter the new time in this field and then click Apply.
New Date	This field displays the last updated date from the time server or the last date configured
(yyyy/mm/dd)	manually.
	When you select Manual, enter the new date in this field and then click Apply.
Get from Time Server	Select this radio button to have the WRE6606 get the time and date from the time server you specified below.
Auto	Select Auto to have the WRE6606

#### Table 33Maintenance > Time

LABEL	DESCRIPTION
User Defined Time Server Address	Select <b>User Defined Time Server Address</b> and enter the IP address or URL (up to 20 extended ASCII characters in length) of your time server. Check with your ISP/network administrator if you are unsure of this information.
Time Zone Setup	
Time Zone	Choose the time zone of your location. This will set the time difference between your time zone and Greenwich Mean Time (GMT).
Daylight Savings	Daylight saving is a period from late spring to early fall when many countries set their clocks ahead of normal local time by one hour to give more daytime light in the evening.
	Select this option if you use Daylight Saving Time.
Start Date	Configure the day and time when Daylight Saving Time starts if you selected <b>Daylight</b> <b>Savings</b> . The <b>at</b> field uses the 24 hour format. Here are a couple of examples:
	Daylight Saving Time starts in most parts of the United States on the second Sunday of March. Each time zone in the United States starts using Daylight Saving Time at 2 A.M. local time. So in the United States you would select <b>Second</b> , <b>Sunday</b> , <b>March</b> and select <b>2</b> in the <b>at</b> field.
	Daylight Saving Time starts in the European Union on the last Sunday of March. All of the time zones in the European Union start using Daylight Saving Time at the same moment (1 A.M. GMT or UTC). So in the European Union you would select <b>Last</b> , <b>Sunday, March</b> . The time you select in the <b>at</b> field depends on your time zone. In Germany for instance, you would select 2 because Germany's time zone is one hour ahead of GMT or UTC (GMT+1).
End Date	Configure the day and time when Daylight Saving Time ends if you selected <b>Daylight</b> <b>Savings</b> . The <b>at</b> field uses the 24 hour format. Here are a couple of examples:
	Daylight Saving Time ends in the United States on the first Sunday of November. Each time zone in the United States stops using Daylight Saving Time at 2 A.M. local time. So in the United States you would select <b>First</b> , <b>Sunday</b> , <b>November</b> and select 2 in the <b>at</b> field.
	Daylight Saving Time ends in the European Union on the last Sunday of October. All of the time zones in the European Union stop using Daylight Saving Time at the same moment (1 A.M. GMT or UTC). So in the European Union you would select <b>Last</b> , <b>Sunday</b> , <b>October</b> . The time you select in the <b>at</b> field depends on your time zone. In Germany for instance, you would select 2 because Germany's time zone is one hour ahead of GMT or UTC (GMT+1).
Apply	Click Apply to save your changes back to the WRE6606.
Reset	Click Reset to begin configuring this screen afresh.

 Table 33
 Maintenance > Time (continued)

## 13.6 Firmware Upgrade Screen

Find firmware at <u>www.zyxel.com</u> in a file that (usually) uses the system model name with a "\*.bin" extension, e.g., "WRE6606.bin". The upload process uses HTTP (Hypertext Transfer Protocol) and may take up to two minutes. After a successful upload, the system will reboot.

Click **Maintenance** > **Firmware Upgrade**. Follow the instructions in this screen to upload firmware to your WRE6606.

Figure 62	Maintenance >	Firmware	Upgrade
i iguie oz		rinnwarc	opgrade

Firmware Upgrade
Firmware Upgrade To upgrade the internal device firmware, browse to the location of the binary (.BIN) upgrade file and click Upload. Upgrade files can be downloaded from website. If the upgrade file is compressed (.ZIP file), you must first extract the binary (.BIN) file. In some cases, you may need to reconfigure. File Path : Select file
File Path : Select file
On-line Firmware Upgrade Check for Latest Firmware now

Table 34	Maintenance	>	Firmware	Upgrade
----------	-------------	---	----------	---------

LABEL	DESCRIPTION
Firmware Upgra	de
File Path	Click <b>Select file</b> to find the .bin file you want to upload. Remember that you must decompress compressed (.zip) files before you can upload them.
Upload	Click <b>Upload</b> to begin the upload process. This process may take up to two minutes.
On-line Firmwar	e Upgrade
Check for Latest Firmware Now	The following fields display when you click this button.
You are currently using firmware version:	The firmware version consists of the trunk version number, model code, and release number. For example, V1.00(AAAG.5) means V1.00 is the trunk number, AAAG represents WRE6606, and 5 means the fifth release.
The Latest Firmware Version	Compare the release number in the previous field with the release number in this one to see if you have the latest firmware. In this example, V1.00(AAAG.5), the numbers are the same (5), so the WRE6606 already has the latest firmware.
Release Date	The date the firmware was issued is shown in year-month-date format.
Release Note	The release note shows what has changed (new features, bug fixes, known issues) in this firmware version. Check the Release Note before deciding to use new firmware.
Size	This is the size of the firmware in bytes. 15073234 is about 15 MB.
Do_Firmware_ Upgrade	Click this button to download and upgrade the new firmware to the WRE6606.

Note: Do not turn off the WRE6606 while firmware upload is in progress!

After you see the **Firmware Upgrading** screen, wait until the upgrade process is complete.

Figure 63 Firmware Upgrading

	Firmware Upgrade is processing. Please Wait
(3)	Do NOT power off your device.
	27%

The WRE6606 automatically restarts in this time causing a temporary network disconnect. In some operating systems, you may see the following icon on your desktop.

Figure 64 Network Temporarily Disconnected

٩	Loca	al Ar	ea Coi	nnecti	ion
Netv	vorka	able	unplug	iged	
,	<i>'</i>	<i>'</i>			V,

After the WRE6606 restarts, the Upgrade Accomplished screen appears.

Figure 65 Upgrade Accomplished

evice Is Restarting Now	k
$\bigcirc$	Device is Restarting Now. Please Wait58 seconds
	ot. As there will be no indication of when the process is complete, please wait for one to access the device again.

Refresh the web page and log in again and check your new firmware version in the Status screen.

## 13.7 Backup / Restore Screen

Click **Maintenance** > **Backup/Restore**. Information related to factory defaults, backup configuration, and restoring configuration appears as shown next.

#### Figure 66 Maintenance > Backup/Restore

Backup Restore		
Backup Configuration		
Click Backup to save the current configuration of your system to your	Backup	
computer.	Durkup	
Restore Configuration		
To restore a previously saved configuration file to your system, browse	to the location of the configura	ation file and click Upload.
File Path : No file selected.	Select file	Upload
Back to Factory Defaults		
Click Reset to clear all user-entered configuration information and return	n to factory defaults. After res	etting, the
- Password will be 1234 - LAN IP address will be 192.168.1.2		
- DHCP will be reset to server	Reset	
	Reset	
	Reset	

#### **13.7.1 Backup Configuration**

Backup configuration allows you to back up (save) the WRE6606's current configuration to a file on your computer. Once your WRE6606 is configured and functioning properly, it is highly recommended that you back up your configuration file before making configuration changes. The backup configuration file will be useful in case you need to return to your previous settings.

Click **Backup** to save the WRE6606's current configuration to your computer.

#### **13.7.2 Restore Configuration**

Restore configuration allows you to upload a new or previously saved configuration file from your computer to your WRE6606.

LABEL	DESCRIPTION
File Path	Click <b>Select file</b> to find the file you want to upload. Remember that you must decompress compressed (.ZIP) files before you can upload them.
Upload	Click <b>Upload</b> to begin the upload process.

 Table 35
 Maintenance Restore Configuration

Note: Do not turn off the WRE6606 while configuration file upload is in progress.

After you see a "configuration upload successful" screen, you must then wait one minute before logging into the WRE6606 again.

The WRE6606 automatically restarts in this time causing a temporary network disconnect. In some operating systems, you may see the following icon on your desktop.





If you uploaded the default configuration file you may need to change the IP address of your computer to be in the same subnet as that of the default WRE6606 IP address (192.168.1.2). Refer to your operating system's help files for details on how to set up your computer's IP address.

#### 13.7.3 Back to Factory Defaults

Click the **Reset** button to clear all user-entered configuration information and return the WRE6606 to its factory defaults. The following warning screen appears.



Message from webpage	23
Do you want to reset the de	vice to factory default settings?
	OK Cancel

You can also press the **WPS** button (see Section 1.4 on page 12) on the front panel for more than 10 seconds to reset the factory defaults of your WRE6606. Refer to Section 1.4 on page 12 for more information on the resetting the WRE6606.

### 13.8 Restart Screen

System restart allows you to reboot the WRE6606 without turning the power off. Click **Maintenance** > **Restart**. The following screen displays. Click **Restart** to have the WRE6606 reboot. This does not affect the WRE6606's configuration.

Figure 69 Maintenance > Restart

Restart
System Restart
Click Restart to perform a software restart. The SYS(or PWR) LED blinks as the device restarts and then stays steady on if the restart is successful. Wait a minute before logging into the device again.
Restart

## 13.9 System Mode

Use this screen to change the operating mode of the WRE6606. For further information on system operating mode, see Section 3.1.1 on page 19.

**Figure 70** Maintenance > System Mode



The following table describes the labels in this menu.

Table 36	Maintenance >	יS <	ystem	Mode
----------	---------------	------	-------	------

LABEL	DESCRIPTION
Normal mode	The default WPS behavior, both 2.4 GHz and 5 GHz bands are supported in up and down broadcasting.
Range boost mode	Select this option to set the WRE6606 to <b>Range boost mode</b> the 2.4 GHz band is supported on the Up behavior, while the 5 GHz band is supported on the Down behavior.
Speed boost mode	Select this option to set the WRE6606 to <b>Speed boost mode</b> the 5 GHz band is supported on the Up behavior, while the 2.4 GHz band is supported on the Down behavior.
Apply	Click Apply to save your changes back to the WRE6606.
Reset	Click <b>Reset</b> to reload the previous configuration for this screen.

#### 13.9.1 System WPS Behavior

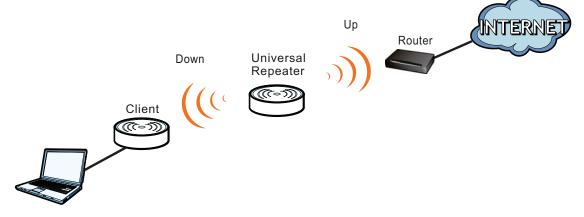
In Repeater mode (see Chapter 3 on page 20), you can select the type of WPS behavior: Normal Mode, Range Boost, or Speed Boost mode.

The device enables you to extend the range of your dual-band router to eliminate "dead spots" in your wireless network. You can choose from normal mode, range boost, or speed boost modes for both your 2.4GHz and 5GHz networks.

The following terms are used to describe the WPS behavior:

- Up: The connection from the WRE6606 to the Router
- Down: The connection from the WRE6606 to a client

Figure 71 Normal Mode with Up and Down Broadcasting



- Home wireless network: 2.4G SSID = Home2.4G\_2.4GEXT; 5G SSID = Home5G\_5GEXT.
- Work wireless network: 2.4G SSID = Work2.4G\_2.4GEXT; 5G SSID = Work5G\_5GEXT.
- No profile: There is no currently defined profile.

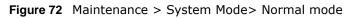
The following section describes the Normal, Range Boost, and Speed Boost mode (WPS) behaviors in a home and work network connection.

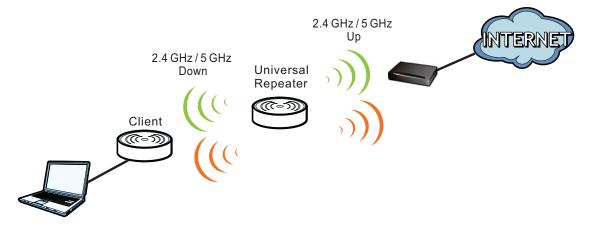
As connection profiles are established, the WRE6606 maintains a record of the varying profiles and automatically joins the network when in range.

Note: The home wireless network is the initial setup environment. The WRE6606 does not have any established network profiles at the time of initial setup.

#### 13.9.1.1 Normal Mode

In normal mode, both Down and Up WPS behaviors are supported for both 2.4 GHz and 5 GHz bands.



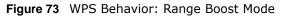


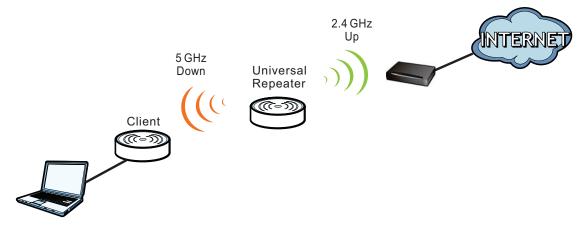
	HOME WIRELES	S NETWORK	WORK WIRELESS NETWORK			
WPS BAND	UP DOWN		UP	DOWN		
2.4 GHz	No profile (Initial Setup)	No profile (Initial Setup)	Work1	Work1_2.4GEXT		
	No profile	No profile	No profile	Work2_2.4GEXT		
	Home1	Home1_2.4GEXT	Work3	Work3_2.4GEXT		
	no profile	no profile	No profile	Work4_2.4GEXT		
	Home1	Home1_2.4GEXT	Work3	Work3_2.4GEXT		
	Home1	Home1_2.4GEXT	Work1	Work1_2.4GEXT		
5 GHz	No profile (Initial Setup)	No profile (Initial Setup)	No profile	Work1_5GEXT		
	No profile	No profile	Work2_5GEXT	Work2_5GEXT		
	No profile	No profile	No profile	Work3_5GEXT		
	Home2	Home2_5GEXT	Work4	Work4_5GEXT		
	Home2	Home2_5GEXT	Work2_5GEXT	Work2_5GEXT		
	Home2	Home2_5GEXT	Work4	Work4_5GEXT		

 Table 37
 WPS Behavior: Normal Mode

#### 13.9.1.2 Range Boost Mode

In range boost mode, the 2.4 GHz band is supported on the Down behavior, while the 5 GHz band is supported on the Up behavior.





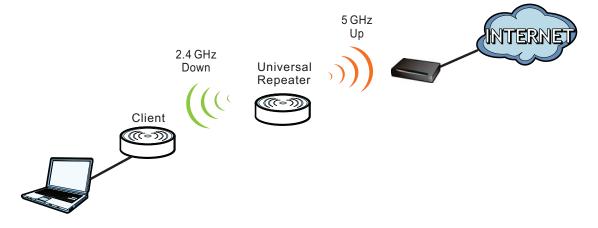
	HOME WIRELE	SS NETWORK	WORK WIRELESS NETWORK		
WPS BAND	UP	DOWN	UP	DOWN	
2.4 GHz	No profile (Initial Setup)	No profile (Initial Setup)	Work1	Off	
	Home1	Home1_2.4GEXT	Work3	Off	
	No profile	Home2_2.4GEXT	Work3	Off	
	Home1	Home1_2.4GEXT	Work3	Off	
5 GHz	No profile (Initial Setup)	No profile (Initial Setup)	No profile	Work1_5GEXT	
	Home2	Home2_5GEXT	Work2	Work3_5GEXT	
	Home2	Home2_5GEXT	Work2	Work3_5GEXT	
	No profile	No profile	No profile	Work3_5GEXT	

Table 38	WPS	Behavior:	Range	Boost	Mode
Table 30	WFJ	Denavior.	Nange	DUUSL	noue

#### 13.9.1.3 Speed Boost Mode

In speed boost mode, the 5 GHz band is supported on the Down behavior, while the 2.4 GHz band is supported on the Up behavior.

Figure 74 WPS Mode: Speed Boost Mode



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	HOT SPO	T 1 (HOME)	HOT SPOT 2 (WORK)			
WPS BAND	UP	DOWN	N UP			
2.4 GHz	No profile (Initial Setup)	No profile (Initial Setup)	No profile	Work2_2.4GEXT		
	Home1	Home1_2.4GEXT	Work1	Work4_2.4GEXT		
	No profile	Home2_2.4GEXT	No profile	Work4_2.4GEXT		
	Home1	Home1_2.4GEXT	Work1	Work3_2.4GEXT		
5 GHz	No profile (Initial Setup)	No profile (Initial Setup)	Work2	Off		
	Home2	Home2_5GEXT	Work4	Off		
	Home2	Home2_5GEXT	Work4	Off		
	No profile	No profile	Work3	Off		

 Table 39
 WPS Mode: Speed Boost Mode

# Troubleshooting

This chapter offers some suggestions to solve problems you might encounter. The potential problems are divided into the following categories.

- Power, Hardware Connections, and LEDs
- WRE6606 Access and Login
- Internet Access
- Resetting the WRE6606 to Its Factory Defaults
- Wireless Problems

### 14.1 Power, Hardware Connections, and LEDs

The WRE6606 does not turn on. None of the LEDs turn on.

- 1 Make sure the WRE6606 is plugged in to an appropriate power source. Make sure the power source is turned on.
- 2 Disconnect and re-connect the WRE6606.
- **3** Remove the WRE6606 from the outlet. Then connect an electrical device that you know works into the same power outlet. This checks the status of the power outlet.
- 4 If the problem continues, contact the vendor.

One of the LEDs does not behave as expected.

- 1 Make sure you understand the normal behavior of the LED. See Section 1.3 on page 10.
- 2 Make sure you understand how the LEDs are enabled or disabled. See Section 1.3 on page 10.
- 3 Check the hardware connections. See the Quick Start Guide.
- 4 Inspect your cables for damage. Contact the vendor to replace any damaged cables.
- **5** Disconnect and re-connect the WRE6606.
- 6 If the problem continues, contact the vendor.



## 14.2 WRE6606 Access and Login

#### I forgot the password.

- 1 The default password is **1234**.
- 2 If this does not work, you have to reset the device to its factory defaults. See Section 14.4 on page 98.

I cannot see or access the **Login** screen in the Web Configurator.

- 1 Make sure you are using the correct address.
  - The default web address (URL) of the WRE6606 is http://zyxelsetup.
- 2 Check the hardware connections, and make sure the LEDs are behaving as expected. See the Quick Start Guide.
- **3** Make sure your Internet browser does not block pop-up windows and has JavaScript and Java enabled.
- 4 Reset the device to its factory defaults, and try to access the WRE6606 with the default address.
- 5 If the problem continues, contact the network administrator or vendor, or try one of the advanced suggestions.

#### **Advanced Suggestions**

• If your computer is connected wirelessly, use a computer that is connected to a LAN/ETHERNET port.

I can see the **Login** screen, but I cannot log in to the WRE6606.

- 1 Make sure you have entered the password correctly. The default password is **1234**.
- **2** This can happen when you fail to log out properly from your last session. Try logging in again after 5 minutes.
- **3** Disconnect and re-connect the WRE6606.
- 4 If this does not work, you have to reset the device to its factory defaults. See Section 14.4 on page 98.

## 14.3 Internet Access

#### I cannot access the Internet.

- 1 Check the hardware connections, and make sure the LEDs are behaving as expected. See the Quick Start Guide.
- **2** Try to connect directly to the AP. If you can access the Internet, check that the WRE6606 (repeater mode) has associated with the AP by checking the **Status** screen. See Section 6.4 on page 33.
- 3 If you are trying to access the Internet wirelessly, make sure the wireless settings in the wireless client are the same as the settings in the AP.
- 4 Disconnect all the cables from your device, and follow the directions in the Quick Start Guide again.
- 5 If the problem continues, contact the network administrator or vendor.

I cannot access the Internet anymore. I had access to the Internet (with the WRE6606 in repeater mode), but my Internet connection is not available anymore.

- 1 Check the hardware connections, and make sure the LEDs are behaving as expected. See the Quick Start Guide and Section 1.3 on page 10.
- **2** Reboot the WRE6606.
- **3** Try to connect directly to the AP. If you can access the Internet, check that the WRE6606 (repeater mode) has associated with the AP by checking the **Status** screen. See Section 6.4 on page 33.
- 4 If the problem continues, contact the network administrator or vendor.

The Internet connection is slow or intermittent.

- 1 There might be a lot of traffic on the network. Look at the LEDs, and check Section 1.3 on page 10. If the WRE6606 is sending or receiving a lot of information, try closing some programs that use the Internet, especially peer-to-peer applications.
- 2 Check the signal strength. If the signal strength is low, try moving the WRE6606 closer to the AP if possible, and look around to see if there are any devices that might be interfering with the wireless network (for example, microwaves, other wireless networks, and so on).
- **3** Reboot the WRE6606.
- 4 If the problem continues, contact the network administrator or vendor, or try one of the advanced suggestions.

#### Advanced Suggestion

• Check the settings for QoS. If it is disabled, you might consider activating it.

### 14.4 Resetting the WRE6606 to Its Factory Defaults

If you reset the WRE6606, you lose all of the changes you have made. The WRE6606 re-loads its default settings, and the password resets to **1234**. You have to make all of your changes again.

You will lose all of your changes when you reset the WRE6606 to its factory defaults.

To reset the WRE6606,

- 1 Make sure the power LED is on.
- 2 Press the **WPS** button for longer than 10 seconds, the Power LED begins to blink, to set the WRE6606 back to its factory-default configuration.

OR

3 Click Maintenance > Backup Restore > Restore and then click Reset.

If the WRE6606 restarts automatically, wait for the WRE6606 to finish restarting, and log in to the Web Configurator. The password is **1234**.

If the WRE6606 does not restart automatically, disconnect and reconnect the WRE6606'. Then, follow the directions above again.

### **14.5 Wireless Problems**

I cannot access the WRE6606 or ping any computer from the WLAN.

- 1 Make sure the wireless LAN is enabled on the WRE6606.
- 2 Make sure the wireless adapter on the wireless station is working properly.
- 3 Make sure the wireless adapter installed on your computer is IEEE 802.11 compatible and supports the same wireless standard as the WRE6606.
- 4 Make sure your computer (with a wireless adapter installed) is within the transmission range of the WRE6606.

- **5** Check that both the WRE6606 and your wireless station are using the same wireless and wireless security settings, and that both the WRE6606 and the AP are using the same wireless and wireless security settings.
- 6 Make sure traffic between the WLAN and the LAN is not blocked by the MAC Address List of the WRE6606. See Section 10.7 on page 69.

# **Customer Support**

In the event of problems that cannot be solved by using this manual, you should contact your vendor. If you cannot contact your vendor, then contact a ZyXEL office for the region in which you bought the device.

See *http://www.zyxel.com/homepage.shtml* and also *http://www.zyxel.com/about\_zyxel/zyxel\_worldwide.shtml* for the latest information.

Please have the following information ready when you contact an office.

#### **Required Information**

- Product model and serial number.
- Warranty Information.
- Date that you received your device.
- Brief description of the problem and the steps you took to solve it.

#### **Corporate Headquarters (Worldwide)**

#### Taiwan

- ZyXEL Communications Corporation
- http://www.zyxel.com

#### Asia

#### China

- ZyXEL Communications (Shanghai) Corp.
   ZyXEL Communications (Beijing) Corp.
   ZyXEL Communications (Tianjin) Corp.
- http://www.zyxel.cn

#### India

- ZyXEL Technology India Pvt Ltd
- http://www.zyxel.in

#### Kazakhstan

- ZyXEL Kazakhstan
- http://www.zyxel.kz

#### Korea

- ZyXEL Korea Corp.
- http://www.zyxel.kr

#### Malaysia

- ZyXEL Malaysia Sdn Bhd.
- http://www.zyxel.com.my

#### Pakistan

- ZyXEL Pakistan (Pvt.) Ltd.
- http://www.zyxel.com.pk

#### **Philippines**

- ZyXEL Philippines
- http://www.zyxel.com.ph

#### Singapore

- ZyXEL Singapore Pte Ltd.
- http://www.zyxel.com.sg

#### Taiwan

- ZyXEL Communications Corporation
- http://www.zyxel.com/tw/zh/

#### Thailand

- ZyXEL Thailand Co., Ltd
- http://www.zyxel.co.th

#### Vietnam

- ZyXEL Communications Corporation-Vietnam Office
- http://www.zyxel.com/vn/vi

#### Europe

#### Austria

- ZyXEL Deutschland GmbH
- http://www.zyxel.de

#### Belarus

- ZyXEL BY
- http://www.zyxel.by

#### Belgium

- ZyXEL Communications B.V.
- http://www.zyxel.com/be/nl/
- http://www.zyxel.com/be/fr/

#### Bulgaria

- ZyXEL България
- http://www.zyxel.com/bg/bg/

#### **Czech Republic**

- ZyXEL Communications Czech s.r.o
- http://www.zyxel.cz

#### Denmark

- ZyXEL Communications A/S
- http://www.zyxel.dk

#### Estonia

- ZyXEL Estonia
- http://www.zyxel.com/ee/et/

#### Finland

- ZyXEL Communications
- http://www.zyxel.fi

#### France

- ZyXEL France
- http://www.zyxel.fr

#### Germany

- ZyXEL Deutschland GmbH
- http://www.zyxel.de

#### Hungary

- ZyXEL Hungary & SEE
- http://www.zyxel.hu

#### Italy

- ZyXEL Communications Italy
- http://www.zyxel.it/

#### Latvia

- ZyXEL Latvia
- http://www.zyxel.com/lv/lv/homepage.shtml

#### Lithuania

- ZyXEL Lithuania
- http://www.zyxel.com/lt/lt/homepage.shtml

#### Netherlands

- ZyXEL Benelux
- http://www.zyxel.nl

#### Norway

- ZyXEL Communications
- http://www.zyxel.no

#### Poland

- ZyXEL Communications Poland
- http://www.zyxel.pl

#### Romania

- ZyXEL Romania
- http://www.zyxel.com/ro/ro

#### Russia

- ZyXEL Russia
- http://www.zyxel.ru

#### Slovakia

- ZyXEL Communications Czech s.r.o. organizacna zlozka
- http://www.zyxel.sk

#### Spain

- ZyXEL Communications ES Ltd
- http://www.zyxel.es

#### Sweden

- ZyXEL Communications
- http://www.zyxel.se

#### Switzerland

• Studerus AG

http://www.zyxel.ch/

#### Turkey

- ZyXEL Turkey A.S.
- http://www.zyxel.com.tr

#### UK

- ZyXEL Communications UK Ltd.
- http://www.zyxel.co.uk

#### Ukraine

- ZyXEL Ukraine
- http://www.ua.zyxel.com

#### Latin America

#### Argentina

- ZyXEL Communication Corporation
- http://www.zyxel.com/ec/es/

#### Brazil

- ZyXEL Communications Brasil Ltda.
- https://www.zyxel.com/br/pt/

#### Ecuador

- ZyXEL Communication Corporation
- http://www.zyxel.com/ec/es/

#### Middle East

#### Israel

- ZyXEL Communication Corporation
- http://il.zyxel.com/homepage.shtml

#### Middle East

- ZyXEL Communication Corporation
- http://www.zyxel.com/me/en/

#### **North America**

#### USA

- ZyXEL Communications, Inc. North America Headquarters
- http://www.zyxel.com/us/en/

#### Oceania

#### Australia

- ZyXEL Communications Corporation
- http://www.zyxel.com/au/en/

#### Africa

#### **South Africa**

- Nology (Pty) Ltd.
- http://www.zyxel.co.za

# **Setting Up Your Computer's IP Address**

Note: Your specific WRE6606 may not support all of the operating systems described in this appendix. See the product specifications for more information about which operating systems are supported.

This appendix shows you how to configure the IP settings on your computer in order for it to be able to communicate with the other devices on your network. Windows Vista/XP/2000, Mac OS 9/ OS X, and all versions of UNIX/LINUX include the software components you need to use TCP/IP on your computer.

If you manually assign IP information instead of using a dynamic IP, make sure that your network's computers have IP addresses that place them in the same subnet.

In this appendix, you can set up an IP address for:

- Windows XP/NT/2000 on page 106
- Windows Vista on page 110
- Windows 7 on page 114
- Mac OS X: 10.3 and 10.4 on page 118
- Mac OS X: 10.5 and 10.6 on page 121
- Linux: Ubuntu 8 (GNOME) on page 124
- Linux: openSUSE 10.3 (KDE) on page 128

#### Windows XP/NT/2000

The following example uses the default Windows XP display theme but can also apply to Windows 2000 and Windows NT.

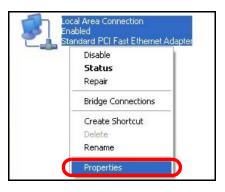
1 Click Start > Control Panel.



2 In the Control Panel, click the Network Connections icon.



3 Right-click Local Area Connection and then select Properties.



4 On the General tab, select Internet Protocol (TCP/IP) and then click Properties.

Local	Area Conn	ectio	n Prope	rties			?
General	Authenticatio	on A	dvanced				
Connect	t using:						
BB A	ccton EN120	7D-T>	(PCI Fast	Etherne	t Adaj	pter	
					Г	Configure	e
This cor	nnection uses	the fo	llowing ite	ms:	_		
	File and Prin	Soho	dulor	)	Netw	orks Propertie	s
Descri	ption						
wide	mission Conti area network s diverse inte	proto	col that pro	vides co			ult
Show	v icon in notif	icatior	n area whe	n conne	cted		
				0	К		ancel

5 The Internet Protocol TCP/IP Properties window opens.

eneral .	Alternate Configu	uration				
his capa	get IP settings a: bility. Otherwise, opriate IP setting:	you need to				
📀 Obt	ain an IP addres	s automatica	ally			
OUse	the following IP	address: –				
IP add	lress:					
Subne	et mask:					
Defau	lt gateway:			- 8	*	
💿 Obt	ain DNS server a	address auto	omatically			
OUse	the following DN	NS server a	ddresses: —			
Prefer	ed DNS server:			3	74	
Alterna	ate DNS server:			-		
					Advan	ced

6 Select Obtain an IP address automatically if your network administrator or ISP assigns your IP address dynamically.

Select Use the following IP Address and fill in the IP address, Subnet mask, and Default gateway fields if you have a static IP address that was assigned to you by your network administrator or ISP. You may also have to enter a Preferred DNS server and an Alternate DNS server, if that information was provided.

- 7 Click OK to close the Internet Protocol (TCP/IP) Properties window.
- 8 Click OK to close the Local Area Connection Properties window.

### **Verifying Settings**

- 1 Click Start > All Programs > Accessories > Command Prompt.
- 2 In the Command Prompt window, type "ipconfig" and then press [ENTER].

You can also go to **Start > Control Panel > Network Connections**, right-click a network connection, click **Status** and then click the **Support** tab to view your IP address and connection information.

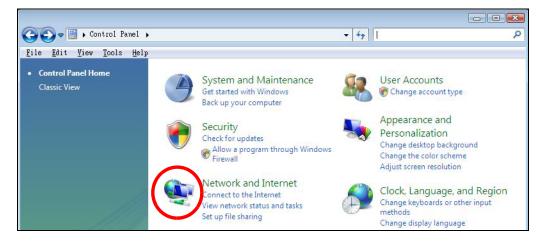
### Windows Vista

This section shows screens from Windows Vista Professional.

1 Click Start > Control Panel.



2 In the Control Panel, click the Network and Internet icon.



3 Click the Network and Sharing Center icon.



4 Click Manage network connections.



5 Right-click Local Area Connection and then select Properties.

LAN or High-Spe		
Local Conne	Collapse group	Left Arrow
Netwo	Expand all groups	
X W Intel	Collapse all groups	
	Disable	
	Status	
	Diagnose	
	Bridge Connections	
	Create Shortcut	
	Delete	
	Rename	
<	Properties	

Note: During this procedure, click **Continue** whenever Windows displays a screen saying that it needs your permission to continue.

6 Select Internet Protocol Version 4 (TCP/IPv4) and then select Properties.

Connect using:		
🔮 Intel(R) PR0/10	000 MT Desktop Connectio	n
	(	Configure
his connection uses	the following items:	
🗹 📑 Client for Mic		
🗹 📙 Network Mor	hitor3 Driver	
🗹 县 File and Print	er Sharing for Microsoft Net	works
<ul> <li>Internet Prote</li> </ul>	col Version 6 (TCP/IPv6)	
	ocol Version 4 (TCP/IPv4)	
	opology Discovery Mapper I	
🗹 🔺 Link-Layer To	opology Discovery Respond	er
	70.2 - W.M .	
Install	Uninstall	Properties
Install		
Description	al Protocol/Internet Protoco	The default
Description Transmission Contro	ol Protocol/Internet Protoco protocol that provides comm	
Description Transmission Contro wide area network		

7 The Internet Protocol Version 4 (TCP/IPv4) Properties window opens.

Seneral	Alternate Configuration				
this cap	n get IP settings assigned a ability. Otherwise, you ne appropriate IP settings.				
0	otain an IP address autom	atically			
_© Uş	e the following IP address	:			
<u>I</u> P ac	ldress:			1	
Sybr	iet mask:		12	¥.	
<u>D</u> efa	ult gateway:	,	2		
o oj	otain DNS server address a	automatically			
O Us	e the following DNS serve	r addresses:			
Prefe	erred DNS server:		÷	с. С	
Alter	nate DNS server;	3	3	r.	
				Ad <u>v</u> a	inced

8 Select Obtain an IP address automatically if your network administrator or ISP assigns your IP address dynamically.

Select Use the following IP Address and fill in the IP address, Subnet mask, and Default gateway fields if you have a static IP address that was assigned to you by your network administrator or ISP. You may also have to enter a Preferred DNS server and an Alternate DNS server, if that information was provided.Click Advanced.

- 9 Click OK to close the Internet Protocol (TCP/IP) Properties window.
- 10 Click OK to close the Local Area Connection Properties window.

### **Verifying Settings**

- 1 Click Start > All Programs > Accessories > Command Prompt.
- 2 In the Command Prompt window, type "ipconfig" and then press [ENTER].

You can also go to **Start > Control Panel > Network Connections**, right-click a network connection, click **Status** and then click the **Support** tab to view your IP address and connection information.

### Windows 7

This section shows screens from Windows 7 Enterprise.

1 Click Start > Control Panel.



2 In the **Control Panel**, click **View network status and tasks** under the **Network and Internet** category.

I Control Panel ►	✓ 4y Search Control Panel
Adjust your computer's settings	View by: Category 🔻
System and Security	User Accounts and Family Safety
Review your computer's status	Add or remove user accounts
Back up your computer	Set up parental controls for any user
Find and fix problems	Appearance and Personalization
Network and Internet	Change the theme
View network status and tasks	Change desktop background
Choose homegroup and sharing options	Adjust screen resolution
Hardware and Sound	Clock, Language, and Region
View devices and printers	Change keyboards or other input methods
Add a device	Change display language
Programs Uninstall a program	Ease of Access Let Windows suggest settings Optimize visual display

3 Click Change adapter settings.

Network and Internet 🕨 Network and	I Sharing Center		▼ ∳ <del>y</del> Search
View your basic network ir	formation and set	up connections	
TW-PC (This computer)	ZyXEL.com	Internet	See full map
View your active networks		Access type: Internet	nect or disconnect
	View your basic network in TW-PC (This computer) View your active networks	TW-PC ZyXEL.com (This computer) View your active networks	View your basic network information and set up connections           Image: Construction of the second set up connections           TW-PC (This computer)           View your active networks           Construction           Access type:

4 Double click Local Area Connection and then select Properties.

Control Panel	<ul> <li>Network and Inte</li> </ul>	ernet 🕨 Network Connec	tions 🕨
Organize   Disable this net	work device Dia	agnose this connection	Rename this
Local Area Connection Unidentified network Broadcom NetXtreme	· 📕	Wireless Network C ZyXEL_RT3062_AP1 802.11n Wireless US	4
Local Area Connection State General Connection IPv4 Connectivity: IPv6 Connectivity: Media State: Duration: Speed: Details	No netw	ork access ork access Enabled 00:04:36 100.0 Mbps	
Activity — Sent — Packets: 4	432	Received 0 Close	

Note: During this procedure, click **Continue** whenever Windows displays a screen saying that it needs your permission to continue.

5 Select Internet Protocol Version 4 (TCP/IPv4) and then select Properties.

🕌 Local Area Connection Properties 📃 💌
Networking Sharing
Connect using:
Broadcom NetXtreme Gigabit Ethemet
<u>C</u> onfigure
This connection uses the following items:
🗹 🖳 Client for Microsoft Networks
🗹 📮 QoS Packet Scheduler
File and Printer Sharing for Microsoft Networks
Internet Protocol Version 6 (TCP/IPv6)
Internet Protocol Version 4 (TCP/IPv4)
Link-Layer Topology Discovery Mapper I/O Driver
🗹 📥 Link-Layer Topology Discovery Responder
Install Uninstall Properties
Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
OK Cancel

6 The Internet Protocol Version 4 (TCP/IPv4) Properties window opens.

Internet Protocol Version 4 (TCP/IPv4)	Properties	? 🗙
General		
You can get IP settings assigned autom this capability. Otherwise, you need to for the appropriate IP settings.		
<ul> <li>Obtain an IP address automatically</li> <li>Ose the following IP address:</li> </ul>	у	
IP address:	192.168.1.7	7
S <u>u</u> bnet mask:	255 . 255 . 255 . 0	)
Default gateway:		
Obtain DNS server address autom	atically	
• Us <u>e</u> the following DNS server addr	esses:	
Preferred DNS server:		
<u>A</u> lternate DNS server:		
Validate settings upon exit	Ad	vanced
	ОК	Cancel

7 Select **Obtain an IP address automatically** if your network administrator or ISP assigns your IP address dynamically.

Select Use the following IP Address and fill in the IP address, Subnet mask, and Default gateway fields if you have a static IP address that was assigned to you by your network administrator or ISP. You may also have to enter a Preferred DNS server and an Alternate DNS server, if that information was provided. Click Advanced if you want to configure advanced settings for IP, DNS and WINS.

- 8 Click OK to close the Internet Protocol (TCP/IP) Properties window.
- 9 Click OK to close the Local Area Connection Properties window.

### **Verifying Settings**

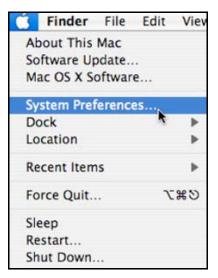
- 1 Click Start > All Programs > Accessories > Command Prompt.
- 2 In the **Command Prompt** window, type "ipconfig" and then press [ENTER].
- 3 The IP settings are displayed as follows.

C:\WINNT\system32\cmd.exe	<u>- 🗆 ×</u>
:\>ipconfig	<u> </u>
indows 2000 IP Configuration	
thernet adapter Local Area Connection:	
Connection-specific DNS Suffix .: P-2612HNU-F3v2 IP Address : 192.168.1.7 Subnet Mask : 255.255.255.0 Default Gateway : 192.168.1.1	
:\>	-

### Mac OS X: 10.3 and 10.4

The screens in this section are from Mac OS X 10.4 but can also apply to 10.3.

1 Click Apple > System Preferences.



2 In the System Preferences window, click the Network icon.



**3** When the **Network** preferences pane opens, select **Built-in Ethernet** from the network connection type list, and then click **Configure**.

	Location:	Automatic
	Show:	Network Status
Θ	Built-in Ethernet	Built-in Ethernet is currently active and has the IP address 10.0.1.2. You are connected to the Internet via Built-in Ethernet.
•		Internet Sharing is on and is using AirPort to share the connection.
	0	Configure)

4 For dynamically assigned settings, select **Using DHCP** from the **Configure IPv4** list in the **TCP/IP** tab.

Show All		Network	Q	
		tic Ethernet pleTalk Proxies	¢ ¢	
Configure IPv4		>	•	
IP Address	0.0.0.0		Renew DH	CP Lease
Subnet Mask Router		DHCP Client I	D: (If required	n
DNS Servers				
Search Domains IPv6 Address				(Optional)
	Configure IPv6	.)		?

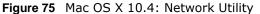
- **5** For statically assigned settings, do the following:
  - From the Configure IPv4 list, select Manually.
  - In the IP Address field, type your IP address.
  - In the Subnet Mask field, type your subnet mask.
  - In the **Router** field, type the IP address of your device.

L	ocation: Automatic	:	
	Show: Built-in Ethernet		
ТСР	IP PPPoE AppleTalk	Proxies Ethernet	
Configure IPv4:	Manually	;	
IP Address:	0.0.0.0		
Subnet Mask:	0.0.0.0		
Router:	0.0.0.0		
DNS Servers:			
	-		
Search Domains:			(Optiona
IPv6 Address:			
	Configure IPv6		(

6 Click Apply Now and close the window.

# **Verifying Settings**

Check your TCP/IP properties by clicking **Applications** > **Utilities** > **Network Utilities**, and then selecting the appropriate **Network Interface** from the **Info** tab.

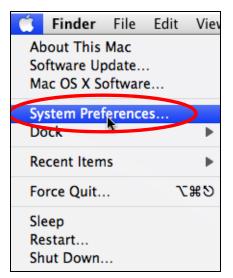


00		Network	Utility			
Info Netstat	AppleTalk Ping	Lookup	Traceroute	Whois	Finger	Port Scan
Please select a net	ork interface for in	formation				
Network Interface	(en0)					
Interface Info	lion		Transfer S	Statistics		
Hardware Addre	ess 00:16:cb:8b:50	:2e	Sent Pack	ets 2060	7	1
IP Address(	es) 118.169.44.20	3	Send Err	ors 0		
Link Spe	ed 100 Mb		Recv Pack	ets 2262	6	
Link Sta	tus Active		Recv Err	ors 0		
Vend	dor Marvell		Collisio	ons 0		
Мо	del Yukon Gigabit 88E8053	Adapter				

### Mac OS X: 10.5 and 10.6

The screens in this section are from Mac OS X 10.5 but can also apply to 10.6.

1 Click Apple > System Preferences.



2 In System Preferences, click the Network icon.

00			System I	Preferences			
	Show All					Q	
Personal							
File New				0	Î	Q	
Appearance	Desktop & Screen Saver	Dock	Exposé & Spaces	International	Security	Spotlight	
Hardware							
6		$\bigcirc$	D				
CDs & DVDs	Displays	Energy Saver	Keyboard & Mouse	Print & Fax	Sound		
Internet &	Network						
		Ø					
.Mac	Network	QuickTime	Sharing				
System							
11	<b>P</b>	**	(0)	-	2	0	
Accounts	Date & Time	Parental Controls	Software Update	Speech	Startup Disk	Time Machine	Universal Access

**3** When the **Network** preferences pane opens, select **Ethernet** from the list of available connection types.

	Network			
			٩	
Location:	Automatic		•	
&	Status:	The cable for Etherne		255.
<···>	Configure:	Using DHCP		•
¥				
(R)				
	DNS Server:			
	Search Domains:			
	802.1X:	WPA: ZyXEL04	Connect	$\supset$
_			Advanced	. ?
<	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Status: Status: Configure: DNS Server: Search Domains:	Status: Not Connected The cable for Etherny your computer does Configure: Using DHCP DNS Server:	Location: Automatic

- 4 From the **Configure** list, select **Using DHCP** for dynamically assigned settings.
- 5 For statically assigned settings, do the following:
  - From the Configure list, select Manually.
  - In the **IP Address** field, enter your IP address.

- In the Subnet Mask field, enter your subnet mask.
- In the **Router** field, enter the IP address of your WRE6606.

Network	
	٩
Location: Automatic	•
Status.	Not Connected The cable for Ethernet is connected, but your computer does not have an IP address.
Configure:	Manually
IP Address: Subnet Mask: Router: DNS Server: Search Domains: 802.1X:	WPA: ZyXEL04 Connect
	Advanced ?
	Status: Configure: IP Address: Subnet Mask: Router: DNS Server: Search Domains:

6 Click **Apply** and close the window.

### **Verifying Settings**

Check your TCP/IP properties by clicking **Applications > Utilities > Network Utilities**, and then selecting the appropriate **Network interface** from the **Info** tab.

O O Network Uti	lity			
Info Netstat AppleTalk Ping Lookup T	Fraceroute	Whois	Finger	Port Scan
lease select a network interface for information				
Network Interface (en1)	Transfer	Statistics		
Hardware Address: 00:30:65:25:6a:b3		kets: 123	0	
IP Address(es): 10.0.2.2	Send Er	rors: 0		
Link Speed: 11 Mbit/s	Recv Pac	kets: 119	7	
Link Status: Active	Recv Er	rors: 0		
Vendor: Apple	Collis	ions: 0		
Model: Wireless Network Adapter (802.11)				

Figure 76 Mac OS X 10.5: Network Utility

### Linux: Ubuntu 8 (GNOME)

This section shows you how to configure your computer's TCP/IP settings in the GNU Object Model Environment (GNOME) using the Ubuntu 8 Linux distribution. The procedure, screens and file locations may vary depending on your specific distribution, release version, and individual configuration. The following screens use the default Ubuntu 8 installation.

Note: Make sure you are logged in as the root administrator.

Follow the steps below to configure your computer IP address in GNOME:

1 Click System > Administration > Network.



2 When the **Network Settings** window opens, click **Unlock** to open the **Authenticate** window. (By default, the **Unlock** button is greyed out until clicked.) You cannot make changes to your configuration unless you first enter your admin password.

5	Network Settings	×
Location:	\$	
Connections	General DNS Hosts	
	Wired connection Roaming mode enabled	Properties
	Point to point connec This network interface is not c	
2 Help	√ <u>U</u> n	lock Close

3 In the **Authenticate** window, enter your admin account name and password then click the **Authenticate** button.

-	Authenticate X
R	System policy prevents modifying the configuration
	An application is attempting to perform an action that requires privileges. Authentication as one of the users below is required to perform this action.
	🕒 C.J.,,,, (chris) 😫
	Password for chris:
♦ <u>D</u> eta	ils
	Cancel Authenticate

4 In the **Network Settings** window, select the connection that you want to configure, then click **Properties**.

5	Network Settings	X
Location:	+	
Connections	General DNS Hosts	
	Wired connection Roaming mode enabled	$\mathcal{D}$
-	Point to point connec This network interface is not c	
Pelp		e

5 The **Properties** dialog box opens.

<u>ب</u>	th0 Properties
Enable roaming mo	de
Connection Setting	S
Con <u>fi</u> guration:	<b>†</b>
<u>I</u> P address:	
<u>S</u> ubnet mask:	
<u>G</u> ateway address:	
	Cancel OK

- In the **Configuration** list, select **Automatic Configuration (DHCP)** if you have a dynamic IP address.
- In the **Configuration** list, select **Static IP address** if you have a static IP address. Fill in the **IP address**, **Subnet mask**, and **Gateway address** fields.
- 6 Click OK to save the changes and close the **Properties** dialog box and return to the **Network Settings** screen.
- 7 If you know your DNS server IP address(es), click the **DNS** tab in the **Network Settings** window and then enter the DNS server information in the fields provided.

19	Network Settings	×
Location:	+	
Connections General	DNS Hosts	
DNS Servers		
10.0.2.3		- Add ☐ Delete
Search Domains		
		dd ∰ <u>D</u> elete
elp	<u>unlo</u>	ock

8 Click the **Close** button to apply the changes.

# **Verifying Settings**

Check your TCP/IP properties by clicking **System > Administration > Network Tools**, and then selecting the appropriate **Network device** from the **Devices** tab. The **Interface Statistics** column shows data if your connection is working properly.

					Dis.	MIGGS	-	letwo	100	ы									9
loc	<u>E</u> dit	<u>H</u> e	lp																
Dev	ices	Ping	Nets	stat	Trace	route	Po	rt Scan	Look	up	Finge	wh	ois						
	etwork		l		œ∳	Eth	ern	et Inter	face (e	th0)	)		•	]	1000	×	<u>C</u> or	nfigu	ure
IP	Infor	mati	ion											_					
	Proto	col I	P Add	dress	23			Netma	sk / Pre	efix	Broa	dcas	t s	Sco	pe	9			
Ĩ	IPv4		10.0.2	2.15				255.25	5.255.	0	10.0	.2.25	5						
	IP∨6	1	e80::	a00:	27ff:fe	e30:e1	6c	64					L	inł	<				
Int	terfac	ce In	form	atio	n			In	terfac				•						
Int	:erfac Hardw	ce In vare a	form	atio ss: 0	n 18:00:	27:30:		In	Iransn	nitte	d byt	es:	68	34.0	6 k	<ίΒ			
Int	terfac Hardw Multic	ce In vare a	form	iatio ss: C E	n 18:00:: inable	27:30:		In	Transm Transm	<del>litte</del> hitte	d byt d pac	es: :kets:	68	34.0	6 k	¢ів			
Int	terfac Hardw Multic MTU:	ce In /are a ast:	form addre	iatio ss: C E 1	n 18:00: Inable	27:30: .d	el:	In	Transm Transm Transm	<del>nitte</del> nitte nissi	d byt d pac on er	es: :kets: rors:	68 14 0	34.0	6 k				
Int H	terfac Hardw Multic MTU: Link sj	ce In vare a ast: peed	form addre	iatio ss: 0 E 1 r	n 18:00: Inable 500 Iot av	27:30:	el:	In	Transm Transm Transm Receive	nitte nitte nissi ed b	<del>d byt</del> d pac on er oytes:	es: :kets: rors:	68 14 0 21	34.( 125 .9.!	6 k				
Int H	terfac Hardw Multic MTU:	ce In vare a ast: peed	form addre	iatio ss: 0 E 1 r	n 18:00: Inable	27:30: .d	el:	In	Transm Transm Transm Receive Receive	nitte nitte nissi ed b ed p	d byt on er oytes: oacket	es: :kets: rors: ts:	68 14 0 21 14	34.( 125 .9.!	6 k				
Int H	terfac Hardw Multic MTU: Link sj	ce In vare a ast: peed	form addre	iatio ss: 0 E 1 r	n 18:00: Inable 500 Iot av	27:30: .d	el:	In	Transm Transm Transm Receive	nitte nitte nissi ed b ed p tion	d byt on er oytes: oacket	es: :kets: rors: ts:	68 14 0 21	34.( 125 .9.!	6 k				

#### Figure 77 Ubuntu 8: Network Tools

### Linux: openSUSE 10.3 (KDE)

This section shows you how to configure your computer's TCP/IP settings in the K Desktop Environment (KDE) using the openSUSE 10.3 Linux distribution. The procedure, screens and file locations may vary depending on your specific distribution, release version, and individual configuration. The following screens use the default openSUSE 10.3 installation.

Note: Make sure you are logged in as the root administrator.

Follow the steps below to configure your computer IP address in the KDE:

1 Click K Menu > Computer > Administrator Settings (YaST).

Search:			•	
			Applica	tions 🔺
	Administrator Settings YaST			
<b>Q</b>	Install Software			
	System Information sysinfo:/			
			System Fo	Iders
	Home Folder /home/zyxel			
	<b>My Documents</b> /home/zyxel/Docum	ients		
	Network Folders remote:/			
			M	1edia
6	2.4G Media (2.0 GB ava /home	ilable)		•
			$\bigotimes$	<b>-</b>
<u>F</u> avorites	Applications	<u>C</u> omputer	History	Leave
User <b>zyxe</b>	l on linux-h2oz		openS	iUSE <sup>®</sup>

2 When the **Run as Root - KDE su** dialog opens, enter the admin password and click **OK**.

💢 Run as r	oot - KDE su 🎱 🛛 🤉 🗖 🗙			
R	Please enter the Administrator (root) password to continue.			
Command:	/sbin/yast2			
<u>P</u> assword:	••••			
	Ignore V <u>O</u> K X <u>C</u> ancel			

3 When the YaST Control Center window opens, select Network Devices and then click the Network Card icon.

🥘 YaST Control Center @ lir	iux-h2oz 🎱		_ <b>•</b> ×
<u>E</u> ile <u>E</u> dit <u>H</u> elp			
Software	DSL	ISDN	
Hardware			
System	Modem 🔤	Network Card	
Network Devices			
Network Services			
movell AppArmor			
Security and Users			
💥 Miscellaneous			
<u>S</u> earch	I		
			/

4 When the **Network Settings** window opens, click the **Overview** tab, select the appropriate connection **Name** from the list, and then click the **Configure** button.

	Notwork S	ottingo			
Network Card Overview	🔍 Network S	ettings			
Obtain an overview of	_				
installed network cards.	Global Options	Overview	Hostname/DNS	Routing	
Additionally, edit their	Name	in a	Address		 
configuration.	AMD PCnet - Fast 7	and the second states			
Adding a Network	AMD PChet - Fast 7	9C971 DHC	ar:		
Card:					
Press Add to configure a new network card					
manually.					
Configuring or					
Deleting: Choose a network card					
to change or remove.					
Then press Configure or					
Delete as desired.					
	AMD PCnet - Fas	t 79C 971			
	MAC: 08:00:27:90				
	Device Nam	a, ath athO			
	Started auto				
		omatically a			
	IP address a				
9					
-	• IP address a	assigned us			
		assigned us	sing DHCP		

5 When the Network Card Setup window opens, click the Address tab

🚯 YaST2@linux-h2oz 🍥				_ 🗆 🗙
Address Setup	風 Network Car	rd Setup		
Select <b>No Address</b> <b>Setup</b> if you do not want any IP address for this device. This is	General Address	Hardware enfiguration Name		
particularly useful for bonding ethernet devices.	Ethernet	tho Bonding Devices)		
Select Dynamic address if you do not	O Dynamic Address			
have a static IP address assigned by the system administrator or your cable or DSL provider.	Statically assigned     IP Address     Address     Additional Addresses	Subnet Mask	Hostname	
You can choose one of the dynamic address assignment method. Select <b>DHCP</b> if you have a DHCP server running on your local network. Network addresses are then obtained automatically from the server.	Alias Name   IP. /	Address Netmask		
To automatically search for free IP and then assign it statically, select <b>Zeroconf.</b> To use		Ad <u>d</u> Edit D	ejete	
	Back	Cancel		Next

#### Figure 78 openSUSE 10.3: Network Card Setup

6 Select **Dynamic Address (DHCP)** if you have a dynamic IP address.

Select **Statically assigned IP Address** if you have a static IP address. Fill in the **IP address**, **Subnet mask**, and **Hostname** fields.

- 7 Click Next to save the changes and close the Network Card Setup window.
- 8 If you know your DNS server IP address(es), click the Hostname/DNS tab in Network Settings and then enter the DNS server information in the fields provided.

Enter the name for this computer and the	Network Settings	
DNS domain that it belongs to.	Global Options Overview Hostna	me/DNS Routing
Optionally enter the name server list and	Hostname and Domain Name	Domain Name
domain search list.	linux-h2oz	site
Note that the hostname is globalit applies to all	<u>C</u> hange Hostname via DHCP <u>W</u> rite Hostname to /etc/hosts	
interfaces, not just this one. The domain is	Ch <u>a</u> nge /etc/resolv.conf manually     Name Servers and Domain Search Lis     Name Server 1	t Domain Search
especially important if	10.0.2.3	
this computer is a mail server.	Name Server 2	
If you are using DHCP to get an IP address, check whether to get a hostname via DHCP.	Name Server <u>3</u>	
The hostname of your host (which can be	Update DNS data via DHCP	
seen by issuing the hostname command) will be set automatically by the DHCP client. You may want to disable this option if you connect to different networks		

**9** Click **Finish** to save your settings and close the window.

## **Verifying Settings**

Click the **KNetwork Manager** icon on the **Task bar** to check your TCP/IP properties. From the **Options** sub-menu, select **Show Connection Information**.

Figure 79 openSUSE 10.3: KNetwork Manager

😰 Enable Wireless		
😰 Disable Wireless	🥪 KNetworkManager	
🚩 Switch to Online Mode	Wired Devices	
🐼 Switch to Offline Mode	🗙 Wired Network	
🗊 Show Connection Information	🔜 Dial-Up Connections	•
💫 Configure	🔏 Options	•
	🔜 🕜 <u>H</u> elp	•
	0 <u>Q</u> uit	Ctrl+Q

When the **Connection Status - KNetwork Manager** window opens, click the **Statistics tab** to see if your connection is working properly.

rigate de opens		Rifeework Hanager	
💫 Connection Status - KNetworkManager 🤄 🛜 🔳 🗙			
Device	🔌 Addresse 🛛 🔇 S	tatistics	
	Received	Transmitted	
Bytes	2317441	841875	
MBytes	2.2	0.8	
Packets	3621	3140	
Errors	0	0	
Dropped	0	0	
KBytes/s	0.0	0.0	
		<mark>∕ </mark> 0K	

### Figure 80 openSUSE: Connection Status - KNetwork Manager

# **Legal Information**

#### Copyright

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#### **Regulatory Notice and Statement**

#### UNITED STATES of AMERICA



The following information applies if you use the product within USA area.

#### FCC EMC Statement

- The device complies with Part 15 of FCC rules. Operation is subject to the following two conditions:
- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the device.
- This product has been tested and complies with the specifications for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses, and can radiate radio frequency energy and, if not installed and used according to the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
- If this device does cause harmful interference to radio or television reception, which is found by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
  - Reorient or relocate the receiving antenna
  - Increase the separation between the devices
  - Connect the equipment to an outlet other than the receiver's
  - Consult a dealer or an experienced radio/TV technician for assistance

The following information applies if you use the product with RF function within USA area.

#### FCC Radiation Exposure Statement

- This device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.
- This transmitter must be at least 20 cm from the user and must not be co-located or operating in conjunction with any other antenna or transmitter.

#### CANADA

The following information applies if you use the product within Canada area

Industry Canada ICES statement

CAN ICES-3 (B)/NMB-3(B)

#### Industry Canada RSS-GEN & RSS-247 statement

- This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
- This radio transmitter has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

If the product with 5G wireless function operating in 5150-5250 MHz and 5725-5850 MHz, the following attention must be paid,

- The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to cochannel mobile satellite systems.
- For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits specified for point-to-point and non-point-to-point operation as appropriate; and
- The worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in Section 6.2.2(3) of RSS 247 shall be clearly indicated.

If the product with 5G wireless function operating in 5250-5350 MHz and 5470-5725 MHz, the following attention must be paid.

- For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit.
- Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.
- Le présent émetteur radio de modèle s'il fait partie du matériel de catégorieI) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Lorsque la fonction sans fil 5G fonctionnant en5150-5250 MHz and 5725-5850 MHz est activée pour ce produit , il est nécessaire de porter une attention particulière aux choses suivantes

- Les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;
- Pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis (pour les dispositifs utilisant la bande de 5 725 à 5 850 MHz) doit être conforme à la limite de la p.i.r.e. spécifiée pour l'exploitation point à point et l'exploitation non point à point, selon le cas;
- Les pires angles d'inclinaison nécessaires pour rester conforme à l'exigence de la p.i.r.e. applicable au masque d'élévation, et énoncée à la section 6.2.2 3) du CNR-247, doivent être clairement indiqués.

Lorsque la fonction sans fil 5G fonctionnant en 5250-5350 MHz et 5470-5725 MHz est activée pour ce produit , il est nécessaire de porter une attention particulière aux choses suivantes.

Lorsque la fonction sans fil 5G fonctionnant en 5250-5350 MHz et 5470-5725 MHz est activée pour ce produit , il est nécessaire de porter une attention particulière aux choses suivantes.

 Pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis pour les dispositifs utilisant les bandes de 5 250 à 5 350 MHz et de 5 470 à 5 725 MHz doit être conforme à la limite de la p.i.r.e.

#### Industry Canada radiation exposure statement

This device complies with IC radiation exposure limits set forth for an uncontrolled environment. This device should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

#### Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

#### **EUROPEAN UNION**



The following information applies if you use the product within the European Union.

#### Declaration of Conformity with Regard to EU Directive 1999/5/EC (R&TTE Directive)

- Compliance information for 2.4GHz and/or 5GHz wireless products relevant to the EU and other Countries following the EU Directive 1999/5/EC (R&TTE)
- This device is restricted to indoor use only when operating in the 5150 to 5350 MHz frequency range.

Български (Bulgarian)	С настоящото ZyXEL декларира, че това оборудване е в съответствие със съществените изисквания и другите приложими разпоредбите на Директива 1999/5/ЕС.
Español (Spanish)	Por medio de la presente ZyXEL declara que el equipo cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Čeština (Czech)	ZyXEL tímto prohlašuje, že tento zařízení je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/EC.

Dansk (Danish)	Undertegnede ZyXEL erklærer herved, at følgende udstyr udstyr overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Deutsch (German)	Hiermit erklärt ZyXEL, dass sich das Gerät Ausstattung in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EU befindet.
Eesti keel (Estonian)	Käesolevaga kinnitab ZyXEL seadme seadmed vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
Ελληνικἁ (Greek)	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ ΖΥΧΕΙ ΔΗΛΩΝΕΙ ΟΤΙ εξοπλισμός ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/EC.
English	Hereby, ZyXEL declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Français (French)	Par la présente ZyXEL déclare que l'appareil équipements est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/EC.
Hrvatski (Croatian)	ZyXEL ovime izjavljuje da je radijska oprema tipa u skladu s Direktivom 1999/5/EC.
Íslenska (Icelandic)	Hér með lýsir, ZyXEL því yfir að þessi búnaður er í samræmi við grunnkröfur og önnur viðeigandi ákvæði tilskipunar 1999/5/EC.
Italiano (Italian)	Con la presente ZyXEL dichiara che questo attrezzatura è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviešu valoda (Latvian)	Ar šo ZyXEL deklarē, ka iekārtas atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių kalba (Lithuanian)	Šiuo ZyXEL deklaruoja, kad šis įranga atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Magyar (Hungarian)	Alulírott, ZyXEL nyilatkozom, hogy a berendezés megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EK irányelv egyéb előírásainak.
Malti (Maltese)	Hawnhekk, ZyXEL, jiddikjara li dan taghmir jikkonforma mal-htigijiet essenzjali u ma provvedimenti ohrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
Nederlands (Dutch)	Hierbij verklaart ZyXEL dat het toestel uitrusting in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EC.
Polski (Polish)	Niniejszym ZyXEL oświadcza, że sprzęt jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Português (Portuguese)	ZyXEL declara que este equipamento está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/EC.
Română (Romanian)	Prin prezenta, ZyXEL declară că acest echipament este în conformitate cu cerințele esențiale și alte prevederi relevante ale Directivei 1999/5/EC.
Slovenčina (Slovak)	ZyXEL týmto vyhlasuje, že zariadenia spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/EC.
Slovenščina (Slovene)	ZyXEL izjavlja, da je ta oprema v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/EC.
Suomi (Finnish)	ZyXEL vakuuttaa täten että laitteet tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska (Swedish)	Härmed intygar ZyXEL att denna utrustning står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EC.
Norsk (Norwegian)	Erklærer herved ZyXEL at dette utstyret er I samsvar med de grunnleggende kravene og andre relevante bestemmelser I direktiv 1999/5/EF.

#### **National Restrictions**

- This product may be used in all EU countries (and other countries following the EU Directive 1999/5/EC) without any limitation except
- for the countries mentioned below: Ce produit peut être utilisé dans tous les pays de l'UE (et dans tous les pays ayant transposés la directive 1999/5/CE) sans aucune limitation, excepté pour les pays mentionnés ci-dessous:
- Questo prodotto è utilizzabile in tutte i paesi EU (ed in tutti gli altri paesi che seguono le direttiva 1999/5/EC) senza nessuna limitazione, eccetto per i paesii menzionati di seguito:
- Das Produkt kann in allen EU Staaten ohne Einschränkungen eingesetzt werden (sowie in anderen Staaten die der Richtlinie 1999/5/CE folgen) mit Außnahme der folgenden aufgeführten Staaten:

In the majority of the EU and other European countries, the 2.4GHz and 5GHz bands have been made available for the use of wireless local area networks (LANs). Later in this document you will find an overview of countries in which additional restrictions or requirements or both are applicable. The requirements for any country may evolve. ZyXEL recommends that you check with the local authorities for the latest status of their national regulations for both the 2.4GHz and 5GHz wireless LANs. The following countries have restrictions and/or requirements in addition to those given in the table labeled "Overview of Regulatory Requirements for Wireless LANs":.. Belaium

- The Belgian Institute for Postal Services and Telecommunications (BIPT) must be notified of any outdoor wireless link having a range exceeding 300 meters. Please check http://www.bipt.be for more details. Draadloze verbindingen voor buitengebruik en met een reikwijdte van meer dan 300 meter dienen aangemeld te worden bij het
- Belgisch Instituut voor postdiensten en telecommunicatie (BIPT). Zie http://www.bipt.be voor meer gegevens.

Les liaisons sans fil pour une utilisation en extérieur d'une distance supérieure à 300 mètres doivent être notifiées à l'Institut Belge des services Postaux et des Télécommunications (IBPT). Visitez http://www.ibpt.be pour de plus amples détails.

#### Denmark

- In Denmark, the band 5150 5350 MHz is also allowed for outdoor usage.
  I Danmark må frekvensbåndet 5150 5350 også anvendes udendørs.

Italy

- This product meets the National Radio Interface and the requirements specified in the National Frequency Allocation Table for Italy. Unless this wireless LAN product is operating within the boundaries of the owner's property, its use requires a "general authorization." Please check http://www.sviluppoeconomico.gov.it/ for more details.
- Ouesto prodotto è conforme alla specifiche di Interfaccia Radio Nazionali e rispetta il Piano Nazionale di ripartizione delle frequenze in Italia. Se non viene installato all 'interno del proprio fondo, l'utilizzo di prodotti Wireless LAN richiede una "Autorizzazione Generale". Consultare http://www.sviluppoeconomico.gov.it/ per maggiori dettagli.

Latvia

- The outdoor usage of the 2.4 GHz band requires an authorization from the Electronic Communications Office. Please check http:// www.esd.lv for more details.
- 2.4 GHz frekvenėu ioslas izmantoðanai árpus telpám nepiecieðama atïauja no Elektronisko sakaru direkcijas. Vairák informácijas: http://www.esd.lv.

Notes:

1. Although Norway, Switzerland and Liechtenstein are not EU member states, the EU Directive 1999/5/EC has also been implemented in those countries.

2. The regulatory limits for maximum output power are specified in EIRP. The EIRP level (in dBm) of a device can be calculated by adding the gain of the antenna used(specified in dBi) to the output power available at the connector (specified in dBm).

COUNTRY	ISO 3166 2 LETTER CODE	COUNTRY	ISO 3166 2 LETTER CODE
Austria	AT	Liechtenstein	LI
Belgium	BE	Lithuania	LT
Bulgaria	BG	Luxembourg	LU
Croatia	HR	Malta	MT
Cyprus	CY	Netherlands	NL
Czech Republic	CZ	Norway	NO
Denmark	DK	Poland	PL
Estonia	EE	Portugal	PT
Finland	FI	Romania	RO
France	FR	Serbia	RS
Germany	DE	Slovakia	SK
Greece	GR	Slovenia	SI
Hungary	HU	Spain	ES
Iceland	IS	Switzerland	СН
Ireland	IE	Sweden	SE
Italy	IT	Turkey	TR
Latvia	LV	United Kingdom	GB

#### List of national codes

#### Safety Warnings

- Do not use this product near water, for example, in a wet basement or near a swimming pool.
- Do not expose your device to dampness, dust or corrosive liquids.
- Do not store things on the device.
- Do not obstruct the device ventilation slots as insufficient airflow may harm your device. For example, do not place the device in an enclosed space such as a box or on a very soft surface such as a bed or sofa.
- Do not install, use, or service this device during a thunderstorm. There is a remote risk of electric shock from lightning. Connect ONLY suitable accessories to the device.
- Do not open the device or unit. Opening or removing covers can expose you to dangerous high voltage points or other risks. ONLY qualified service personnel should service or disassemble this device. Please contact your vendor for further information. Make sure to connect the cables to the correct ports.
- Place connecting cables carefully so that no one will step on them or stumble over them. Always disconnect all cables from this device before servicing or disassembling
- Do not remove the plug and connect it to a power outlet by itself; always attach the plug to the power adaptor first before connecting it to a power outlet.
- Do not allow anything to rest on the power adaptor or cord and do NOT place the product where anyone can walk on the power adaptor or cord.
- Please use the provided or designated connection cables/power cables/ adaptors. Connect it to the right supply voltage (for example, 110V AC in North America or 230V AC in Europe). If the power adaptor or cord is damaged, it might cause electrocution. Remove it from the device and the power source, repairing the power adapter or cord is prohibited. Contact your local vendor to order a new one.
- Do not use the device outside, and make sure all the connections are indoors. There is a remote risk of electric shock from lightning.

- CAUTION: Risk of explosion if battery is replaced by an incorrect type, dispose of used batteries according to the instruction. Dispose
  them at the applicable collection point for the recycling of electrical and electronic devices. For detailed information about recycling of
  this product, please contact your local city office, your household waste disposal service or the store where you purchased the product.
- The following warning statements apply, where the disconnect device is not incorporated in the device or where the plug on the power supply cord is intended to serve as the disconnect device,
  - For permanently connected devices, a readily accessible disconnect device shall be incorporated external to the device;
  - For pluggable devices, the socket-outlet shall be installed near the device and shall be easily accessible.

#### **Environment Statement**

#### ErP (Energy-related Products)

ZyXEL products put on the EU market in compliance with the requirement of the European Parliament and the Council published Directive 2009/125/EC establishing a framework for the setting of ecodesign requirements for energy-related products (recast), so called as "ErP Directive (Energy-related Products directive) as well as ecodesign requirement laid down in applicable implementing measures, power consumption has satisfied regulation requirements which are:

- Network standby power consumption < 8W, and/or</li>
- Off mode power consumption < 0.5W, and/or</li>
- Standby mode power consumption < 0.5W.

(Wireless setting, please refer to "Wireless" chapter for more detail.)

#### European Union - Disposal and Recycling Information

The symbol below means that according to local regulations your product and/or its battery shall be disposed of separately from domestic waste. If this product is end of life, take it to a recycling station designated by local authorities. At the time of disposal, the separate collection of your product and/or its battery will help save natural resources and ensure that the environment is sustainable development.

Die folgende Symbol bedeutet, dass Ihr Produkt und/oder seine Batterie gemäß den örtlichen Bestimmungen getrennt vom Hausmüll entsorgt werden muss. Wenden Sie sich an eine Recyclingstation, wenn dieses Produkt das Ende seiner Lebensdauer erreicht hat. Zum Zeitpunkt der Entsorgung wird die getrennte Sammlung von Produkt und/oder seiner Batterie dazu beitragen, natürliche Ressourcen zu sparen und die Umwelt und die menschliche Gesundheit zu schützen.

El símbolo de abajo indica que según las regulaciones locales, su producto y/o su batería deberán depositarse como basura separada de la doméstica. Cuando este producto alcance el final de su vida útil, llévelo a un punto limpio. Cuando llegue el momento de desechar el producto, la recogida por separado éste y/o su batería ayudará a salvar los recursos naturales y a proteger la salud humana y medioambiental.

Le symbole ci-dessous signifie que selon les réglementations locales votre produit et/ou sa batterie doivent être éliminés séparément des ordures ménagères. Lorsque ce produit atteint sa fin de vie, amenez-le à un centre de recyclage. Au moment de la mise au rebut, la collecte séparée de votre produit et/ou de sa batterie aidera à économiser les ressources naturelles et protéger l'environnement et la santé humaine.

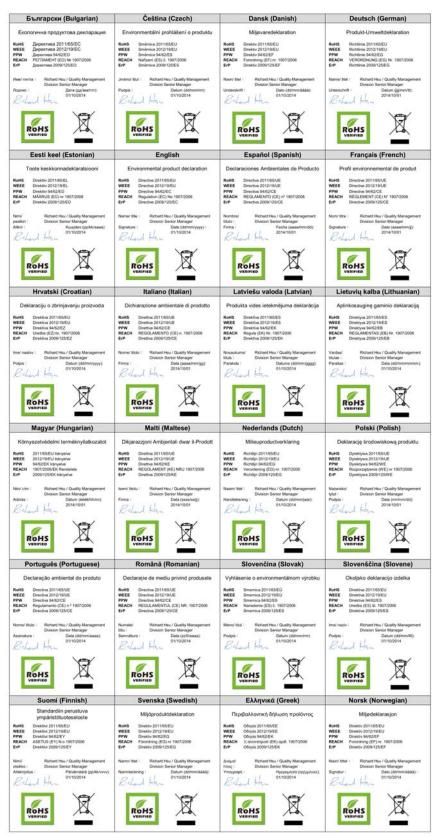
Il simbolo sotto significa che secondo i regolamenti locali il vostro prodotto e/o batteria deve essere smaltito separatamente dai rifiuti domestici. Quando questo prodotto raggiunge la fine della vita di servizio portarlo a una stazione di riciclaggio. Al momento dello smaltimento, la raccolta separata del vostro prodotto e/o della sua batteria aiuta a risparmiare risorse naturali e a proteggere l'ambiente e la salute umana.

Symbolen innebär att enligt lokal lagstiftning ska produkten och/eller dess batteri kastas separat från hushållsavfallet. När den här produkten når slutet av sin livslängd ska du ta den till en återvinningsstation. Vid tiden för kasseringen bidrar du till en bättre miljö och mänsklig hälsa genom att göra dig av med den på ett återvinningsställe.





#### **Environmental Product Declaration**



WRE6606 User's Guide





以下訊息僅適用於產品具有無線功能且銷售至台灣地區

- 第十二條 經型式認證合格之低功率射頻電機,非經許可,公司,商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。
- 第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通信;經發現有干擾現象時,應立即停用,並改善至無干擾時方得繼續使用。 前項合法通信,指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。
- 無線資訊傳輸設備忍受合法通信之干擾且不得干擾合法通信;如造成干擾,應立即停用,俟無干擾之虞,始得繼續使用。
- 無線資訊傳設備的製造廠商應確保頻率穩定性,如依製造廠商使用手冊上所述正常操作,發射的信號應維持於操作頻帶中。

以下訊息僅適用於產品操作於 5.25-5.35 秭赫頻帶內並銷售至台灣地區

• 在 5.25-5.35 秭赫頻帶內操作之無線資訊傳輸設備,限於室內使用。

以下訊息僅適用於產品屬於專業安裝並銷售至台灣地區

• 本器材須經專業工程人員安裝及設定,始得 設置使用,且不得直接販售給一般消費者。

安全警告

為了您的安全,請先閱讀以下警告及指示:

- 請勿將此產品接近水、火焰或放置在高溫的環境。
- 避免設備接觸:
- 短先說爾按胸: 任何液體 切勿讓設備接觸水、兩水、高濕度、污水腐蝕性的液體或其他水份。 灰塵及污物 切勿接觸灰塵、污物、沙土、食物或其他不合適的材料。 雷雨天氣時,不要安裝,使用或維修此設備。有遭受電擊的風險。 切勿重摔或撞擊設備,並勿使用不正確的電源變壓器。
- .
- 若接上不正確的電源變壓器會有爆炸的風險。 •
- .
- 請勿隨意更換產品內的電池。如果更換不正確之電池型式,會有爆炸的風險,請依製造商說明書處理使用過之電池。
- 請將廢電池丟棄在適當的電器或電子設備回收處
- 請勿將設備解體。
- .
- .
- 請勿將設備醉靈。 請勿阻礙設備的散熱孔,空氣對流不足將會造成設備損害。 請插在正確的電壓供給插座(如:北美/台灣電壓110V AC,歐洲是230V AC)。 假若電源變壓器或電源變壓器的纜線損壞,請從插座拔除,若您還繼續插電使用,會有觸電死亡的風險。 請勿試圖修理電源變壓器或電源變壓器的纜線,若有毀損,請直按聯絡您購買的店家,購買一個新的電源變壓器。
- •
- 請勿將此設備安裝於室外,此設備僅適合放置於室內。
- 請勿隨一般垃圾丟棄 .
- 請參閱產品背貼上的設備額定功率。
- 請參考產品型錄或是彩盒上的作業溫度。
- 產品沒有斷電裝置或者採用電源線的插頭視為斷電裝置的一部分,以下警語將適用:
- 對永久連接之設備, 在設備外部須安裝可觸及之斷電裝置; - 對插接式之設備, 插座必須接近安裝之地點而且是易於觸及的。

#### About the Symbols

Various symbols are used in this product to ensure correct usage, to prevent danger to the user and others, and to prevent property damage. The meaning of these symbols are described below. It is important that you read these descriptions thoroughly and fully understand the contents.

SYMBOL	EXPLANATION
$\sim$	Alternating current (AC): AC is an electric current in which the flow of electric charge periodically reverses direction.
	Direct current (DC): DC if the unidirectional flow or movement of electric charge carriers.
	Earth; ground: A wiring terminal intended for connection of a Protective Earthing Conductor.
	Class II equipment: The method of protection against electric shock in the case of class II equipment is either double insulation or reinforced insulation.

#### Explanation of the Symbols

#### **Viewing Certifications**

Go to http://www.zyxel.com to view this product's documentation and certifications.

#### **ZyXEL Limited Warranty**

ZyXEL warrants to the original end user (purchaser) that this product is free from any defects in material or workmanship for a specific period (the Warranty Period) from the date of purchase. The Warranty Period varies by region. Check with your vendor and/or the authorized ZyXEL local distributor for details about the Warranty Period of this product. During the warranty period, and upon proof of purchase, should the product have indications of failure due to faulty workmanship and/or materials, ZyXEL will, at its discretion, repair or replace the defective products or components without charge for either parts or labor, and to whatever extent it shall deem necessary to restore the product or components to proper operating condition. Any replacement will consist of a new or re-manufactured functionally equivalent product of equal or higher value, and will be solely at the discretion of ZyXEL. This warranty shall not apply if the product has been modified, misused, tampered with, damaged by an act of God, or subjected to abnormal working conditions.

#### Note

Repair or replacement, as provided under this warranty, is the exclusive remedy of the purchaser. This warranty is in lieu of all other warranties, express or implied, including any implied warranty of merchantability or fitness for a particular use or purpose. ZyXEL shall in no event be held liable for indirect or consequential damages of any kind to the purchaser.

To obtain the services of this warranty, contact your vendor. You may also refer to the warranty policy for the region in which you bought the device at http://www.zyxel.com/web/support\_warranty\_info.php.

#### Registration

Register your product online to receive e-mail notices of firmware upgrades and information at www.zyxel.com for global products, or at www.us.zyxel.com for North American products.

#### **Open Source Licenses**

This product contains in part some free software distributed under GPL license terms and/or GPL like licenses. Open source licenses are provided with the firmware package. You can download the latest firmware at www.zyxel.com. To obtain the source code covered under those Licenses, please contact support@zyxel.com.tw to get it.

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