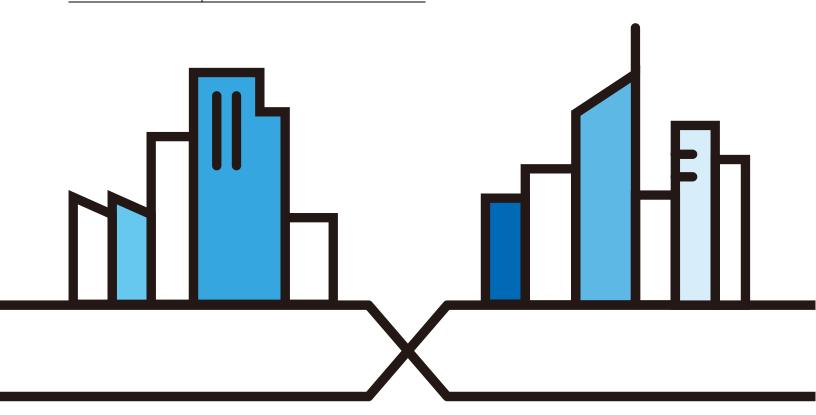


User's Guide WAP7205

AC1300 Gigabit Ethernet MoCA Extender

Default Login Details		
Web Address	http://zyxelsetup (Windows) http://zyxelsetup.local (Mac)	
LAN IP Address	http://(DHCP-assigned IP)	
User Name	admin	
Password	(default Wi-Fi key)	

Version 1.00 Edition 1, 05/2017



IMPORTANT!

READ CAREFULLY BEFORE USE.

KEEP THIS GUIDE FOR FUTURE REFERENCE.

Screenshots and graphics in this book may differ slightly from your product due to differences in your product firmware or your computer operating system. Every effort has been made to ensure that the information in this manual is accurate.

Related Documentation

More Information

Quick Start Guide
 The Quick Start Guide shows how to connect WAP and access the web configurator.

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



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PART I User's Guide

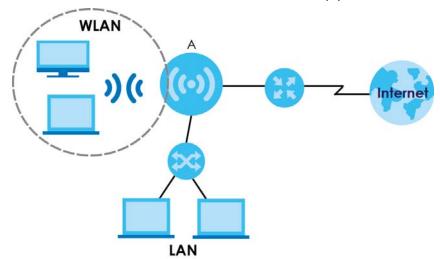
CHAPTER 1 Introducing the WAP7205

1.1 Overview

The WAP7205 extends the range of your existing wired network without additional wiring, providing easy network access to mobile users. You can set up a wireless network with other IEEE 802.11a/b/g/n/ac compatible devices. The WAP7205 is able to function both 2.4GHz and 5GHz networks at the same time.

You can create the following connections using the WAP7205:

- LAN. You can connect network devices via the Ethernet port of the WAP7205 (A) so that they can communicate with each other and access the Internet.
- WLAN. Wireless clients can connect to the WAP7205 (A) to access network resources._



The WAP7205 also comes with one coaxial port that supports MoCA (Multimedia over Coax Alliance) technology (see Chapter 8 on page 49).

Use a (supported) web browser to manage the WAP7205.

1.2 Securing the WAP7205

Do the following things regularly to make the WAP7205 more secure and to manage the WAP7205 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.

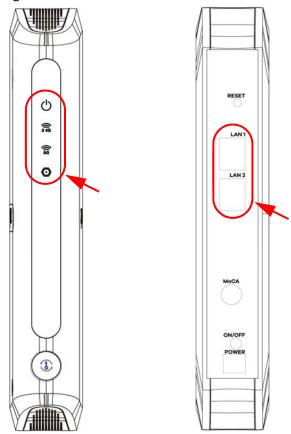
Back up the configuration (and make sure you know how to restore it). Restoring an earlier working
configuration may be useful if the device becomes unstable or even crashes. If you forget your
password, you will have to reset the WAP7205 to its factory default settings. If you backed up an
earlier configuration file, you would not have to totally re-configure the WAP7205. You could simply
restore your last configuration.

1.3 LEDs

The following sections describes the LEDs on the WAP7205.

The following figure is the front panel of the WAP7205. Use the LEDs to determine if the WAP7205 is behaving normally or if there are some problems on your powerline network.

Figure 1 WAP7205 Front Panel and Rear Panel



The following table describes the behavior of the lights on the WAP7205.

Table 1 WAP7205 LEDs

LIGHTS	ICON	COLOR	STATUS	DESCRIPTION
POWER	(l)	White	On	The WAP7205 is on and receiving power.
	\cup		Blinking	The WAP7205 is in the process of starting up or default restoring.
			Off	The WAP7205 is not receiving power.

Table 1 WAP7205 LEDs

LIGHTS	ICON	COLOR	STATUS	DESCRIPTION
Wi-Fi 2.4G	2 4G	White	On	The WAP7205's wireless LAN is ready.
Wi-Fi 5G	2 4G		Blinking	The WAP7205 is transmitting and/or receiving traffic through the wireless LAN.
			Off	The wireless LAN is disabled.
		Amber	Blinking	The WAP7205 is negotiating a WPS connection with a wireless device.
			Off	The WPS <u>process completed, WPS connection failed or</u> WPS is disabled.
MoCA	0	O White	On	The MoCA port is connected and the WAP7205 detects another MoCA device.
			Blinking	The WAP7205 is communicating with another MoCA device. Data is being transmitted and/or received through the coaxial cables.
			Off	The MoCA port is not connected, or the WAP7205 does not detect another MoCA device.
LAN1~2		Green	On	This port has a successful link to an Ethernet network.
			Blinking	The WAP7205 is sending or receiving packets to/from an Ethernet network on this port.
			Off	There is no connection on this port.

1.4 Resetting the WAP7205

If you forget your password or IP address, or you cannot access the Web Configurator, press the **RESET** button for more than 5 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 the default Wi-Fi key.

1.4.1 RESET Button

- 1 Make sure the power LED is on.
- 2 Press and hold the **RESET** button. After 5 seconds, the power LED begins flashing.
- 3 Release the **RESET** button. The WAP7205 reloads factory defaults and begins to reboot.

1.5 WPS Button

Your WAP7205 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 7.3 on page 38.

CHAPTER 2 Introducing the Web Configurator

2.1 Overview

This chapter describes how to access the WAP7205 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 WAP7205 via Internet browser. Use Internet Explorer 8.0 and later or Safari 2.0 or 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. Web pop-up blocking is enabled by default in Windows XP SP (Service Pack) 2.
- JavaScripts (enabled by default).
- Java permissions (enabled by default).

2.2 Accessing the Web Configurator

- 1 Make sure your WAP7205 hardware is properly connected. See the Quick Start Guide.
- 2 Open a web browser such as Internet Explorer.
- 3 Type "http://zyxelsetup" (for Windows) or "http://zyxelsetup.local" (for Mac) as the web address in your web browser.

The WAP7205 is a DHCP client by default. Alternatively, check the connected gateway for the WAP7205's current IP address. Make sure your computer's IP address is in the same subnet as the WAP7205's IP address. Type "http://(DHCP-assigned IP)" as the web address in your web browser.

2.2.1 Login Screen

The Web Configurator initially displays the following login screen.

Figure 2 Login screen



Table 2 Login screen

LABEL	DESCRIPTION	
Language	Select the language you want to use to configure the Web Configurator.	
User	Type "admin" (default) as the user name.	
Password	Type the default Wi-Fi key as the password. Click Login .	
00:06:51 1970-01-01	This shows the time (hh:mm) and date (yyyy:mm:dd) of the timezone you select in the Maintenance > Time screen (see Section 12.5 on page 71). The time is in 24-hour format, for example 15:00 is 3:00 PM.	

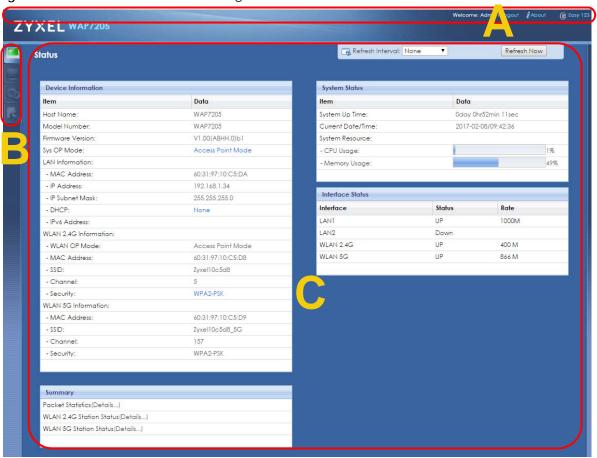
Note: The management session automatically times out when the time period set in the **Administrator Inactivity Timer** field expires (default five minutes; go to Section 10.3 on page 54 to change this). Simply log back into the WAP7205 if this happens.

Right after you log in, the **Dashboard** screen is displayed. See Chapter 3 on page 17 for more information about the **Dashboard** screen.

2.3 Navigating the Web Configurator

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

Figure 3 Status Screen of the Web Configurator



As illustrated above, the Web Configurator 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 4 Title Bar

Welcome: Admin I Logout ¿About @ Easy 123

The icons provide the following functions.

Table 3 Title Bar: Web Configurator Icons

LABEL	DESCRIPTION
Logout	Click this at any time to exit the Web Configurator.
About	Click this icon to view copyright and a link for related product information.
Easy123	Click this icon to open the wizard to give a name and password to identify your WAP7205 in the Wi-Fi network. See Chapter 6 on page 33.

2.3.2 Navigation Panel

Use the menu items on the navigation panel to open screens to configure WAP7205 features.

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

Table 4 Navigation Panel Menu Icons

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

The following tables describe each menu item.

Table 5 Navigation Panel

LINK	TAB FUNCTION	
Dashboard		This screen shows the WAP7205's general device, system and interface status information. Use this screen to access the summary statistics tables.
MONITOR		
Log	View Log	Use this screen to view the list of activities recorded by your WAP7205.
	Log Setting	Use this screen to specify which logs to display in the View Log screen.
Packet Statistics	Packet Statistics	Use this screen to view port status and packet specific statistics.
WLAN 2.4G Station Status	Association List	Use this screen to view the details about the devices connected to your WAP7205, using the 2.4G wireless connection.
WLAN 5G Station Status	Association List	Use this screen to view the details about the devices connected to your WAP7205, using the 5G wireless connection.
CONFIGURATION	1	•
Network		

Table 5 Navigation Panel

INK	TAB	FUNCTION	
Wireless LAN 2.4 and	General	Use this screen to configure general wireless LAN and wireless security settings.	
Wireless LAN 5G	More AP	Use this screen to enable and configure multiple wireless networks on the WAP7205.	
	MAC Filter	Use the MAC filter screen to configure the WAP7205 to block access to devices or block the devices from accessing the WAP7205.	
	Advanced	This screen allows you to configure advanced wireless settings.	
	QoS	Use this screen to configure Wi-Fi Multimedia Quality of Service (WMM QoS). WMM QoS allows you to prioritize wireless traffic according to the delivery requirements of individual services.	
	WPS	Use this screen to configure WPS.	
	WPS Station	Use this screen to add a wireless station using WPS.	
	Scheduling	Use this screen to schedule the times the Wireless LAN is enabled.	
	Channel Status	Use this screen to display the status of all available channels as well as related information.	
LAN	IP	Use this screen to configure LAN IP address and subnet mask.	
	IP Alias	Use this screen to have the WAP7205 apply IP alias to create LAN subnets.	
MoCA	MoCA	Use this screen to set the MoCA Privacy, and enable multimedia and home networking over coaxial cabling.	
	Monitor	Use this screen to view the MoCA connection status and information about the connected MoCA device(s).	
ONE Connect	ONE Connect	Use this screen to enable the One Connect feature. One Connect uses an app that allows you to easily integrate the WAP7205 and other devices to your home network.	
IAINTENANCE			
General	General	Use this screen to view and change administrative settings such as system and domain names.	
Account	User Account	Use this screen to change the password of your WAP7205.	
Backup/ Restore	Backup/ Restore	Use this screen to backup and restore the configuration or reset your WAP7205 to the factory defaults.	
Restart	System Restart	This screen allows you to reboot the WAP7205 without turning the power off.	
Language	Language	This screen allows you to select the language you prefer.	
Diagnostic	Ping	Use this screen to ping an IP address.	
	TraceRoute	Use this screen to trace the route packets take to a host.	

CHAPTER 3 Dashboard

The **Dashboard** screens display when you log into the WAP7205, or click **Dashboard** in the navigation menu.

Use the **Dashboard** screen to look at the current status of the device, system resources, and interfaces. The **Dashboard** screens also provide detailed information about system statistics, associated wireless clients, and logs.

3.1 Dashboard Screen

Use this screen to get a quick view of system, Ethernet, WLAN and other information regarding your WAP7205.

Click Dashboard. The following screen displays.

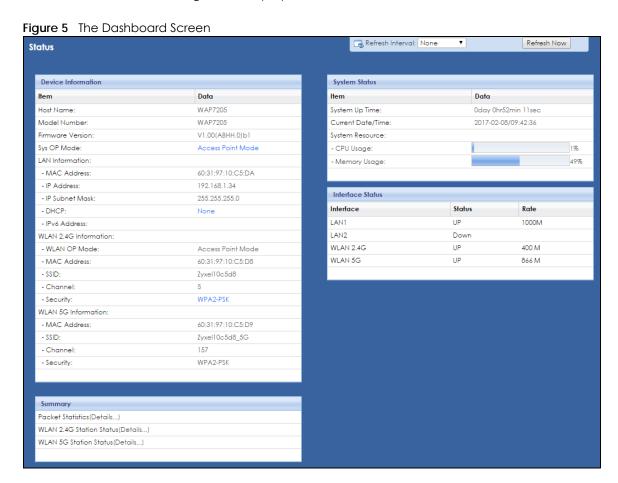


Table 6 The Dashboard Screen

LABEL	DESCRIPTION
Refresh Interval	Select a number of seconds or None 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 System Name to enter in the Maintenance > General screen for identification purposes.
Model Number	This is the WAP7205's model name.
Firmware Version	This is the firmware version and the date created.
Sys OP Mode	This is the device mode to which the WAP7205 is set - Access Point Mode.
LAN Information	
MAC Address	This shows the LAN Ethernet adapter MAC Address of your device.
IP Address	This shows the LAN port's IPv4 address.
IP Subnet Mask	This shows the LAN port's subnet mask.
DHCP	This shows the LAN port's DHCP role - Client or None.
IPv6 Address	This is the IPv6 address of the WAP7205 on the LAN.
WLAN 2.4G Information	
WLAN OP Mode	This is the device mode to which the WAP7205's 2.4GHz wireless LAN is set - Access Point Mode.
MAC Address	This shows the wireless adapter MAC Address of your device.
SSID	This shows a descriptive name used to identify the WAP7205 in the wireless LAN.
Channel	This shows the channel number which the WAP7205 is currently using over the wireless LAN.
Security	This shows the level of wireless security the WAP7205 is using.
WLAN 5G Information	
MAC Address	This shows the wireless adapter MAC Address of your device.
SSID	This shows a descriptive name used to identify the WAP7205 in the wireless LAN.
Channel	This shows the channel number which the WAP7205 is currently using over the wireless LAN.
Security	This shows the level of wireless security the WAP7205 is using.
Summary	
Packet Statistics	Click Details to go to the Monitor > Packet Statistics screen (Section 5.4 on page 24). Use this screen to view port status and packet specific statistics.
WLAN 2.4G Station Status	Click Details to go to the Monitor > WLAN Station Status screen (Section 5.5 on page 25). Use this screen to view the 2.4Ghz wireless stations that are currently associated to the WAP7205.
WLAN 5G Station Status	Click Details to go to the Monitor > WLAN Station Status screen (Section 5.6 on page 26). Use this screen to view the 5Ghz wireless stations that are currently associated to the WAP7205.
System Status	
Item	This column shows the type of data the WAP7205 is recording.
Data	This column shows the actual data recorded by the WAP7205.
System Up Time	This is the total time the WAP7205 has been on.
Current Date/Time	This field displays your WAP7205's present date and time.
System Resource	
CPU Usage	This displays what percentage of the WAP7205's processing ability is currently used. When this percentage is close to 100%, the WAP7205 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.

Table 6 The Dashboard Screen

LABEL	DESCRIPTION
Memory Usage	This shows what percentage of the heap memory the WAP7205 is using.
Interface Status	
Interface	This displays the WAP7205 port types. The port types are: LAN and WLAN.
Status	For the LAN ports, this field displays Down (line is down) or Up (line is up or connected).
	For the WLAN, it displays Up when the WLAN is enabled or Down when the WLAN is disabled.
Rate	For the LAN ports, this displays the port speed or N/A when the line is disconnected.
	For the WLAN, it displays the maximum transmission rate when the WLAN is enabled and N/A when the WLAN is disabled.

CHAPTER 4 Easy123 Wizard Setup

4.1 Overview

This chapter provides information on the Wizard setup screens in the Web Configurator. The Web Configurator Wizard setup helps you configure your device.

4.2 Accessing the Wizard

1 Launch your web browser and type "http://zyxelsetup" (for Windows) or "http://zyxelsetup.local" (for Mac) as the website address. See Section 2.2 on page 12 for detailed information.

Note: The wizard appears when the WAP7205 is accessed for the first time or when you reset the WAP7205 to its default factory settings.

2 The wizard screen opens.

Note: If you have already configured the wizard screens and want to open it again, click the Easy123 icon ([@ Easy122]) on the upper right corner of any Web Configurator screen.

4.3 Using the Wizard

After you access the WAP7205 Web Configurator, click to begin the Wizard setup, located in the Title Bar.

Figure 6 Wizard Setup Screen

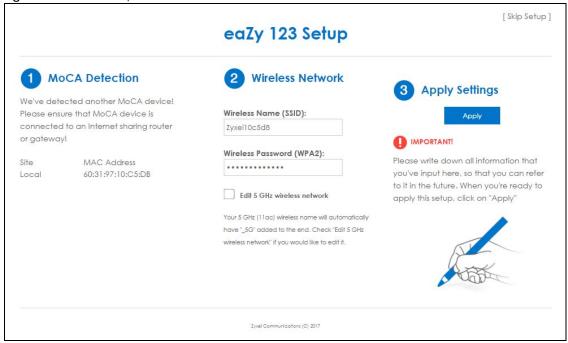


Table 7 Wizard Setup Screen

LABEL	DESCRIPTION
MoCA Detection	This shows details of the connection between other MoCA devices and your WAP7205.
Wireless Network	Use this step to configure your WAP7205 wireless network.
Wireless Name (SSID)	Enter a descriptive name used to identify your WAP7205 in the wireless network.
Wireless Password (WPA2)	Enter the password that lets you connect to the WAP7205 wireless network. Your password should be in a string of ASCII characters between 8 and 63 or hexadecimal characters between 8 and 64.
Edit 5 GHz wireless network	Click this to view and/or change your 5Ghz wireless network SSID and password.
Apply Settings	Click Apply to save your settings to the WAP7205.
Skip Setup	Click this to skip the Wizard setup and go to the Dashboard screen.

PART II Technical Reference

CHAPTER 5 Monitor

5.1 Overview

This chapter discusses read-only information related to the device state of the WAP7205.

Note: To access the Monitor screens, you can also click the links in the Summary table of the Status screen to view the packets sent/received as well as the status of clients connected to the WAP7205.

5.2 What You Can Do

- Use the Log screen (Section 5.3 on page 23) to view the logs for the categories such as system maintenance, system errors, and so on.
- use the Packet Statistics screen (Section 5.4 on page 24) to view port status, packet specific statistics, the "system up time" and so on.
- Use the WLAN 2.4G Station Status screen (Section 5.5 on page 25) to view the wireless stations that are currently associated to the WAP7205.
- Use the WLAN 5G Station Status screen (Section 5.6 on page 26) to view the wireless stations that are currently associated to the WAP7205.

5.3 Log

Use the View Log screen to see the logged messages for the WAP7205.

Log entries in red indicate system error logs. The log wraps around and deletes the old entries after it fills.

Click Monitor > Log.

Figure 7 Monitor > View Log

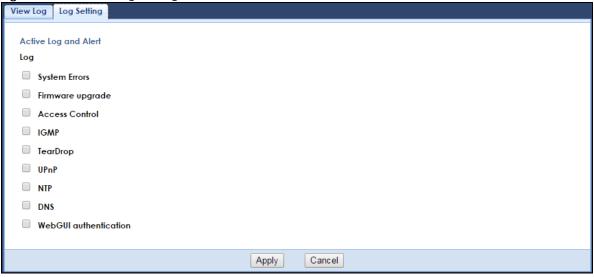


Table 8 Monitor > Log

<u> </u>	
LABEL	DESCRIPTION
Display	Select what logs you want to see from the Display drop list. The log choices depend on your settings in the Log Setting screen.
Refresh	Click Refresh to renew the log screen.
Clear Log	Click Clear Log to delete all the logs.
#	This field is a sequential value and is not associated with a specific entry.
Time	This field displays the time the log was recorded.
Message	This field states the reason for the log.

You can configure which logs to display in the **View Log** screen. Go to the **Log Setting** screen and select the logs you wish to display. Click **Apply** to save your settings. Click **Cancel** to start the screen afresh.

Figure 8 Monitor > Log Setting



5.4 Packet Statistics

Click the Packet Statistics (Details...) hyperlink in the Dashboard screen or 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 9 Monitor > Packet Statistics

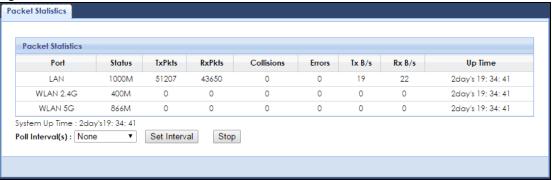


Table 9 Monitor > Packet Statistics

LABEL	DESCRIPTION
Port	This is the WAP7205's interface type.
Status	For the LAN port, this displays the port speed or Down when the line is disconnected.
	For the WLAN, it displays the maximum transmission rate when the WLAN is enabled and Down 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.
Errors	This is the number of received errors on this port.
Tx B/s	This displays the transmission speed in bytes per second on this port.
Rx B/s	This displays the reception speed in bytes per second on this port.
Up Time	This is the total time the WAP7205 has been for each session.
System Up Time	This is the total time the WAP7205 has been on.
Poll Interval(s)	Enter the time interval in seconds for refreshing statistics in this field.
Set Interval	Click this button to apply the new poll interval you entered in the Poll Interval(s) field.
Stop	Click Stop to stop refreshing statistics.

5.5 WLAN 2.4G Station Status

Click the WLAN 2.4G Station Status (Details...) hyperlink in the Dashboard screen or Monitor > WLAN 2.4G Station Status. View the 2.4G wireless stations that are currently associated to the WAP7205 in the Association List. Association means that a wireless client (for example, your network or computer with a wireless network card) has connected successfully to the WAP7205 using the same SSID, channel and security settings.

Figure 10 Monitor > WLAN 2.4G Station Status



Table 10 Monitor > WLAN 2.4G Station Status

LABEL	DESCRIPTION
#	This is the index number of an associated wireless station.
Strength	This field displays the station's wireless connection signal strength.
MAC Address	This field displays the MAC address of an associated wireless station.
SSID	This field displays the name of the WAP7205's wireless network to which the station is connected.
TxPkts	This field displays the number of packets transmitted by the station through the wireless connection.
RxPkts	This field displays the number of packets received by the station through the wireless connection.
Security	This field displays which secure encryption method is being used by the station to connect to the network.
Rate	This field displays the wireless station's transmission rate.
Mode	This field displays the wireless standard supported by the wireless station.
Association Time	This field displays the time a wireless station first associated with the WAP7205's 2.4G wireless network.
Poll Interval(s)	Enter the time interval in seconds for refreshing this screen in this field.
Set Interval	Click this button to apply the new poll interval you entered in the Poll Interval(s) field.
Stop	Click Stop to stop refreshing the screen.

5.6 WLAN 5G Station Status

Click the WLAN 5G Station Status (Details...) hyperlink in the Dashboard screen or Monitor > WLAN 5G Station Status. View the 5G wireless stations that are currently associated to the WAP7205 in the Association List. Association means that a wireless client (for example, your network or computer with a wireless network card) has connected successfully to the WAP7205 using the same SSID, channel and security settings.

Figure 11 Monitor > WLAN 5G Station Status



Table 11 Monitor > WLAN 5G Station Status

LABEL	DESCRIPTION
#	This is the index number of an associated wireless station.
Strength	This field displays the station's wireless connection signal strength.
MAC Address	This field displays the MAC address of an associated wireless station.
SSID	This field displays the name of the WAP7205's wireless network to which the station is connected.
TxPkts	This field displays the number of packets transmitted by the station through the wireless connection.
RxPkts	This field displays the number of packets received by the station through the wireless connection.
Security	This field displays which secure encryption method is being used by the station to connect to the network.
Rate	This field displays the wireless station's transmission rate.
Mode	This field displays the wireless standard supported by the wireless station.
Association Time	This field displays the time a wireless station first associated with the WAP7205's 5G wireless network.
Poll Interval(s)	Enter the time interval in seconds for refreshing this screen in this field.
Set Interval	Click this button to apply the new poll interval you entered in the Poll Interval(s) field.
Stop	Click Stop to stop refreshing the screen.

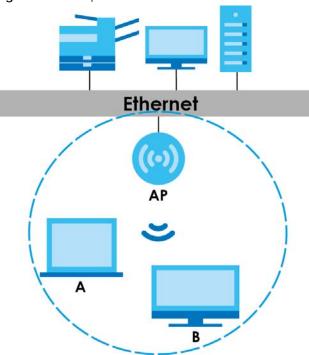
CHAPTER 6 Wireless LAN

6.1 Overview

This chapter discusses how to configure the wireless network settings in your WAP7205.

The following figure provides an example of a wireless network.





The wireless network is the part in the blue circle. In this wireless network, devices **A** and **B** are called wireless clients. The wireless clients use the access point (AP) to interact with other devices (such as the printer) or with the Internet. Your WAP7205 is the AP.

6.2 What You Can Do

- Use the General screen (Section 6.4 on page 30) to turn the wireless connection on or off, enter the SSID, select the channel, and configure wireless security between the WAP7205 and the wireless clients.
- Use the More AP screen (Section 6.4 on page 30) to enable and configure multiple wireless networks on the WAP7205.

- Use the MAC Filter screen (Section 6.7 on page 38) to allow or deny wireless stations based on their MAC addresses from connecting to the WAP7205.
- Use the **Advanced** screen (Section 6.8 on page 39) to configure wireless advanced features, such as set the RTS/CTS Threshold and HT physical mode.
- Use the QoS screen (Section 6.9 on page 40) to enable Wi-Fi MultiMedia Quality of Service (WMMQoS). This allows the WAP7205 to automatically set priority levels to services, such as e-mail, VoIP, chat, and so on.
- Use the **WPS** screen (Section 6.10 on page 41) to quickly set up a wireless network with strong security, without having to configure security settings manually.
- Use the WPS Station screen (Section 6.11 on page 42) to add a wireless station using WPS.
- Use the Scheduling screen (Section 6.12 on page 43) to set the times your wireless LAN is turned on and off.
- Use the **Channel Status** screen (Section 6.13 on page 43) to view the status of all available channels as well as related information.

6.3 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.

6.3.1 Wireless Security Overview

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

6.3.1.1 SSID

Normally, the AP acts like a beacon and regularly broadcasts the SSID in the area. You can hide the SSID instead, in which case the AP does not broadcast the SSID. In addition, you should change the default SSID to something that is difficult to guess.

This type of security is fairly weak, however, because there are ways for unauthorized devices to get the SSID. In addition, unauthorized devices can still see the information that is sent in the wireless network.

6.3.1.2 MAC Address Filter

Every wireless client has a unique identification number, called a MAC address.¹ A MAC address is usually written using twelve hexadecimal characters²; 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 filter to tell the AP which wireless clients are allowed or not 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.

6.3.1.3 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 enter a PIN (Personal Identification Number) in the devices. Then, they connect and set up a secure network by themselves.

6.4 General Wireless LAN Screen

Use this screen to enable or disable the WLAN, enter the SSID, select the channel and configure wireless security settings.

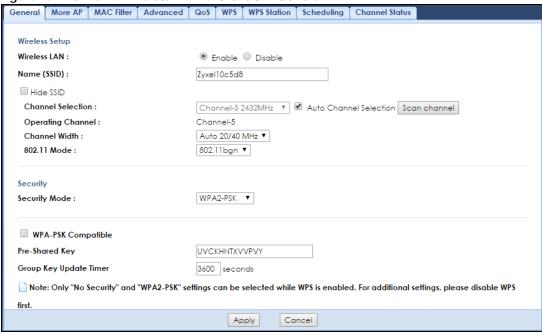
Note: If you are configuring the WAP7205 from a computer connected to the wireless LAN and you change the WAP7205's SSID, channel or security settings, you will lose your wireless connection when you press **Apply** to confirm. You must then change the wireless settings of your computer to match the WAP7205's new settings.

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

^{1.} 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.

^{2.} Hexadecimal characters are 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, and F.

Figure 13 Network > Wireless LAN 2.4G or 5G > General



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

Table 12 Network > Wireless LAN 2.4G or 5G > General

LABEL	DESCRIPTION
Wireless Setup	
Wireless LAN	Select to enable or disable the wireless LAN. This is turned on by default.
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 if Auto Channel Selection is disabled.
Auto Channel Selection	Select the check box to have the WAP7205 automatically scan for and select a channel which is not used by another device.
Operating Channel	This displays the channel the WAP7205 is currently using.

Table 12 Network > Wireless LAN 2.4G or 5G > General

LABEL	DESCRIPTION
Channel Width	Select the wireless channel width used by WAP7205.
	A standard 20 MHz channel offers transfer speeds of up to 150Mbps whereas a 40 MHz channel uses two standard channels and offers speeds of up to 300Mbps.
	Because not all devices support 40 MHz channels, select Auto 20/40 MHz or Auto 20/40/80 MHz to allow the WAP7205 to adjust the channel bandwidth automatically.
	40 MHz (channel bonding or dual channel) bonds two adjacent radio channels to increase throughput. A 80 MHz channel consists of two adjacent 40 MHz channels. The wireless clients must also support 40 MHz or 80 MHz. It is often better to use the 20 MHz setting in a location where the environment hinders the wireless signal.
	Select 20 MHz if you want to lessen radio interference with other wireless devices in your neighborhood or the wireless clients do not support channel bonding.
802.11 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.
	You can select from the following:
	802.11b: allows either IEEE 802.11b or IEEE 802.11g compliant WLAN devices to associate with the WAP7205. In this mode, all wireless devices can only transmit at the data rates supported by IEEE 802.11b.
	802.11g: allows IEEE 802.11g compliant WLAN devices to associate with the Device. IEEE 802.11b compliant WLAN devices can associate with the WAP7205 only when they use the short preamble type.
	802.11bg: allows either IEEE 802.11b or IEEE 802.11g compliant WLAN devices to associate with the WAP7205. The WAP7205 adjusts the transmission rate automatically according to the wireless standard supported by the wireless devices.
	802.11n: allows IEEE 802.11n compliant WLAN devices to associate with the WAP7205. This can increase transmission rates, although IEEE 802.11b or IEEE 802.11g clients will not be able to connect to the WAP7205. I
	802.11gn: allows either IEEE 802.11g or IEEE 802.11n compliant WLAN devices to associate with the WAP7205. The transmission rate of your WAP7205 might be reduced.
	802.11 bgn: allows IEEE802.11b, IEEE802.11g and IEEE802.11n compliant WLAN devices to associate with the WAP7205. The transmission rate of your WAP7205 might be reduced.
	802.11a: allows only IEEE 802.11a compliant WLAN devices to associate with the WAP7205.
	802.11a/n: allows both IEEE802.11a and IEEE802.11n compliant WLAN devices to associate with the WAP7205. The transmission rate of your WAP7205 might be reduced.
	802.11a/an/ac: allows both IEEE802.11a, IEEE802.11n and IEEE802.11ac compliant WLAN devices to associate with the WAP7205.
Security	1
Security Mode	Select WPA2-PSK or WPA2 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 6.5 on page 32 for detailed information on different security modes. Or you can select No Security to allow any client to associate this network without authentication.
	Note: If the WPS function is enabled (default), only No Security and WPA2-PSK are available in this field.
Apply	Click Apply to save your changes back to the WAP7205.
Cancel	Click Cancel to reload the previous configuration for this screen.

6.5 Wireless Security

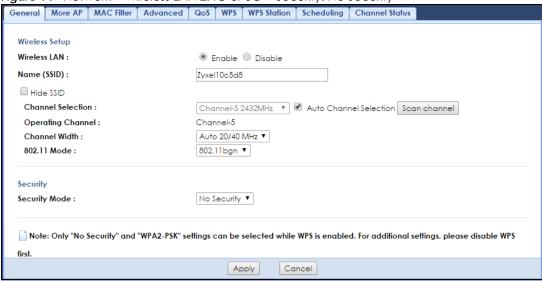
The screen varies depending on what you select in the **Security Mode** field.

6.5.1 No Security

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

Note: If you do not enable any wireless security on your WAP7205, your network is accessible to any wireless networking device that is within range.

Figure 14 Network > Wireless LAN 2.4G or 5G > Security: No Security



The following table describes the labels in this screen.

Table 13 Network > Wireless LAN 2.4G or 5G > Security: No Security

LABEL	DESCRIPTION
Security Mode	Choose No Security from the drop-down list box.
Apply	Click Apply to save your changes back to the WAP7205.
Cancel	Click Cancel to reload the previous configuration for this screen.

6.5.2 WPA2-PSK

Select WPA2-PSK from the Security Mode list.

Figure 15 Network > Wireless LAN 2.4G or 5G > Security: WPA2-PSK

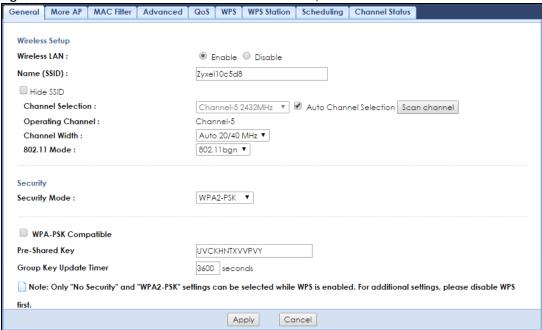


Table 14 Network > Wireless LAN 2.4G or 5G > Security: WPA2-PSK

LABEL	DESCRIPTION
Security Mode	Select WPA2-PSK to enable data encryption.
WPA-PSK Compatible	Check this field to allow wireless devices using WPA-PSK security mode to connect to your WAP7205 even when the WAP7205 is using WPA2-PSK.
Pre-Shared Key	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 Group Key Update Timer is the rate at which the AP sends a new group key out to all clients.
Apply	Click Apply to save your changes back to the WAP7205.
Cancel	Click Cancel to reload the previous configuration for this screen.

6.5.3 WPA2

Select WPA2 from the Security Mode list.

Note: WPA2 is not available if you enable WPS before you configure WPA2 in the **Wireless LAN**2.4G or 5G > General screen.

General More AP MAC Filter Advanced QoS WPS WPS Station Scheduling Channel Status Wireless Setup Wireless LAN: Enable Disable Name (SSID): Zyxel10c5d8 Hide SSID Channel Selection: Channel-5 2432MHz ▼ ✓ Auto Channel Selection Scan channel Operating Channel: Channel-5 Channel Width: Auto 20/40 MHz ▼ 802.11 Mode: 802.11bgn ▼ Security WPA2 Security Mode: WPA Compatible Group Key Update Timer 3600 seconds PMK Cache Period 10 minutes Pre-Authentication O Enable O Disable Authentication Server IP Address 192.168.2.3 Port Number 1812 Shared Secret 12345 Session Timeout(0 or 60~) 0 seconds 📗 Note: Only "No Security" and "WPA2-PSK" settings can be selected while WPS is enabled. For additional settings, please disable WPS first. Cancel Apply

Figure 16 Network > Wireless LAN 2.4G or 5G > General: WPA2

Table 15 Network > Wireless LAN 2.4G or 5G > General: WPA2

LABEL	DESCRIPTION
Security Mode	Select WPA2 to enable data encryption.
WPA Compatible	Check this field to allow wireless devices using WPA security mode to connect to your WAP7205 even when the WAP7205 is using WPA2.
Group Key Update Timer	The Group Key Update Timer is the rate at which the RADIUS server sends a new group key out to all clients.
PMK Cache Period	Specify how often wireless clients have to resend usernames and passwords in order to stay connected. Enter a time interval between 10 and 999999 minutes.
	Note: If wireless client authentication is done using a RADIUS server, the reauthentication timer on the RADIUS server has priority.
Pre-Authentication	Pre-authentication enables fast roaming by allowing the wireless client (already connecting to an AP) to perform IEEE 802.1x authentication with another AP before connecting to it. Select Enable to turn on preauthentication in WAP2. Otherwise, select Disable .
Authentication Serve	
IP Address	Enter the IP address of the external authentication server in dotted decimal notation.
Port Number	Enter the port number of the external authentication server.
	You need not change this value unless your network administrator instructs you to do so with additional information.

Table 15 Network > Wireless LAN 2.4G or 5G > General: WPA2

LABEL	DESCRIPTION
Shared Secret	Enter a password as the key to be shared between the external authentication server and the WAP7205.
	The key must be the same on the external authentication server and your WAP7205. The key is not sent over the network.
Session Timeout	The WAP7205 automatically disconnects a wireless client from the wireless and wired networks after a period of inactivity. The wireless client needs to send the username and password again before it can use the wireless and wired networks again. Some wireless clients may prompt users for a username and password; other clients may use saved login credentials. In either case, there is usually a short delay while the wireless client logs in to the wireless network again. Enter the time in seconds from 0 to 9999.
Apply	Click Apply to save your changes back to the WAP7205.
Cancel	Click Cancel to reload the previous configuration for this screen.

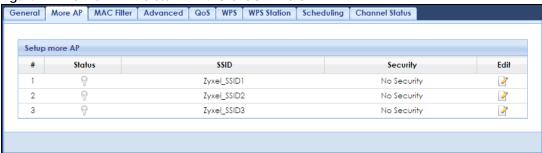
6.6 More AP Screen

This screen allows you to enable and configure multiple wireless networks on the WAP7205.

You can configure up to four SSIDs to enable multiple BSSs (Basic Service Sets) on the WAP7205. This allows you to use one access point to provide several BSSs simultaneously. You can then assign varying security types to different SSIDs. Wireless clients can use different SSIDs to associate with the same access point.

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

Figure 17 Network > Wireless LAN 2.4G or 5G > More AP



The following table describes the labels in this screen.

Table 16 Network > Wireless LAN 2.4G or 5G > More AP

LABEL	DESCRIPTION
#	This is the index number of each SSID profile.
Status	This shows whether the SSID profile is active (a yellow lightbulb) or not (a grey lightbulb).
SSID	An SSID profile is the set of parameters relating to one of the WAP7205's BSSs. The SSID (Service Set Identifier) identifies the Service Set with which a wireless device is associated.
	This field displays the name of the wireless profile on the network. When a wireless client scans for an AP to associate with, this is the name that is broadcast and displayed in the wireless client utility.

Table 16 Network > Wireless LAN 2.4G or 5G > More AP

LABEL	DESCRIPTION
Security	This field indicates the SSID profile's security mode.
Edit	Click the Edit icon to configure the SSID profile.

6.6.1 More AP Edit

Use this screen to edit an SSID profile. Click the **Edit** icon next to an SSID in the **More AP** screen. The following screen displays.

Figure 18 Network > Wireless LAN 2.4G or 5G > More AP: Edit



Table 17 Network > Wireless LAN 2.4G or 5G > More AP: Edit

LABEL	DESCRIPTION
Active	Select this to activate the SSID profile.
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 client cannot obtain the SSID through scanning using a site survey tool.
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 is enabled, wireless clients can access the wired network and communicate with each other. When Intra-BSS traffic is disabled, wireless clients can still access the wired network but cannot communicate with each other.
	Select Enable to prevent crossover traffic from within the same SSID on the WAP7205.
WMM QoS	Check this to have the WAP7205 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 17 Network > Wireless LAN 2.4G or 5G > More AP: Edit

LABEL	DESCRIPTION
Security Mode	Select WPA2-PSK or WPA2 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 6.5 on page 32 for detailed information on different security modes. Or you can select No Security to allow any client to associate this network without authentication. Note: If the WPS function is enabled (default), only No Security and WPA2-PSK are available in this field.
Apply	Click Apply to save your changes back to the WAP7205.
Cancel	Click Cancel to reload the previous configuration for this screen.

6.7 MAC Filter

The MAC filter screen allows you to configure the WAP7205 to give exclusive access to devices (Allow) or exclude devices from accessing the WAP7205 (Deny). 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 WAP7205's MAC filter settings, click **Network > Wireless LAN 2.4G or 5G > MAC Filter**. The screen appears as shown.

Figure 19 Network > Wireless LAN 2.4G or 5G > MAC Filter

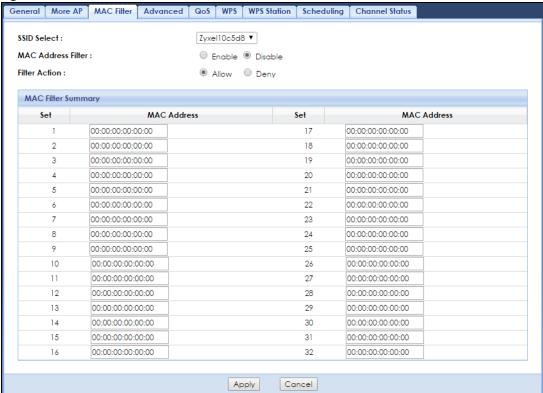


Table 18 Network > Wireless LAN 2.4G or 5G > MAC Filter

LABEL	DESCRIPTION
SSID Select	Select the SSID for which you want to configure MAC filtering.
MAC Address Filter	Select to turn on (Enable) or off (Disable) MAC address filtering.
Filter Action	Define the filter action for the list of MAC addresses in the MAC Filter Summary table.
	Select Allow to permit access to the WAP7205, MAC addresses not listed will be denied access to the WAP7205.
	Select Deny to block access to the WAP7205, MAC addresses not listed will be allowed to access the WAP7205.
MAC Filter Sumr	nary
Set	This is the index number of the MAC address.
MAC Address	Enter the MAC address of the wireless station that are allowed or denied access to the WAP7205.
Apply	Click Apply to save your changes back to the WAP7205.
Cancel	Click Cancel to reload the previous configuration for this screen.

6.8 Wireless LAN Advanced Screen

Use this screen to allow wireless advanced features, such as the output power, and RTS/CTS Threshold.

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

Figure 20 Network > Wireless LAN 2.4G or 5G > Advanced

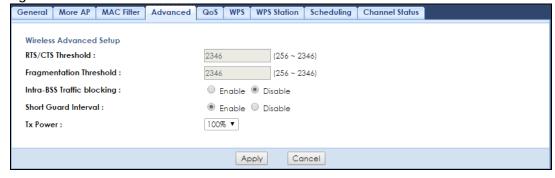


Table 19 Network > Wireless LAN 2.4G or 5G > Advanced

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.
	Note: If you select 802.11n , 802.11gn or 802.11bgn in the Wireless LAN 2.4G or 5G> General screen, this field is not configurable and the WAP7205 automatically changes to use the maximum value.

Table 19 Network > Wireless LAN 2.4G or 5G > Advanced

LABEL	DESCRIPTION
Fragmentation Threshold	The threshold (number of bytes) for the fragmentation boundary for directed messages. It is the maximum data fragment size that can be sent.
	Note: If you select 802.11n, 802.11gn or 802.11bgn in the Wireless LAN 2.4G or 5G> General screen, this field is not configurable and the WAP7205 automatically changes to use the maximum value.
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 is enabled, wireless clients can access the wired network and communicate with each other. When Intra-BSS traffic is disabled, wireless clients can still access the wired network but cannot communicate with each other.
	Select Enable to prevent crossover traffic from within the same SSID on the WAP7205.
Short Guard	Select Enable to use Short GI (Guard Interval).
Interval	The guard interval is the gap introduced between data transmission from users in order to reduce interference. Reducing the interval increases data transfer rates but also increases interference. Increasing the interval reduces data transfer rates but also reduces interference.
Tx Power	Set the output power of the WAP7205 in this field. If there is a high density of APs in an area, decrease the output power of the WAP7205 to reduce interference with other APs. Select one of the following 100%, 90%, 75%, 50%, 25% or 10%.
Apply	Click Apply to save your changes back to the WAP7205.
Cancel	Click Cancel to reload the previous configuration for this screen.

6.9 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 5G > QoS. The following screen appears.

Figure 21 Network > Wireless LAN 2.4G or 5G > QoS

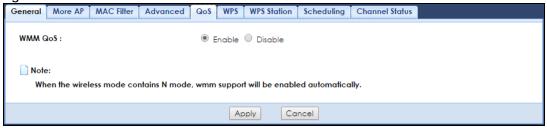


Table 20 Network > Wireless LAN 2.4G or 5G > QoS

LABEL	DESCRIPTION
WMM QoS	Select Enable to have the WAP7205 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 20 Network > Wireless LAN 2.4G or 5G > QoS (continued)

LABEL	DESCRIPTION
Apply	Click Apply to save your changes to the WAP7205.
Cancel	Click Cancel to reload the previous configuration for this screen.

6.10 WPS Screen

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

Note: With WPS, wireless clients can only connect to the wireless network using the first SSID on the WAP7205.

Figure 22 Network > Wireless LAN 2.4G or 5G > WPS

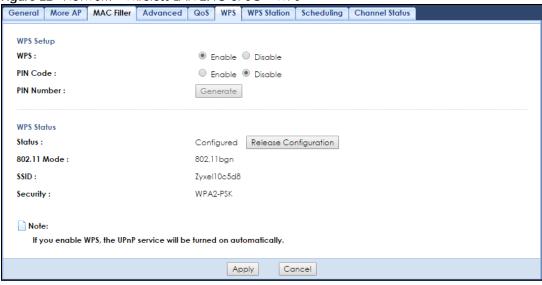


Table 21 Network > Wireless LAN 2.4G or 5G > WPS

LABEL	DESCRIPTION
WPS Setup	
WPS	Select Enable to turn on the WPS feature. Otherwise, select Disable .
PIN Code	Select Enable and click Apply to allow the PIN Configuration method. If you select Disable , you cannot create a new PIN number.
PIN Number	This is the WPS PIN (Personal Identification Number) of the WAP7205. The PIN is not necessary when you use WPS push-button method. Click Generate to generate a new PIN number.
WPS Status	

Table 21 Network > Wireless LAN 2.4G or 5G > WPS

LABEL	DESCRIPTION
Status	This displays Configured when the WAP7205 has connected to a wireless network using WPS or when WPS is enabled and wireless or wireless security settings have been changed. The current wireless and wireless security settings also appear in the screen. This displays Unconfigured if WPS is disabled and there are no wireless or wireless security
	changes on the WAP7205 or you click Release_Configuration to remove the configured wireless and wireless security settings.
Release Configuration	This button is only available when the WPS status displays Configured.
	Click this button to remove all configured wireless and wireless security settings for WPS connections on the WAP7205.
802.11 Mode	This is the 802.11 mode used. Only compliant WLAN devices can associate with the WAP7205.
SSID	This is the name of the wireless network (the WAP7205'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 WAP7205.
Cancel	Click Cancel to reload the previous configuration for this screen.

6.11 WPS Station 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 5G > WPS Station**.

Figure 23 Network > Wireless LAN 2.4G or 5G > WPS Station



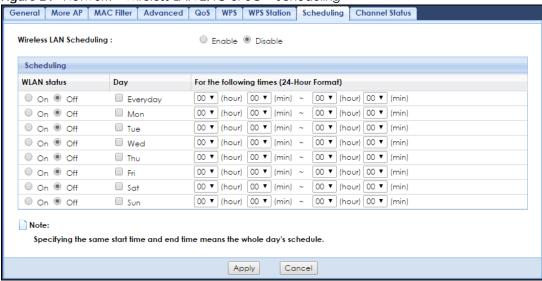
Table 22 Network > Wireless LAN 2.4G or 5G > WPS Station

LABEL	DESCRIPTION
Push Button	Use this button when you use the PBC (Push Button Configuration) method to configure wireless station's wireless settings.
	Click this to start WPS-aware wireless station scanning and the wireless security information synchronization.
Or input station's PIN number	Use this button when you use the PIN Configuration method to configure wireless station's wireless settings.
	Type the same PIN number generated in the wireless station's utility. Then click Start to associate to each other and perform the wireless security information synchronization.

6.12 Scheduling Screen

Use this screen 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 5G** > **Scheduling**.

Figure 24 Network > Wireless LAN 2.4G or 5G > Scheduling



The following table describes the labels in this screen.

Table 23 Network > Wireless LAN 2.4G or 5G > Scheduling

LABEL	DESCRIPTION
Wireless LAN Scheduling	Select Enable to activate the wireless LAN scheduling feature. Select Disable to turn it off.
Scheduling	
WLAN Status	Select On or Off to specify whether the Wireless LAN is turned on or off. This field works in conjunction with the Day and For the following times fields.
Day	Select Everyday or the specific days to turn the Wireless LAN on or off. If you select Everyday you can not select any specific days. This field works in conjunction with the For the following times field.
For the following times (24-Hour Format)	Select a begin time using the first set of hour and minute (min) drop down boxes and select an end time using the second set of hour and minute (min) drop down boxes. If you have chosen On earlier for the WLAN Status the Wireless LAN will turn on between the two times you enter in these fields. If you have chosen Off earlier for the WLAN Status the Wireless LAN will turn off between the two times you enter in these fields.
Apply	Click Apply to save your changes back to the WAP7205.
Cancel	Click Cancel to reload the previous configuration for this screen.

6.13 Channel Status Screen

Use this screen to display the status of all available channels as well as related information. To open this screen, click **Network > Wireless LAN 2.4G or 5G > Channel Status**.

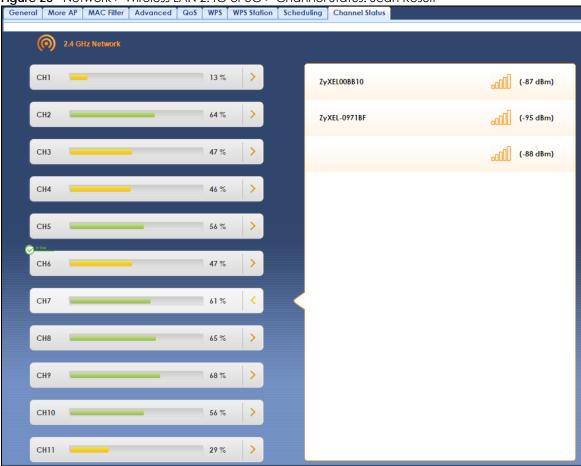
Click **Start** to scan for available channels and display the signal strength of each channel. The channel numbers vary depending on the frequency band and the country in which you are using the WAP7205.

Figure 25 Network > Wireless LAN 2.4G or 5G > Channel Status



You can click the > or < icon to show or hide the list of wireless networks that are using the channel.

Figure 26 Network > Wireless LAN 2.4G or 5G > Channel Status: Scan Result



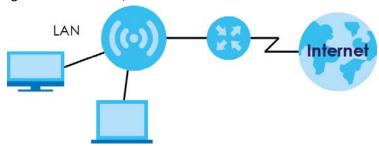
CHAPTER 7 LAN

7.1 Overview

This chapter describes how to configure LAN settings.

A Local Area Network (LAN) is a shared communication system to which many computers are attached. A LAN is a computer network limited to the immediate area, usually the same building or floor of a building. The LAN screens can help you configure the manage IP address, and partition your physical network into logical networks.

Figure 27 LAN Example



The LAN screens can help you manage IP addresses.

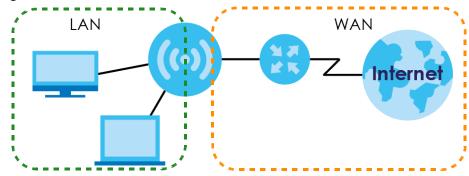
7.2 What You Can Do

- Use the IP screen (Section 7.4 on page 46) to change the IP address for your WAP7205 and DNS server information.
- Use the IP Alias screen (Section 7.5 on page 47) to have the WAP7205 apply IP alias to create LAN subnets.

7.3 What You Need To Know

There are two separate IP networks, one inside the LAN network and the other outside the WAN network as shown next.

Figure 28 LAN and WAN IP Addresses



7.3.1 IP Alias

IP alias allows you to partition a physical network into different logical networks over the same Ethernet interface. The WAP7205 supports three logical LAN interfaces via its single physical Ethernet interface with the WAP7205 itself as the gateway for each LAN network.

7.4 LAN IP Screen

Use this screen to change the IP address for your WAP7205. Click Network > LAN > IP.

Figure 29 Network > LAN > IP (Access Point or Universal Repeater)

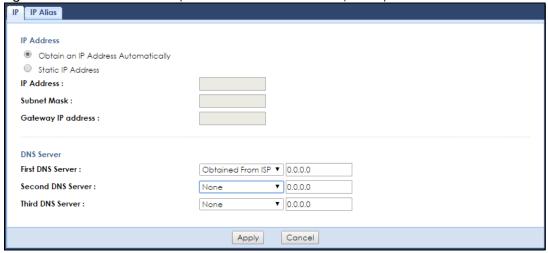


Table 24 Network > LAN > IP

LABEL	DESCRIPTION
Obtain an IP	Click this to deploy the WAP7205 as a DHCP client in the network.
Address Automatically	When you enable this, the WAP7205 gets its IP address from the network's DHCP server (for example, your ISP or router). Users connected to the WAP7205 can now access the network (i.e., the Internet if the IP address is given by the ISP or a router with Internet access).
	The Web Configurator may no longer be accessible unless you know the IP address assigned by the DHCP server to the WAP7205.
	Also when you select this, you cannot enter an IP address for your WAP7205 in the field below.
Static IP Address	Click this if you want to specify the IP address of your WAP7205. Or if your ISP or network administrator gave you a static IP address to access the network or the Internet.
IP Address	Type the IP address in dotted decimal notation. If you change the IP address you will have to log in again with the new IP address.
Subnet Mask	The subnet mask specifies the network number portion of an IP address.
Gateway IP Address	Enter a gateway IP address (if your ISP or network administrator gave you one) in this field.
DNS Server	
First DNS Server	Select Obtained From ISP if your ISP or router to which the WAP7205 connects dynamically
Second DNS Server	assigns DNS server information (and the WAP7205's IP address). The field to the right displays the (read-only) DNS server IP address that the ISP assigns.
	Select User-Defined if you have the IP address of a DNS server. Enter the DNS server's IP address in the field to the right.
	Select None 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 Apply to save your changes back to the WAP7205.
Cancel	Click Cancel to reload the previous configuration for this screen.

7.5 IP Alias Screen

Use this screen to have the WAP7205 apply IP alias to create LAN subnets. Click LAN > IP Alias.

Figure 30 Network > LAN > IP Alias

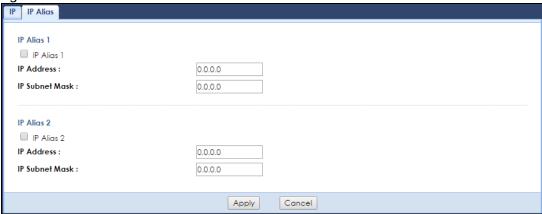


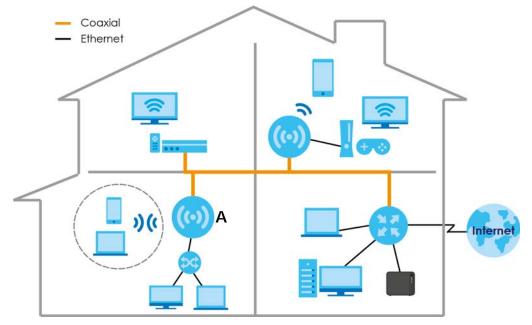
Table 25 Network > LAN > IP Alias

LABEL	DESCRIPTION
IP Alias <u>1, 2</u>	Check this to enable IP alias.
IP Address	Type the IP alias address of your WAP7205 in dotted decimal notation.
IP Subnet Mask	The subnet mask specifies the network number portion of an IP address.
Apply	Click Apply to save your changes back to the WAP7205.
Cancel	Click Cancel to reload the previous configuration for this screen.

CHAPTER 8 MoCA

8.1 Overview

MoCA (Multimedia over Coax Alliance) is an industry standard organization, which created a standard for transferring data and multimedia content over the existing coaxial wires in your home. Data communication and audio/video streaming are allowed at the same time. The WAP7205 (A) automatically sets up a MoCA network when multiple MoCA devices (nodes) are powered on and connected with a coaxial cable.



The WAP7205 supports MoCA 2.0 and is backward compatible with MoCA 1.1. The MoCA 1.1 technology provides 175 Mbps net throughputs (270 Mbps PHY rate) and operates in the 500 to 1500 MHz frequency range. MoCA 2.0 in turbo mode offers actual data rates of up to 1 Gbps MAC throughputs and operates in the 500 to 1650 MHz operating frequency range. MoCA 2.0 also supports improved packet error rate (PER) and two new power saving modes: Standby (reduced power) and Sleep (minimum power).

8.2 What You Can Do

- Use the MoCA screen (Section 8.3 on page 50) to set the MoCA Privacy, and enable multimedia and home networking over coaxial cabling.
- Use the MoCA > Monitor screen (Section 8.3 on page 50) to view the MoCA network status and information about the connected MoCA devices (nodes).

8.3 MoCA Screen

Use this screen to change the MoCA settings for your WAP7205. Click Network > MoCA.

Figure 31 Network > MoCA

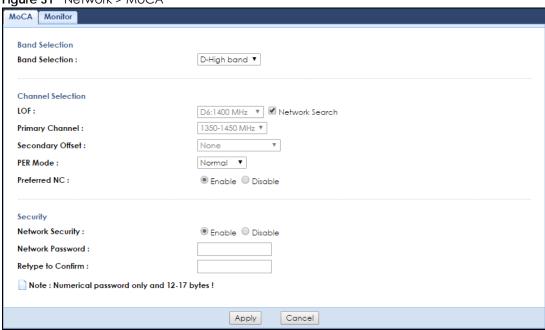


Table 26 Network > MoCA

able 26 Network > MocA	
LABEL	DESCRIPTION
Band Selection	In MoCA frequency band plans, there are bands A, B, C1, C2, C3, C4, D, E, F, G, and H. The extended band D in MoCA 2.0 is between 1125 MHz and 1675 MHz. Two sub-bands (D-Low and D-High) are defined within the extended band D.
	 Sub-band D-Low (DL): 1125 to 1225 MHz edge to edge (100 MHz wide) Sub-band D-High (DH): 1350 to 1675 MHz edge to edge (325 MHz wide)
	At the time of writing, the WAP7205 supports the sub-band D-High only.
LOF	Last Operational Frequency (LOF) is the last RF channel center frequency which a MoCA device (node) will automatically turn to when it is last in the linkup state,
	The center frequency of a channel is a central frequency in the middle of the upper cutoff and lower cutoff frequencies.
	If you clear the Auto Channel Selection check box, manually select an operating frequency from the drop-down list.
Network Search	Select the check box to enable auto scan for the operating frequency.
Primary Channel	Select the first operating frequency range if you clear the Auto Channel Selection check box.
	The field options vary depending on the center frequency you select in the LOF field.

Table 26 Network > MoCA (continued)

LABEL	DESCRIPTION
Secondary Offset	Select the second operating frequency range if you clear the Auto Channel Selection check box.
	Select None if you don't want to specify a second channel.
	Select Above to have the WAP7205 use a frequency higher than the upper edge of the selected primary channel.
	Select Below to have the WAP7205 use a frequency less than the lower edge of the selected primary channel.
PER Mode	The Packet Error Rate (PER) indicates the ratio between the total number of incorrectly received data packets and the total number of transmitted data packets. The total number of transmitted packets is at least 100,000,000 when the PER mode is NPER (Normal PER) and at least 10,000,000,000 when the PER mode is VLPER (Very Low PER). In very low PER mode, the physical data rate will be decreased in order to achieve a lower packet error rate.
	Select Normal to set the PER mode to NPER. Otherwise, select Very Low to set the PER mode to VLPER.
Preferred NC	The Network Coordinator (NC) is a node that performs the following functions in a MoCA network: beacon generation, MAP (Medium Allocation Plan) generation, admission of new MoCA nodes to the network, privacy key generation and distribution, and LMO (Link Maintenance Operation) scheduling. The NC is dynamically selected from all the MoCA nodes in the network. There is only one NC in a MoCA network and the rest of the MoCA nodes in the MoCA network are clients.
	Select Enable to configure the WAP7205 as a preferred network coordinator. The preferred NC has an advantage in the NC selection.
Network Security	Select Enable to turn on MoCA privacy. If this is enabled, all MoCA devices connected via coaxial cables must use the same password.
Network Password	Enter the password for the MoCA network. All packets in the MoCA network are encrypted except for beacons.
Retype to Confirm	Enter the password again for confirmation.
Apply	Click Apply to save your changes back to the WAP7205.
Cancel	Click Cancel to reload the previous configuration for this screen.

8.4 MoCA Monitor Screen

Use this screen to view the MoCA network status and information about the connected MoCA devices (nodes). Click **Network > MoCA > Monitor**.

Figure 32 Network > MoCA > Monitor



Table 27 Network > MoCA > Monitor

LABEL	DESCRIPTION
Status	This shows the MoCA network status. It displays Link Up if the WAP7205 joins the MoCA network successfully. Otherwise, it displays Link Down .
Node Count	This shows the number of the nodes (including the WAP7205) present in the MoCA network.
Node Coordinator	This shows the <u>ID</u> number of the network coordinator in the MoCA network.
Channel	This shows the frequency at which the WAP7205 is operating.
Last Good Channel	This shows the last RF channel center frequency you configured in the MoCA screen.
Link Up Time	This displays how long the connection with other MoCA node(s) has been up.
ID	This shows the ID number of the node in the MoCA network.
Node Type	This shows whether the MoCA node is acting as a MoCA client or NC.
MoCA MAC	This shows the MAC address of the MoCA node.
TNode Tx PHY	This shows the PHY rate in Mbps for the broadcast packets transmitted from the MoCA node.
Rate	Greatest Common Density (GCD) is a signaling method used by a MoCA node when transmitting information to multiple recipients.
Node Rx Power	This shows the MoCA node's power consumption (in dBm) of receiving.
Node Rx Packets	This shows the number of packets received by the MoCA node.
Node Rx Corrected	This shows the number of packets corrected and received by the MoCA node.
Node Rx Drops	This shows the number of packets dropped by the MoCA node.
Refresh	Click this button to renew the screen.

CHAPTER 9 ONE Connect

9.1 Overview

This chapter describes the One Connect feature. This feature uses an app that allows you to easily integrate the WAP7205 and other devices to your home network. Through the app you can view a neighbor device list, along with detailed information, such as each device's address, firmware version and description of its physical location previously noted by the administrator. One Connect can be used to remotely turn the power of a neighboring powered device (PD), on or off from a distance. And most importantly, you can easily set up notifications, customize and control all the devices in your network using your smart phone or tablet.

9.2 What You Can Do

Use the ONE Connect screen (Section 9.3 on page 53) to enable this One Connect feature.

9.3 ONF Connect Screen

Use this screen to **Enable** or **Disable** the One Connect feature in your WAP7205.

Figure 33 Network > One Connect



CHAPTER 10 Maintenance

10.1 Overview

This chapter provides information on the Maintenance screens.

10.2 What You Can Do

- Use the **General** screen (Section 10.3 on page 54) to set the system name, the domain name and the timeout period of the management session.
- Use the Account screen (Section 10.4 on page 55) to change your WAP7205's system password.
- Use the Backup/Restore screen (Section 10.5 on page 56) to view information related to factory defaults, backup configuration, and restoring configuration.
- Use the Restart screen (Section 10.6 on page 57) to reboot the WAP7205 without turning the power off.
- Use the Language screen (Section 10.7 on page 58) to change the language for the Web Configurator.
- Use the **Diagnostic** screen (Section 10.8 on page 58) to display information to help you identify problems with the WAP7205.

10.3 General Screen

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 34 Maintenance > General

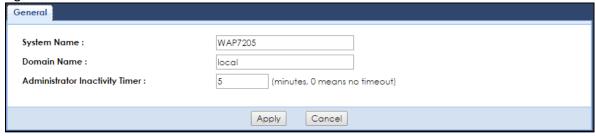


Table 28 Maintenance > General

LABEL	DESCRIPTION
System Name	Enter a unique name to identify the WAP7205 in an Ethernet network.
Domain Name	Enter the domain name you wish to give to the WAP7205.
Administrator Inactivity Timer	Type how many minutes a management session can be left idle before the session times out. The default is 5 minutes. 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 WAP7205.
Cancel	Click Cancel to reload the previous configuration for this screen.

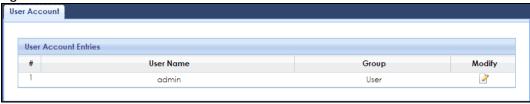
10.4 Account Screen

It is strongly recommended that you change the password of the user account.

If you forget your login account password (or IP address), you will need to reset the device. See Section 1.4 on page 10 and Section 10.5 on page 56 for details

Click Maintenance > Account.

Figure 35 Maintenance > Account



The following table describes the labels in this screen.

Table 29 Maintenance > Account

LABEL	DESCRIPTION
#	This the index number of the entry
User Name	This field displays the user name.
Group	This field displays the user's login account type.
Modify	Click the Edit icon to go to the screen where you can edit the account.

10.4.1 Edit a User's Account

Use this screen to edit a user's account. Click the **Edit** icon next to the user account you want to edit. The **Account Setup** screen displays as shown.

Figure 36 Maintenance > Account: Edit



Table 30 Maintenance > Account: Edit

LABEL	DESCRIPTION
Username	Enter a descriptive name for the user account. The user name can be made up of up to 15 alphanumeric characters (0-9, A-Z, a-z, -, _) with no spaces.
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.
Group	This is the user's account type. The web configurator screens and privileges vary depending on which account type you use to log in.
Apply	Click Apply to save your changes back to the WAP7205.
Cancel	Click Cancel to reload the previous configuration for this screen.

10.5 Configuration Backup/Restore Screen

Backup configuration allows you to back up (save) the WAP7205's current configuration to a file on your computer. Once your WAP7205 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.

Restore configuration allows you to upload a new or previously saved configuration file from your computer to your WAP7205.

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

Figure 37 Maintenance > Backup/Restore

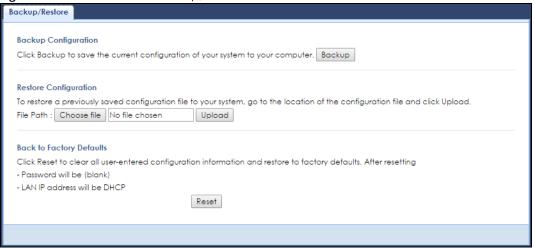


Table 31 Maintenance > Backup/Restore

LABEL	DESCRIPTION
Backup	Click Backup to save the WAP7205's current configuration to your computer.
File Path	Type in the location of the file you want to upload in this field or click Browse to find it.
Browse / Choose file	Click Browse or Choose file to find the file you want to upload. Remember that you must decompress compressed (.ZIP) files before you can upload them.
Upload	Click Upload to begin the upload process. Note: Do not turn off the WAP7205 while configuration file upload is in progress. After you click Upload , you must then wait one minute before logging into the WAP7205 again. The WAP7205 automatically restarts in this time causing a temporary network disconnect.
Reset	Pressing the Reset button in this section clears all user-entered configuration information and returns the WAP7205 to its factory defaults. You can also press the RESET button on the rear panel to reset the factory defaults of your WAP7205. Refer to the chapter about introducing the Web Configurator for more information on the RESET button.

Note: 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 WAP7205 IP address.

10.6 Restart Screen

System restart allows you to reboot the WAP7205 without turning the power off.

Click Maintenance > Restart to open the following screen.

Figure 38 Maintenance > Restart



Click Restart to have the WAP7205 reboot. This does not affect the WAP7205's configuration.

10.7 Language Screen

Use this screen to change the language for the Web Configurator.

Select the language you prefer and click **Apply**. The Web Configurator language changes after a while without restarting the WAP7205.

Figure 39 Maintenance > Language



10.8 Diagnostic Screens

The Diagnostic screens display information to help you identify problems with the EWAP7205.

10.8.1 Ping Screen

Use this screen to ping an IP address. Click **Maintenance > Diagnostic > Ping** to open the following screen.

Figure 40 Maintenance > Diagnostic > Ping

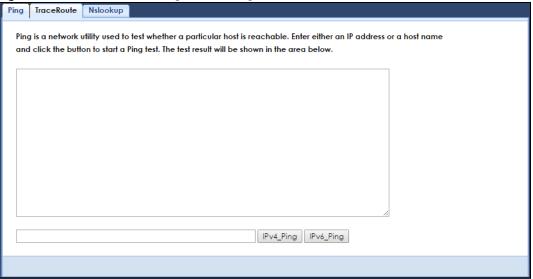


Table 32 Maintenance > Diagnostic > Ping

LABEL	DESCRIPTION
	Type the URL or IP address of a computer to which you want to perform Ping in order to test a connection.
IPv4_Ping	Click the button to ping the IP address that you entered.
IPv6_Ping	

10.8.2 TraceRoute Screen

Use this screen to trace the route packets take to a host. Click **Maintenance > Diagnostic > TraceRoute** to open the following screen.

Figure 41 Maintenance > Diagnostic > TraceRoute

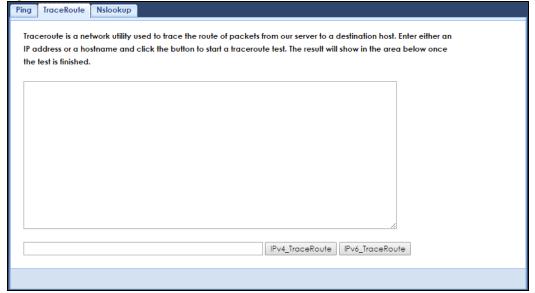


Table 33 Maintenance > Diagnostic > TraceRoute

LABEL	DESCRIPTION
	Type the URL or IP address of a computer for which you want to perform traceroute in order to test a connection.
IPv4_TraceRoute	Click this button to perform the traceroute function. This determines the path a packet takes to
IPv6_TraceRoute	the specified computer.

10.8.3 Nslookup Screen

Use this screen to perform an nslookup (name server lookup). Nslookup queries the DNS to resolve an IP address into a host name and vice-versa. Click **Maintenance** > **Diagnostic** > **Nslookup** to open the following screen.

Figure 42 Maintenance > Diagnostic > Nslookup

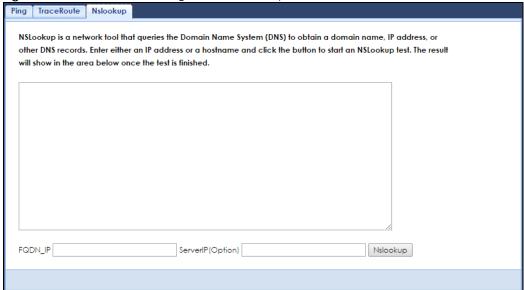


Table 34 Maintenance > Diagnostic > Nslookup

LABEL	DESCRIPTION
FQDN_IP	Type a domain name or IP address in this field for the name server lookup.
ServerIP	Enter the IP address of the server the WAP7205 uses to translate the specified domain name or IP address.
Nslookup	Click this button to perform a DNS lookup on the IP address or domain name you entered.

CHAPTER 11 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
- WAP7205 Access and Login
- Internet Access
- Resetting the WAP7205 to Its Factory Defaults
- Wireless Problems
- MoCA Network

11.1 Power, Hardware Connections, and LEDs

The WAP7205 does not turn on. None of the LEDs turn on.

- 1 Make sure the WAP7205 is plugged in to an appropriate power source. Make sure the power source is turned on.
- 2 Disconnect and re-connect the WAP7205.
- 3 Remove the WAP7205 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 9.
- 2 Make sure you understand how the LEDs are enabled or disabled. See <u>Section 1.3 on page 9</u>.
- 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 WAP7205.

6 If the problem continues, contact the vendor.

11.2 WAP7205 Access and Login

I forgot the password.

- 1 The default password is the default Wi-Fi key for the admin user account.
- 2 If this does not work, you have to reset the device to its factory defaults. See Section 11.4 on page 64.

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 WAP7205 is http://zyxelsetup (for Windows) or http://zyxelsetup.local (for Mac).
- 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 WAP7205 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 WAP7205.

- 1 Make sure you have entered the password correctly. The default password is the default Wi-Fi key for the admin user account.
- 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 WAP7205.
- 4 If this does not work, you have to reset the device to its factory defaults. See Section 11.4 on page 64.

11.3 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 gateway. If you can access the Internet, check that the WAP7205 has connected to the gateway by checking the **Status** screen. See Section 3.1 on page 17.
- 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 WAP7205.
- 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 WAP7205), 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 9.
- 2 Reboot the WAP7205.
- 3 Try to connect directly to the gateway. If you can access the Internet, check that the WAP7205 has connected to the gateway by checking the **Status** screen. See Section 3.1 on page 17.
- 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 9. If the WAP7205 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 WAP7205 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 WAP7205.
- 4 If the problem continues, contact the network administrator or vendor, or try one of the advanced suggestions.

11.4 Resetting the WAP7205 to Its Factory Defaults

If you reset the WAP7205, you lose all of the changes you have made. The WAP7205 re-loads its default settings, and the password resets to the default Wi-Fi key for the admin user account. You have to make all of your changes again.

You will lose all of your changes when you reset the WAP7205 to its factory defaults.

To reset the WAP7205,

- **1** Make sure the power LED is on.
- 2 Press the **RESET** button for longer than 5 seconds, the Power LED begins to blink, to set the WAP7205 back to its factory-default configuration.

OR

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

If the WAP7205 restarts automatically, wait for the WAP7205 to finish restarting, and log in to the Web Configurator. The password is the default Wi-Fi key for the admin user account.

If the WAP7205 does not restart automatically, disconnect and reconnect the WAP7205. Then, follow the directions above again.

11.5 Wireless Problems

I cannot access the WAP7205 or ping any computer from the WLAN.

- 1 Make sure the wireless LAN is enabled on the WAP7205.
- 2 Make sure the wireless adapter on the wireless client 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 WAP7205.
- 4 Make sure your computer (with a wireless adapter installed) is within the transmission range of the WAP7205.
- 5 Check that both the WAP7205 and your wireless station 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 WAP7205. See Section 6.7 on page 38.

11.6 MoCA Network

The WAP7205 cannot set up a MoCA network with other MoCA devices.

- 1 Make sure all the MoCA devices are turned on and connected using the same coaxial wiring.
- 2 Make sure all the MoCA devices are operating at the same channel frequency.
- 3 <u>If you enable MoCA network security on the WAP7205, make sure other MoCA devices also use the same password.</u>

APPENDIX A 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

APPENDIX B Legal Information

Copyright

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Disclaimer

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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.
- Operations in the 5.15-5.25GHz band are restricted to indoor usage only.

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 co-channel 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 catégoriel) 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 en 5150-5250 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.

 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/EC.
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.	
Ελληνικά (Greek)	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ ΖΥΧΕΙ ΔΗΛΩΝΕΙ ΟΤΙ εξοπλισμός ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕC.	
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 tagħmir jikkonforma mal-ħtiģijiet essenzjali u ma provvedimenti oħrajn 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":.

Belgium

- 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.
- Questo 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 frekvenèu joslas izmantoðanai ârpus telpâm nepiecieðama afiauja no Elektronisko sakaru direkcijas. Vairâk informâcijas: 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).

Declaration of Conformity with Regard to EU Directive 2014/53/EU (Radio Equipment Directive, RED)

- Compliance information for 2.4GHz and/or 5GHz wireless products relevant to the EU and other Countries following the EU Directive 2014/53/EU (RED). And this product may be used in all EU countries (and other countries following the EU Directive 2014/53/EU) without any limitation except for the countries mentioned below table:
- In the majority of the EU and other European countries, the 5GHz bands have been made available for the use of wireless local areanetworks (LANS). Later in this document you will find an overview of countries in which additional restrictions or requirements or both areapplicable. 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 the 5GHz wireless LANs.
- If this device for operation in the band 5150-5350 MHz, it is for indoor use only.
- The maximum RF power operating for each band as follows:
 - the band 2,400 to 2,483.5 MHz is XXXX mW,
 - the bands 5,150 MHz to 5,350 MHz is XXXX mW,
 - the 5,470 MHz to 5,725 MHz is XXXX mW.

Български (Bulgarian)	С настоящото Zyxel декларира, че това оборудване е в съответствие със съществените изисквания и другите- приложими разпоредбите на Директива 2014/53/EC.	
	National Restrictions	
	 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 teworden 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. 	
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 2014/53/UE.	
Čeština (Czech)	Zyxel tímto prohlašuje, že tento zařízení je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice- 2014/53/EU.	
Dansk (Danish)	Undertegnede Zyxel erklærer herved, at følgende udstyr udstyr overholder de væsentlige krav og øvrige relevante krav i- direktiv 2014/53/EU.	
	National Restrictions	
	 In Denmark, the band 5150 - 5350 MHz is also allowed for outdoor usage. I Danmark må frekvensbåndet 5150 - 5350 også anvendes udendørs. 	
Deutsch (German)	Hiermit erklärt Zyxel, dass sich das Gerät Ausstattung in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 2014/53/EU befindet.	
Eesti keel (Estonian)	Käesolevaga kinnitab Zyxel seadme seadmed vastavust direktiivi 2014/53/EL põhinõuetele ja nimetatud direktiivist- tulenevatele teistele asjakohastele sätetele.	
Ελληνικά (Greek)	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ ΖΥΧΟΙ ΔΗΛΩΝΕΙ ΟΤΙ εξοπλισμός ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΑΟΙΠΕΣ ΣΧΕΤΙΚΕΣ- ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 2014/53/ΕΕ.	
English	Hereby, Zyxel declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.	
Français- (French)	Par la présente Zyxel déclare que l'appareil équipements est conforme aux exigences essentielles et aux autres dispositions- pertinentes de la directive 2014/53/UE.	
Hrvatski- (Croatian)	Zyxel ovime izjavljuje da je radijska oprema tipa u skladu s Direktivom 2014/53/UE.	
Íslenska (Icelandic)	Hér með lýsir, Zyxel því yfir að þessi búnaður er í samræmi við grunnkröfur og önnur viðeigandi ákvæði tilskipunar 2014/53/UE.	

Italiano (Italian)	Con la presente Zyxel dichiara che questo attrezzatura è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti- stabilite dalla direttiva 2014/53/UE. National Restrictions		
	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.sviluppeeconomico.gov.it/ for more details. Questo prodotto è conforme alla specifiche di Interfaccia Radio Nazionale in Piano Nazionale di ripartizione delle frequenze in Italia. Se non viene installate all "interno del proprio fondo, l'utilizzo di prodotti Wireless LAN richiede una "Autorizzazione Generale". Consultare http://www.sviluppeeconomico.gov.it/ per maggiori dettagli.		
Latviešu valoda (Latvian)	Ar šo Zyxel deklarē, ka iekārtas atbilst Direktīvas 2014/53/ES būtiskajām prasībām un citiem ar to saistītajiem noteikumiem. National Restrictions		
	 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 frekvenêu joslas izmantoôanai ârpus telpâm nepiecieôama afiauja no Elektronisko sakaru direkcijas. Vairâk-informâcijas: http://www.esd.lv. 		
Lietuvių kalba (Lithuanian)	Šiuo Zyxel deklaruoja, kad šis įranga atitinka esminius reikalavimus ir kitas 2014/53/ES Direktyvos nuostatas.		
Magyar- (Hungarian)	Alulírott, Zyxel nyilatkozom, hogy a berendezés megfelel a vonatkozó alapvető követelményeknek és az 2014/53/EU irányelv egyéb előírásainak.		
Malti (Maltese)	Hawnhekk, Zyxel, jiddikjara li dan tagħmir jikkonforma mal ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemmfid Dirrettiva 2014/53/UE.		
Nederlands (Dutch)	Hierbij verklaart Zyxel dat het toestel uitrusting in overeenstemming is met de essentiële eisen en de andere relevante- bepalingen van richtlijn 2014/53/EU.		
Polski (Polish)	Niniejszym Zyxel oświadcza, że sprzęt jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 2014/53/UE.		
Português (Portuguese)	Zyxel declara que este equipamento está conforme com os requisitos essenciais e outras disposições da Directiva 2014/53/UE.		
Română- (Romanian)	Prin prezenta, Zyxel declară că acest echipament este în conformitate cu cerințele esențiale și alte prevederi relevante ale Directivei 2014/53/UE.		
Slovenčina (Slovak)	Zyxel týmto vyhlasuje, že zariadenia spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 2014/53/EÚ.		
Slovenščina (Slovene)	Zyxel izjavlja, da je ta oprema v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 2014/53/EU.		
Suomi (Finnish)	Zyxel vakuuttaa täten että laitteet tyyppinen laite on direktiivin 2014/53/EU 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 2014/53/EU.		
Norsk- (Norwegian)	Erklærer herved Zyxel at dette utstyret er i samsvar med de grunnleggende kravene og andre relevante bestemmelser i direktiv 2014/53/EU.		

Notes:

- 1. Although Norway, Switzerland and Liechtenstein are not EU member states, the EU Directive 2014/53/EU 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).

List of national codes

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

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
- Off mode power consumption < 0.5W, and/or
- 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.

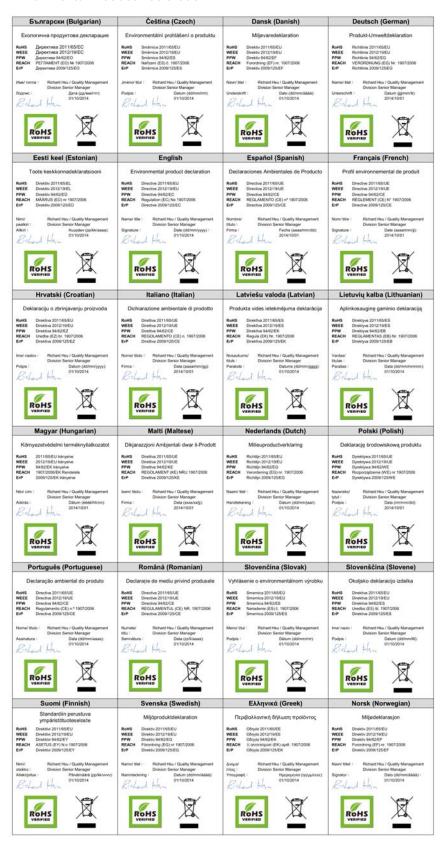
Le symbole ci-dessous signifie que selon les réglementations locales votre produit et/ou sa batterie doivent être éliminés séparément des ordures ménagères. Lorsque ce produit atteint sa fin de vie, amenez-le à un centre de recyclage. Au moment de la mise au rebut, la collecte séparée de votre produit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



台灣



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。
- 電磁波曝露量 MPE 標準值 1 mW/cm² · 送測產品實測值為 · 0.183 mW/cm² · 本產品使用時建議應距離人體 20 cm ·
- 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:
 - 任何液體 切勿讓設備接觸水、雨水、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,請直接聯絡您購買的店家,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.

Explanation of the Symbols

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.

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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