EMG2926-Q10A

Dual-Band Wireless AC/N Gigabit Ethernet Gateway

Version 1.00
Edition 1, 03/2014

User's Guide

Default Login Details	
LAN IP Address	http://192.168.0.1 (Router Mode)
User Name	admin
Password	(blank)

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

- Quick Start Guide

  The Quick Start Guide shows how to connect the EMG2926-Q10A. It contains information on setting up your network and configuring for Internet access.

Contents Overview

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User's Guide

1

Introduction

1.1 Overview

This chapter introduces the main features and applications of the EMG2926-Q10A.

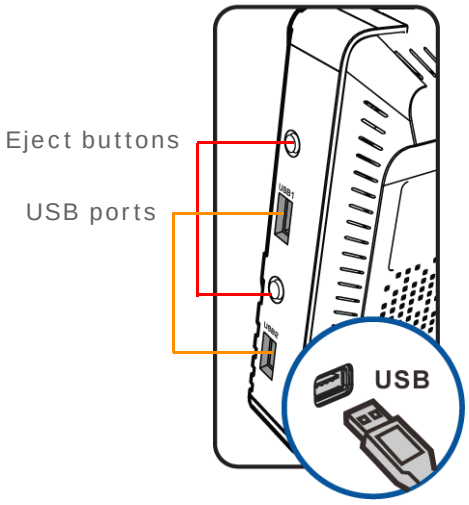
The EMG2926-Q10A extends the range of your existing wired network without additional wiring, providing easy network access to mobile users. You can set up a wireless network with other IEEE 802.11a/ac/b/g/n compatible devices.

A range of services such as a firewall and content filtering are also available for secure Internet computing. The EMG2926-Q10A also supports the new StreamBoost technology, which is smart Quality of Service (QoS), to redistribute traffic over the EMG2926-Q10A for the best possible performance in a home network.

There are two USB 2.0 ports on the side panel of your EMG2926-Q10A. You can connect USB (version 2.0 or lower) memory sticks, USB hard drives, or USB devices for file sharing. The EMG2926-Q10A automatically detects the USB devices.

Two USB eject buttons are located above the USB ports. Push the eject button of the corresponding USB port for 2 seconds. Make sure the USB LED is off before removing your USB device. This will remove your USB device safely, preventing file or data loss if it is being transmitted through the USB device.

Figure 1 USB Ports and Eject Buttons

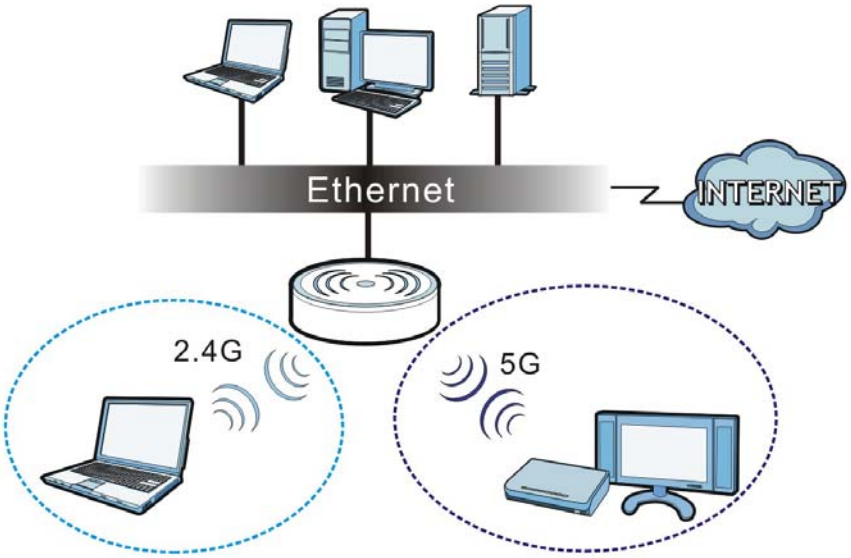


Note: For the USB function, it is strongly recommended to use version 2.0 or lower USB storage devices (such as memory sticks, USB hard drives) and/or USB devices. Other USB products are not guaranteed to function properly with the EMG2926-Q10A.

1.1.1 Dual-Band

The EMG2926-Q10A is a dual-band AP and able to function both 2.4G and 5G networks at the same time. You could use the 2.4 GHz band for regular Internet surfing and downloading while using the 5 GHz band for time sensitive traffic like high-definition video, music, and gaming.

Figure 2 Dual-Band Application



1.2 Applications

You can have the following networks with the EMG2926-Q10A:

- **Wired**. You can connect network devices via the Ethernet ports of the EMG2926-Q10A so that they can communicate with each other and access the Internet.
- **Wireless**. Wireless clients can connect to the EMG2926-Q10A to access network resources. You can use WPS (Wi-Fi Protected Setup) to create an instant network connection with another WPS-compatible device.
- **WAN**. Connect to a broadband modem/router for Internet access.

1.3 Ways to Manage the EMG2926-Q10A

Use any of the following methods to manage the EMG2926-Q10A.

- WPS (Wi-Fi Protected Setup). You can use the WPS button or the WPS section of the Web Configurator to set up a wireless network with your EMG2926-Q10A.
- Web Configurator. This is recommended for everyday management of the EMG2926-Q10A using a (supported) web browser.

1.4 Good Habits for Managing the EMG2926-Q10A

Do the following things regularly to make the EMG2926-Q10A more secure and to manage the EMG2926-Q10A 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 EMG2926-Q10A to its factory default settings. If you backed up an earlier configuration file, you would not have to totally re-configure the EMG2926-Q10A. You could simply restore your last configuration.

1.5 Resetting the EMG2926-Q10A

If you forget your password or IP address, or you cannot access the Web Configurator, you will need to use the **RESET** button at the back of the EMG2926-Q10A to reload the factory-default configuration file. This means that you will lose all configurations that you had previously saved, the user name will be reset to "admin" and the IP address will be reset to "192.168.0.1". The default password is an empty string.

1.5.1 How to Use the RESET Button

1. Make sure the power LED is on.
2. Press the **RESET** button for one to four seconds to restart/reboot the EMG2926-Q10A.
3. Press the **RESET** button for longer than five seconds to set the EMG2926-Q10A back to its factory-default configurations.

1.6 The WPS Button

Your EMG2926-Q10A 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 (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) on 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.

You can use the WPS button ( ) on the front panel of the EMG2926-Q10A to activate WPS in order to quickly set up a wireless network with strong security.

1 Make sure the power LED is on (not blinking).

2 Press the WPS button for more than three seconds and release it. Press the WPS button on another WPS-enabled device within range of the EMG2926-Q10A.

Note: You must activate WPS on the EMG2926-Q10A and on another wireless device within two minutes of each other.

For more information on using WPS, see Section 6.2 on page 48.

1.7 LEDs

Look at the LED lights on the front panel to determine the status of the EMG2926-Q10A. Use the **LED** button at the side panel of the device to turn the LED lights on or off. If you have already pushed the **LED** button to the **ON** position but none of the LEDS are on, make sure the EMG2926-Q10A is receiving power and the power is turned on.

Note: The **Power** LED will be on even if you push the **LED** button to the **OFF** position. This is for you to determine whether the EMG2926-Q10A is powered on.

Figure 3 LED Button

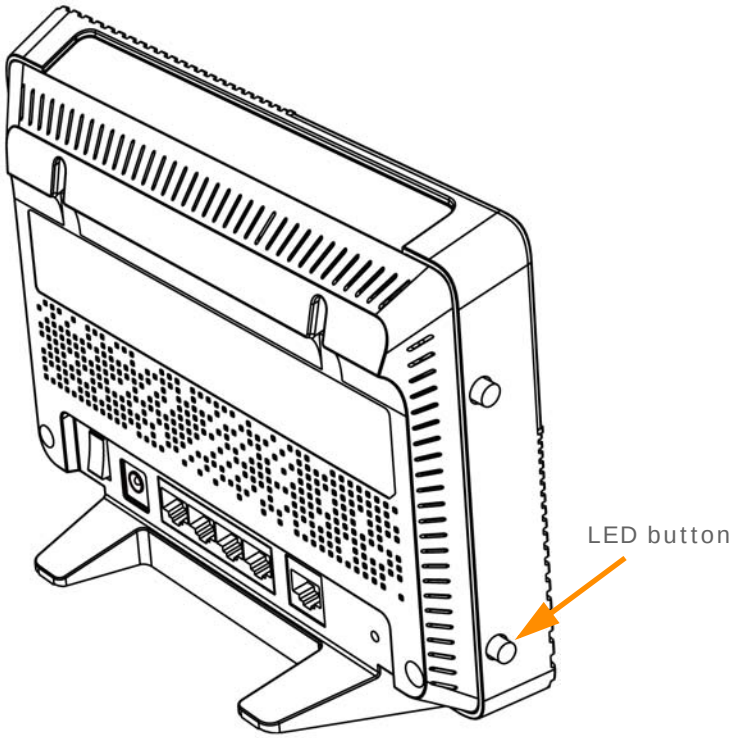
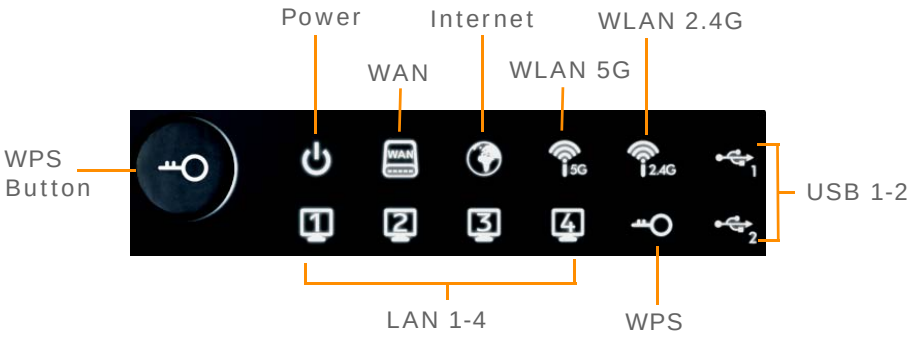


Figure 4 Front Panel



The following table describes the LEDs and the WPS button.

Table 1 Front panel LEDs and WPS button

LED	STATUS	DESCRIPTION
WPS Button	Press this button for 1 second to set up a wireless connection via WiFi Protected Setup with another WPS-enabled client. You must press the WPS button on the client side within 120 seconds for a successful connection. See Section 1.6 on page 13 and Section 6.2 on page 48 for more information on WPS.	
Power	On	The EMG2926-Q10A is receiving power and functioning properly.
	Off	The EMG2926-Q10A is not receiving power.
WAN	On	The EMG2926-Q10A's WAN connection is ready.
	Blinking	The EMG2926-Q10A is sending/receiving data through the WAN with a 1000Mbps transmission rate.
	Off	The WAN connection is not ready, or has failed.
Internet	On	The EMG2926-Q10A has an IP connection but no traffic. Your device has a WAN IP address (either static or assigned by a DHCP server), PPP negotiation was successfully completed (if used) and the connection is up.
	Blinking	The EMG2926-Q10A is sending or receiving IP traffic.
	Off	The EMG2926-Q10A does not have an IP connection.
WLAN 2.4/5G	On	The EMG2926-Q10A is ready, but is not sending/receiving data through the 5G wireless LAN.
	Blinking	The EMG2926-Q10A is sending/receiving data through the 5G wireless LAN. The EMG2926-Q10A is negotiating a WPS connection with a wireless client.
	Off	The wireless LAN is not ready or has failed.
LAN 1-4	On	The EMG2926-Q10A's LAN connection is ready.
	Blinking	The EMG2926-Q10A is sending/receiving data through the LAN with a 1000Mbps transmission rate.
	Off	The LAN connection is not ready, or has failed.
USB 1-2	On	The EMG2926-Q10A has a USB device installed.
	Blinking	The EMG2926-Q10A is transmitting and/or receiving data from routers through an installed USB device.
	Off	There is no USB device connected to the EMG2926-Q10A.

1.8 Wall Mounting

You may need screw anchors if mounting on a concrete or brick wall.

Table 2 Wall Mounting Information

Distance between holes	12.7 cm
M4 Screws	Two
Screw anchors (optional)	Two

1 Select a position free of obstructions on a wall strong enough to hold the weight of the device.

2 Mark two holes on the wall at the appropriate distance apart for the screws.

Be careful to avoid damaging pipes or cables located inside the wall when drilling holes for the screws.

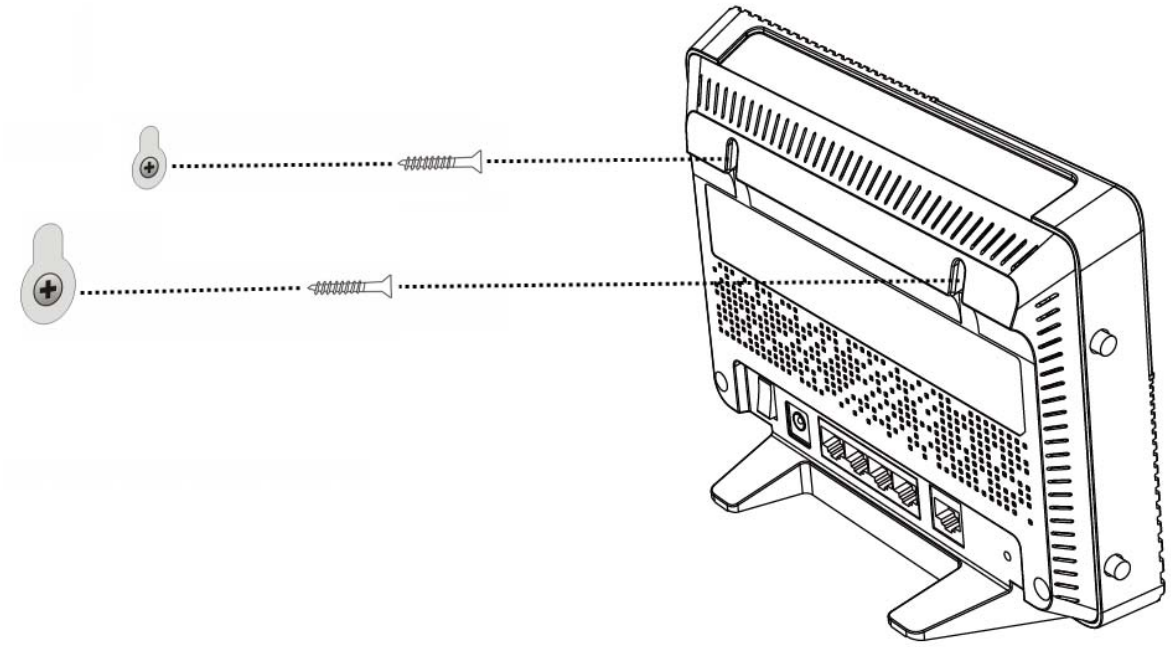
3 If using screw anchors, drill two holes for the screw anchors into the wall. Push the anchors into the full depth of the holes, then insert the screws into the anchors. Do not insert the screws all the way in - leave a small gap of about 0.5 cm.

If not using screw anchors, use a screwdriver to insert the screws into the wall. Do not insert the screws all the way in - leave a gap of about 0.5 cm.

4 Make sure the screws are fastened well enough to hold the weight of the EMG2926-Q10A with the connection cables.

5 Align the holes on the back of the EMG2926-Q10A with the screws on the wall. Hang the EMG2926-Q10A on the screws.

Figure 5 Wall Mounting Example



2

Introducing the Web Configurator

2.1 Overview

This chapter describes how to access the EMG2926-Q10A 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 EMG2926-Q10A via Internet browser. Use Internet Explorer 9.0 and later versions, Mozilla Firefox 21 and later versions, Safari 6.0 and later versions or Google Chrome 26.0 and later versions. The recommended screen resolution is 1024 by 768 pixels.

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

- Web browser pop-up windows on your device. Web pop-up blocking is enabled by default in Windows XP SP (Service Pack) 2.
- JavaScript (enabled by default).
- Java permissions (enabled by default).

2.2 Accessing the Web Configurator

1. Make sure your EMG2926-Q10A hardware is properly connected and prepare your computer or computer network to connect to the EMG2926-Q10A (refer to the Quick Start Guide).
2. Launch your web browser.
3. The EMG2926-Q10A is in router mode by default. Type "http://192.168.0.1" as the website address.

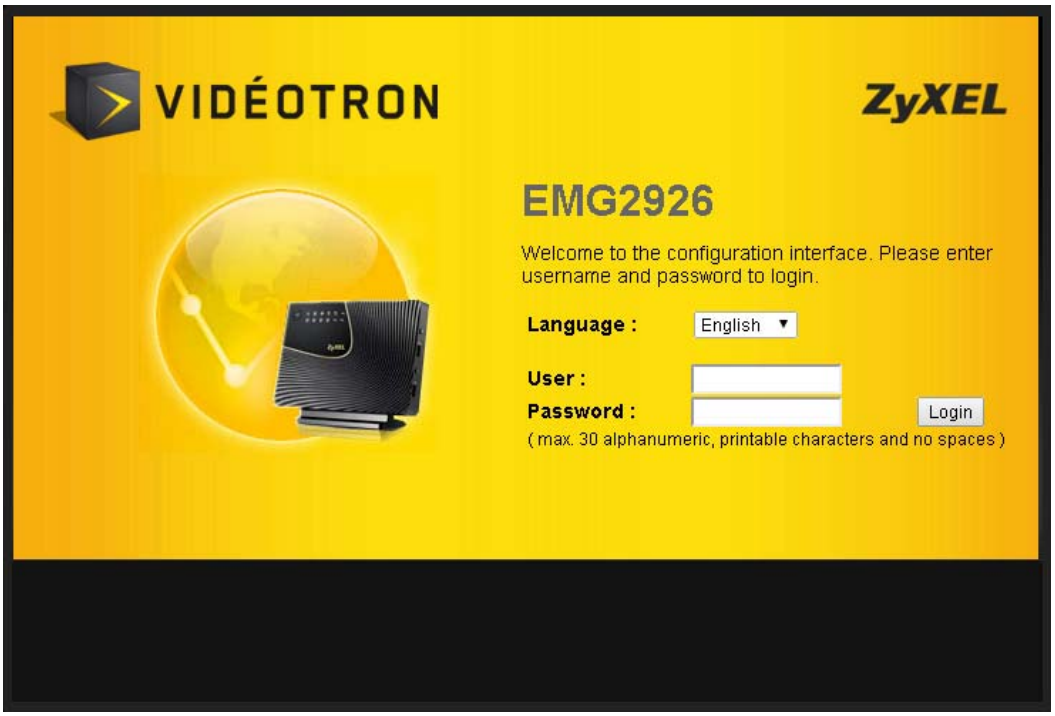
   If the EMG2926-Q10A is in access point mode, the IP address is 192.168.0.2.

   Your computer must be in the same subnet in order to access this website address.

2.2.1 Login Screen

The Web Configurator initially displays the following login screen.

Figure 6 Login screen



The following table describes the labels in this screen.

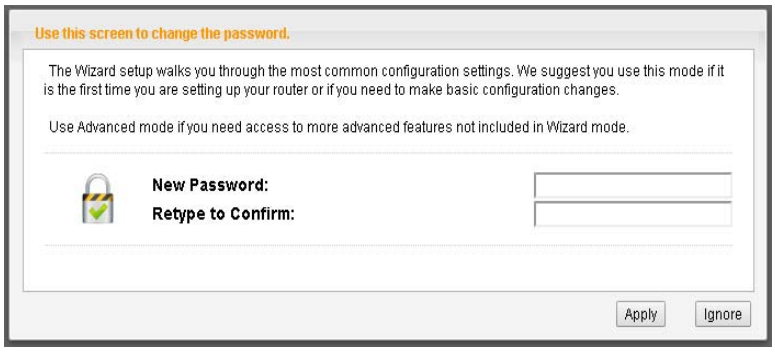
Table 3 Login screen

LABEL	DESCRIPTION
Language	Select the language you want to use to configure the Web Configurator.
User	Type "admin" (default) as the user name. Click **Login**.
Password	Leave this field blank.

2.2.2 Password Screen

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

Figure 7 Change Password Screen



The following table describes the labels on this screen.

Table 4 Change Password Screen

LABEL	DESCRIPTION
New Password	Type a new password.
Retype to Confirm	Retype the password for confirmation.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Ignore	Click **Ignore** if you do not want to change the password this time.

Note: The management session automatically times out when the time period set in the **Administrator Inactivity Timer** field expires (default five minutes; go to Chapter 24 on page 147 to change this). Simply log back into the EMG2926-Q10A if this happens.

3

Connection Wizard

3.1 Overview

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

The Web Configurator's wizard setup helps you configure your device to access the Internet. Refer to your ISP for your Internet account information. Leave a field blank if you don't have that information.

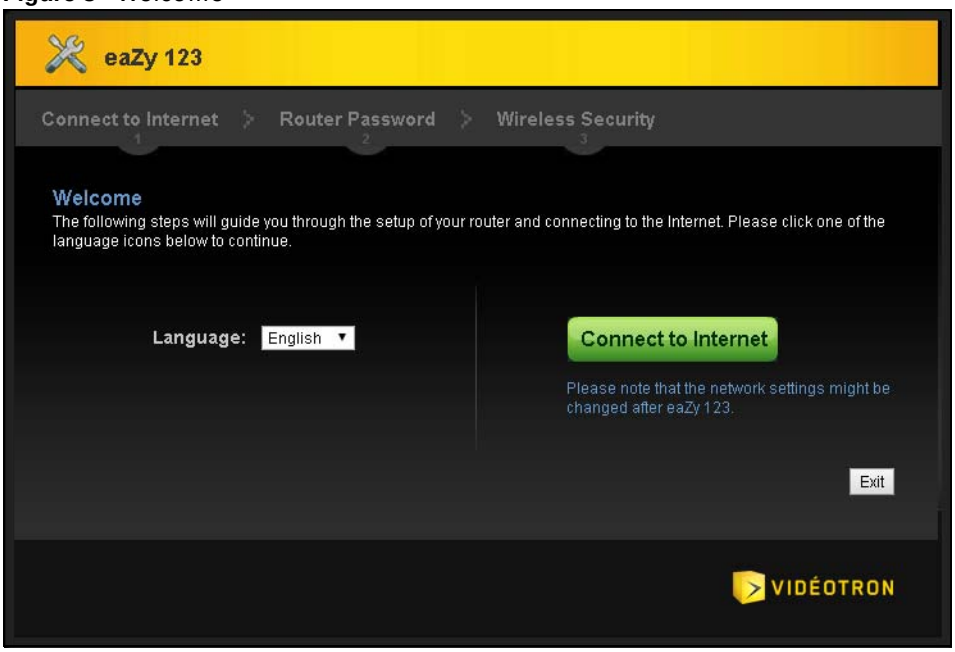
3.2 Accessing the Wizard

Launch your web browser and type "http://192.168.0.1" as the website address. Type "admin" (default) as the user name and leave the password field blank. Click **Login**.

Note: The Web Configurator is set to **Easy Mode** by default after login. If you are in **Expert Mode**, you can click the **Easy Mode** icon on the upper right corner of any Web Configurator screen to go to **Easy Mode**.

Click the **eaZy123** icon on the network map screen in **Easy Mode**. The Wizard screen opens. Choose your **Language** and click **Connect to Internet**.

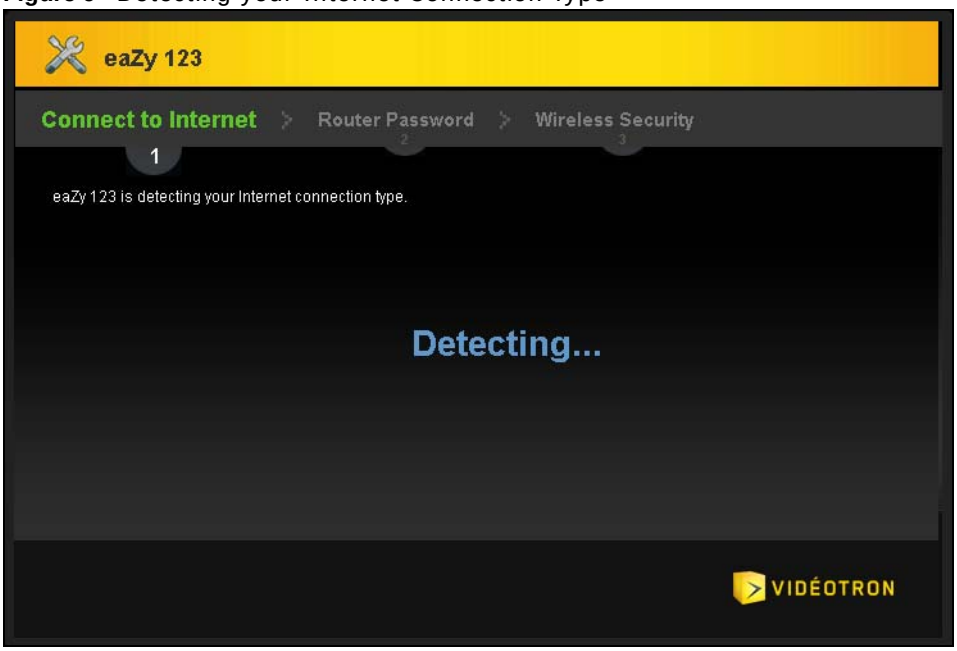
Figure 8 Welcome



3.3 Connect to Internet

The EMG2926-Q10A offers two Internet connection types. They are **IPoE** or **PPPoE**. The wizard attempts to detect which WAN connection type you are using.

Figure 9 Detecting your Internet Connection Type

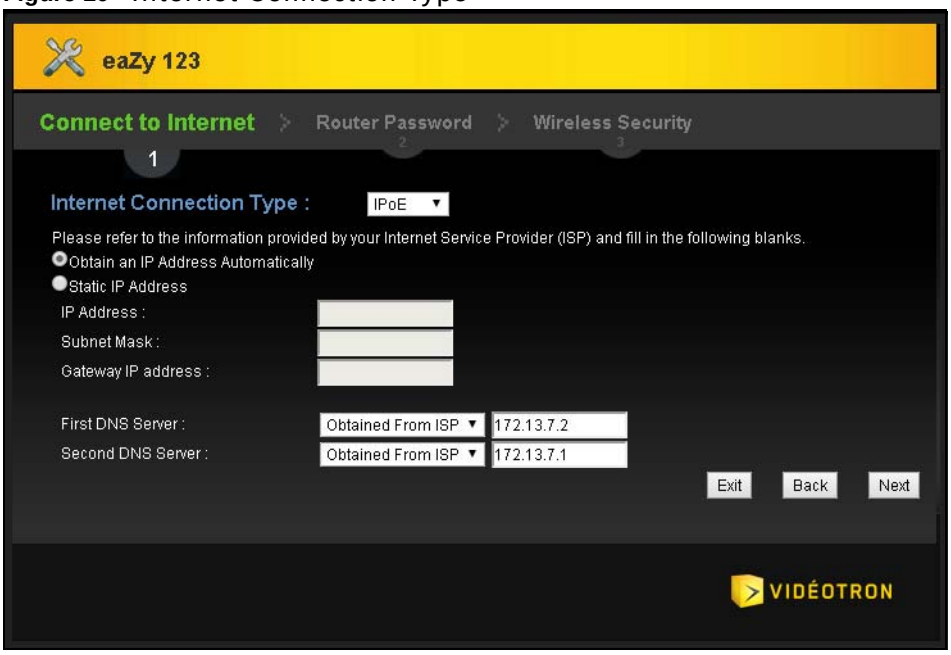


If the wizard does not detect a connection type, you must select one from the drop-down list box. Check with your ISP to make sure you use the correct type.

Note: If you get an error message, check your hardware connections. Make sure your Internet connection is up and running.

The following screen depends on your Internet connection type. Enter the details provided by your Internet Service Provider (ISP) in the fields (if any).

Figure 10 Internet Connection Type



Your EMG2926-Q10A detects the following Internet Connection types.

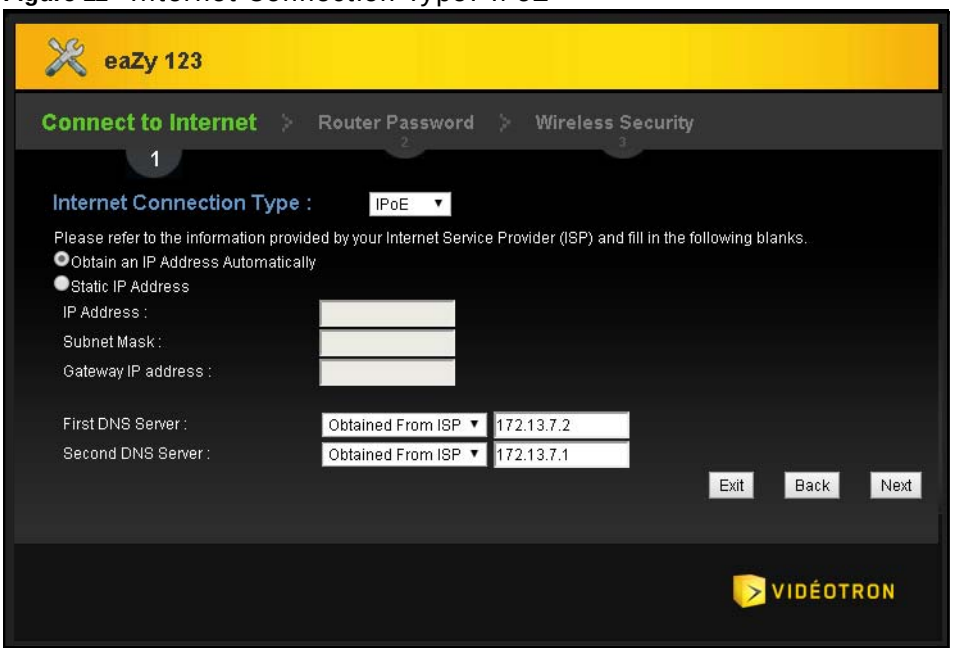
Table 5 Internet Connection Types

CONNECTION TYPE	DESCRIPTION
IPoE	Select the **IPoE** (IP over Ethernet) option when the WAN port is used as a regular Ethernet.
PPPoE	Select the **PPPoE** (Point-to-Point Protocol over Ethernet) option for a dial-up connection.

3.3.1 Connection Type: IPoE

Choose **IPoE** as the **Internet Connection Type** when the WAN port is used as a regular Ethernet. Click **Next**.

Figure 11 Internet Connection Type: IPoE



The following table describes the labels on this screen.

Table 6 Internet Connection Type: IPoE

LABEL	DESCRIPTION
Internet Connection Type	Select the **IPoE** option.
Obtain an IP Address Automatically	Select this radio button if your Internet Service Provider (ISP) did not assign you a fixed IP address.
Static IP Address	Select this radio button if your ISP assigned an IP address for your Internet connection.
IP Address	Enter the IP address provided by your ISP.
Subnet Mask	Enter the IP subnet mask in this field.
Gateway IP Address	Enter the gateway IP address in this field.
First DNS Server Second DNS Server	Select **Obtained From ISP** if your ISP dynamically assigns DNS server information (and the EMG2926-Q10A's WAN 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.
Exit	Click this to close the wizard screen without saving.
Back	Click this to return to the previous screen.
Next	Click this to continue.

Note: If you get an error screen after clicking **Next**, you might have selected the wrong Internet Connection type. Click **Back**, make sure your Internet connection is working and select the right Connection Type. Contact your ISP if you are not sure of your Internet Connection type.

3.3.2 Connection Type: PPPoE

Point-to-Point Protocol over Ethernet (PPPoE) functions as a dial-up connection. PPPoE is an IETF (Internet Engineering Task Force) standard specifying how a host personal computer interacts with a broadband modem (for example DSL, cable, wireless, etc.) to achieve access to high-speed data networks.

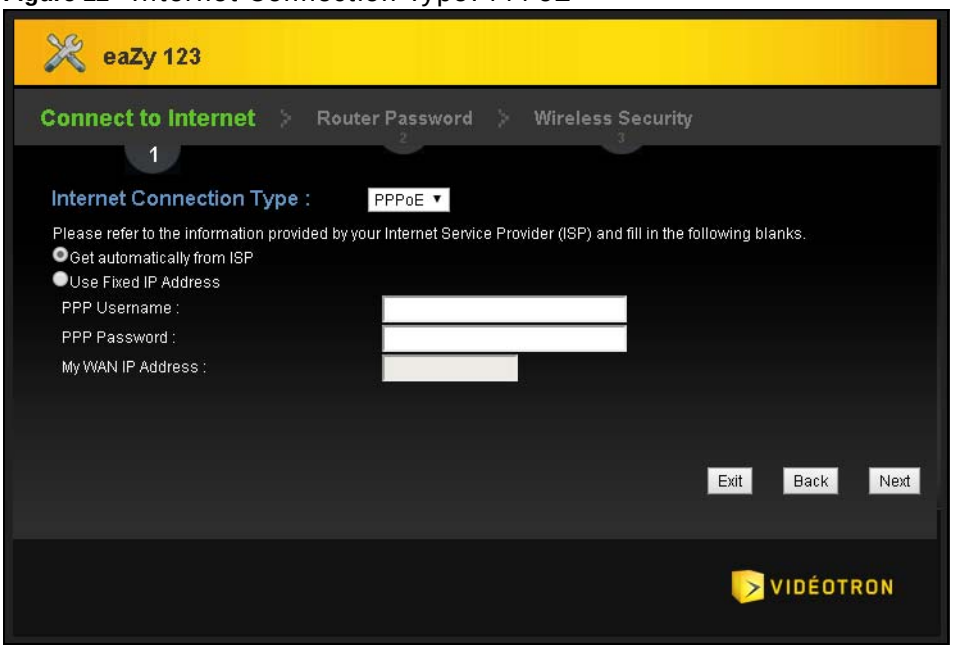
For the service provider, PPPoE offers an access and authentication method that works with existing access control systems (for instance, RADIUS).

One of the benefits of PPPoE is the ability to let end users access one of multiple network services, a function known as dynamic service selection. This enables the service provider to easily create and offer new IP services for specific users.

Operationally, PPPoE saves significant effort for both the subscriber and the ISP/carrier, as it requires no specific configuration of the broadband modem at the subscriber's site.

By implementing PPPoE directly on the EMG2926-Q10A (rather than individual computers), the computers on the LAN do not need PPPoE software installed, since the EMG2926-Q10A does that part of the task. Furthermore, with NAT, all of the LAN's computers will have Internet access.

Figure 12 Internet Connection Type: PPPoE



The following table describes the labels on this screen.

Table 7 Internet Connection Type: PPPoE

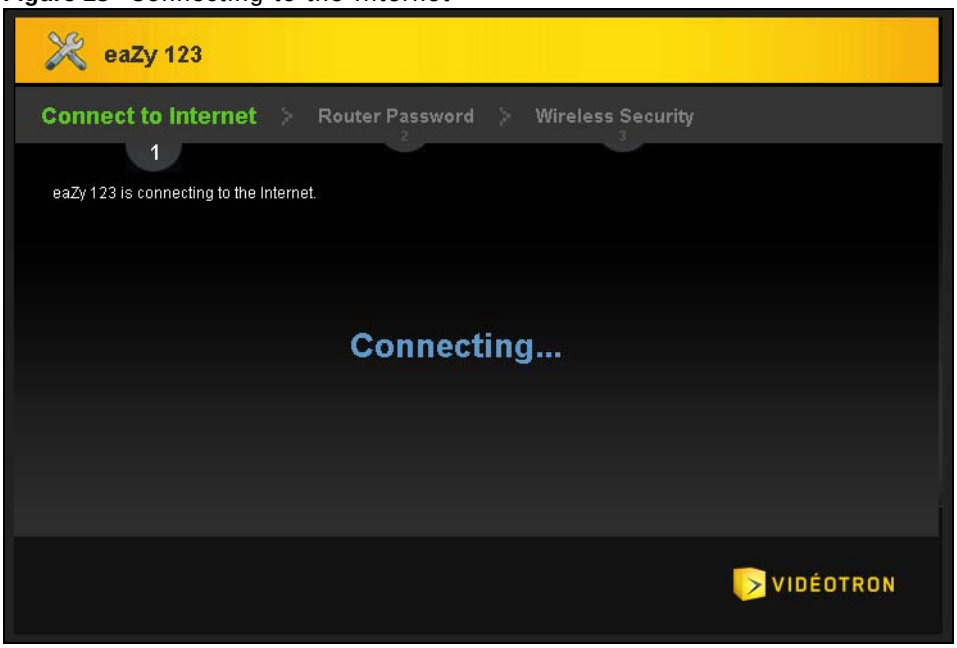
LABEL	DESCRIPTION
Internet Connection Type	Select the **PPPoE** option for a dial-up connection.
Get automatically from ISP	Select this radio button if your ISP did not assign you a fixed IP address.
Use Fixed IP Address	Select this radio button, provided by your ISP to give the EMG2926-Q10A a fixed, unique IP address.

Table 7 Internet Connection Type: PPPoE (continued)

LABEL	DESCRIPTION
PPP Username	Type the user name given to you by your ISP.
PPP Password	Type the password associated with the user name above.
My WAN IP Address	Type the name of your service provider.
Exit	Click this to close the wizard screen without saving.
Back	Click this to return to the previous screen.
Next	Click this to continue.

The EMG2926-Q10A connects to the Internet.

Figure 13 Connecting to the Internet

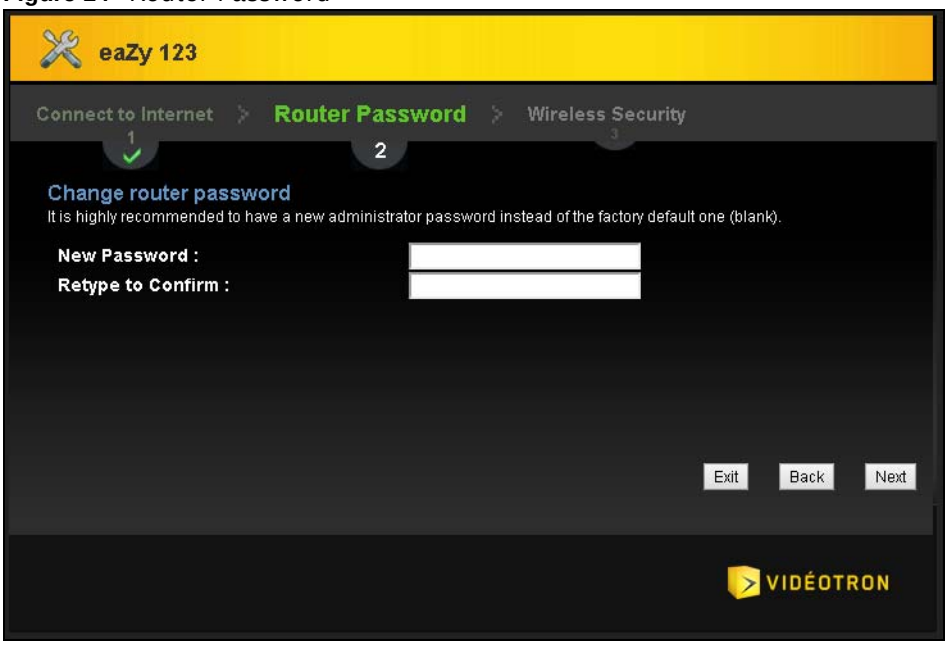


Note: If the Wizard successfully connects to the Internet, it proceeds to the next step. If you get an error message, go back to the previous screen and make sure you have entered the correct information provided by your ISP.

3.4 Router Password

Change the login password in the following screen. Enter the new password and retype it to confirm. Click **Next** to proceed with the **Wireless Security** screen**.**

Figure 14 Router Password



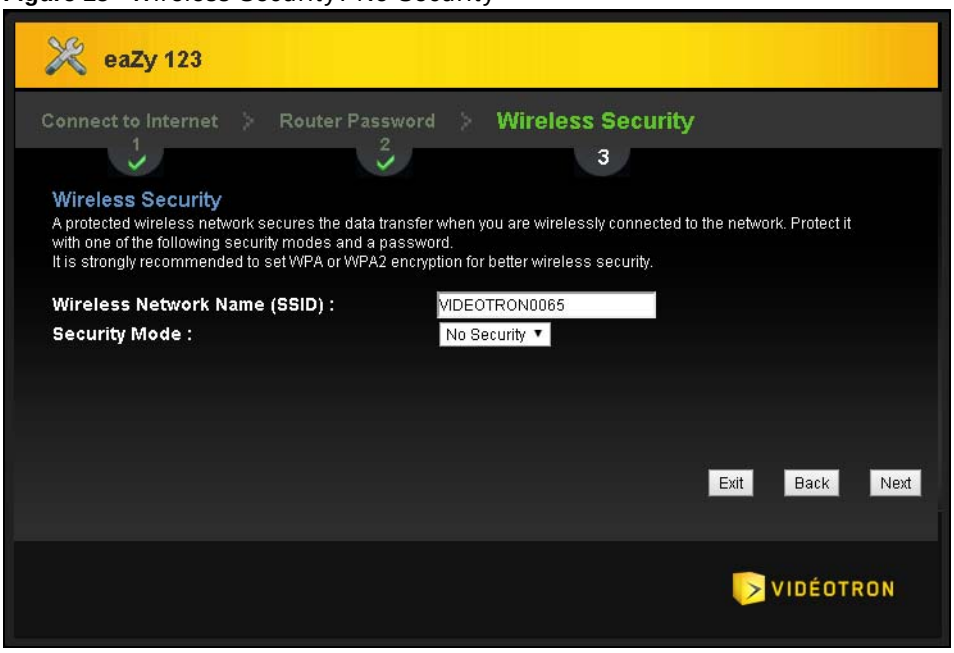
3.5 Wireless Security

Configure Wireless Settings. Configure the wireless network settings on your EMG2926-Q10A on the following screen. The fields that show up depend on the kind of security you select.

3.5.1 Wireless Security: No Security

Choose **No Security** on the **Wireless Security** screen to let wireless devices within range access your wireless network.

Figure 15 Wireless Security: No Security



The following table describes the labels on this screen.

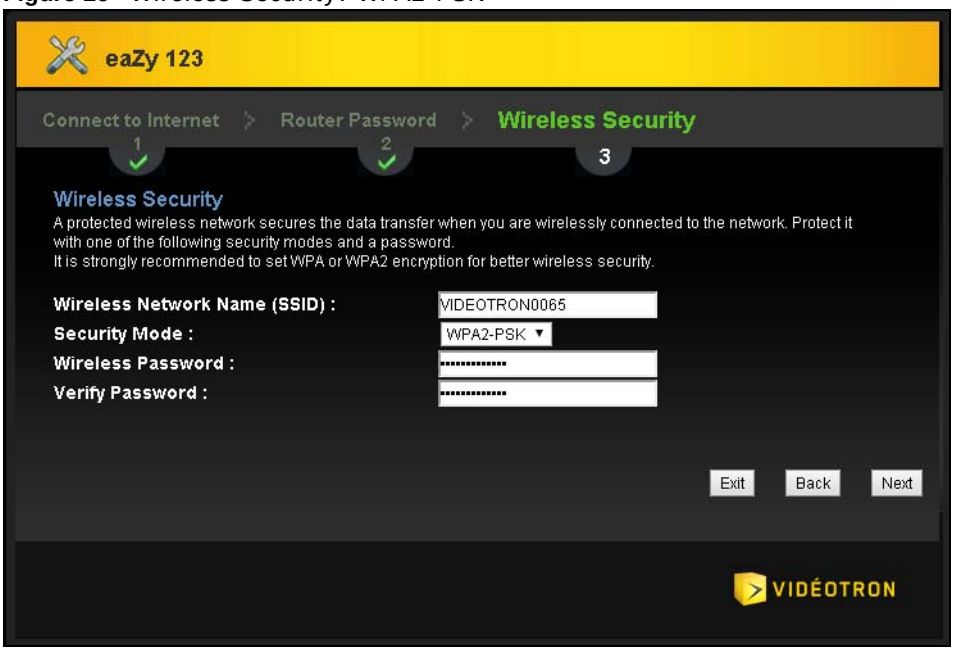
Table 8 Wireless Security: No Security

LABEL	DESCRIPTION
Wireless Network Name (SSID)	Enter a descriptive name (up to 32 printable 7-bit ASCII characters) for the wireless LAN. If you change this field on the EMG2926-Q10A, make sure all wireless stations use the same SSID in order to access the network.
Security Mode	Select a security level from the drop-down list box. Choose **No Security** to have no wireless LAN security configured. If you do not enable any wireless security on your EMG2926-Q10A, your network is accessible to any wireless networking device that is within range.
Exit	Click this to close the wizard screen without saving.
Back	Click this to return to the previous screen.
Next	Click this to continue.

3.5.2 Wireless Security: WPA2-PSK

Choose **WPA2-PSK** security in the Wireless Security screen to set up a password for your wireless network.

Figure 16 Wireless Security: WPA2-PSK



The following table describes the labels on this screen.

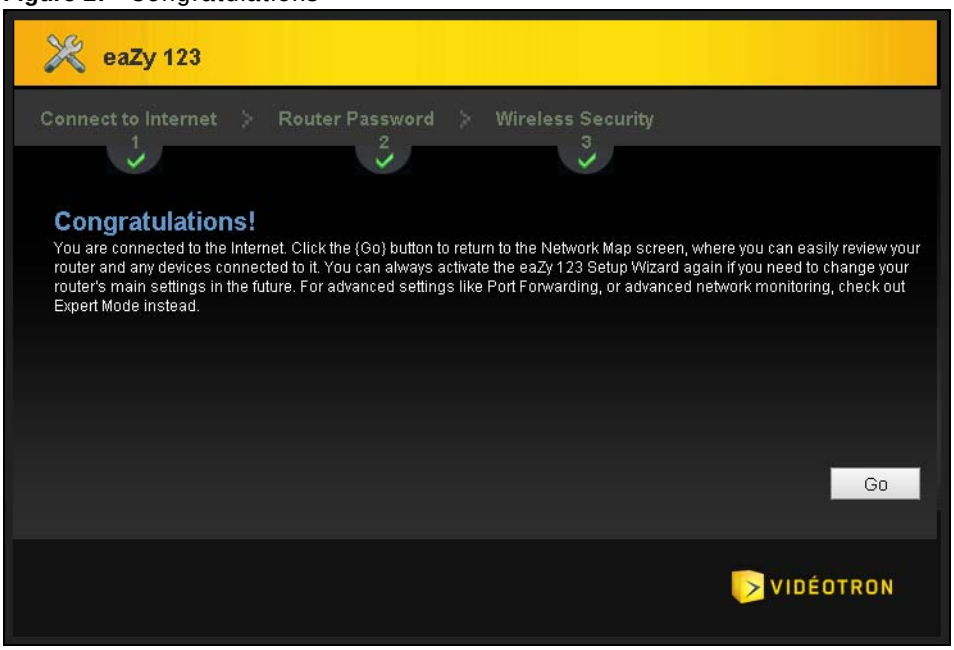
Table 9 Wireless Security: WPA2-PSK

LABEL	DESCRIPTION
Wireless Network Name (SSID)	Enter a descriptive name (up to 32 printable 7-bit ASCII characters) for the wireless LAN. If you change this field on the EMG2926-Q10A, make sure all wireless stations use the same SSID in order to access the network.
Security Mode	Select a security level from the drop-down list box. Choose **WPA2-PSK** security to configure a Pre-Shared Key. Choose this option only if your wireless clients support WPA2-PSK.
Wireless password	Type from 8 to 63 case-sensitive ASCII characters. You can set up the most secure wireless connection by configuring WPA in the wireless LAN screens.
Verify Password	Retype the password to confirm.
Exit	Click this to close the wizard screen without saving.
Back	Click this to return to the previous screen.
Next	Click this to continue.

Congratulations! Open a web browser, such as Internet Explorer, to visit your favourite website.

Note: If you cannot access the Internet when your computer is connected to one of the EMG2926-Q10A's LAN ports, check your connections. Then turn the EMG2926-Q10A off, wait for a few seconds then turn it back on. If that does not work, log in to the web configurator again and check if you have typed all information correctly. See the User's Guide for more suggestions.

Figure 17 Congratulations



You can also click **GO** to open the **Easy Mode** Web Configurator of your EMG2926-Q10A.

You have successfully set up your EMG2926-Q10A to operate on your network and access the Internet. You are now ready to connect wirelessly to your EMG2926-Q10A and access the Internet.

4

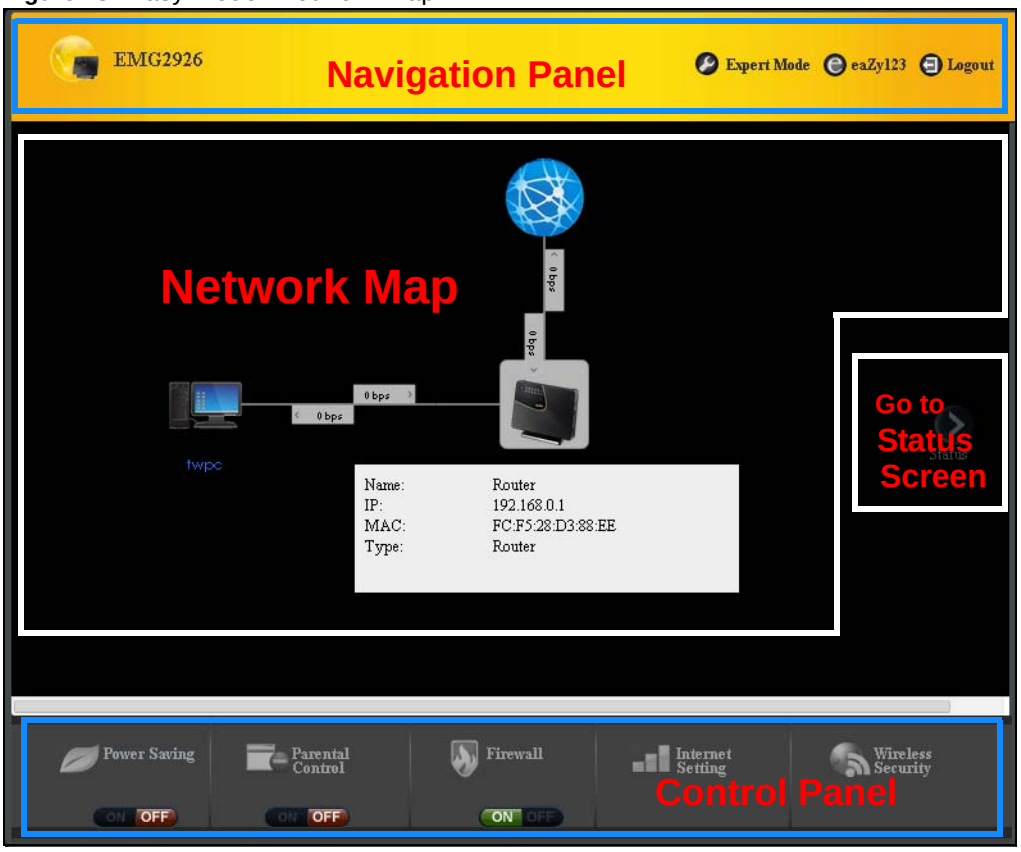
Easy Mode

4.1 Overview

The Web Configurator is set to **Easy Mode** by default. You can configure several key features of the EMG2926-Q10A in this mode. This mode is useful to users who are not fully familiar with some features that are usually intended for network administrators.

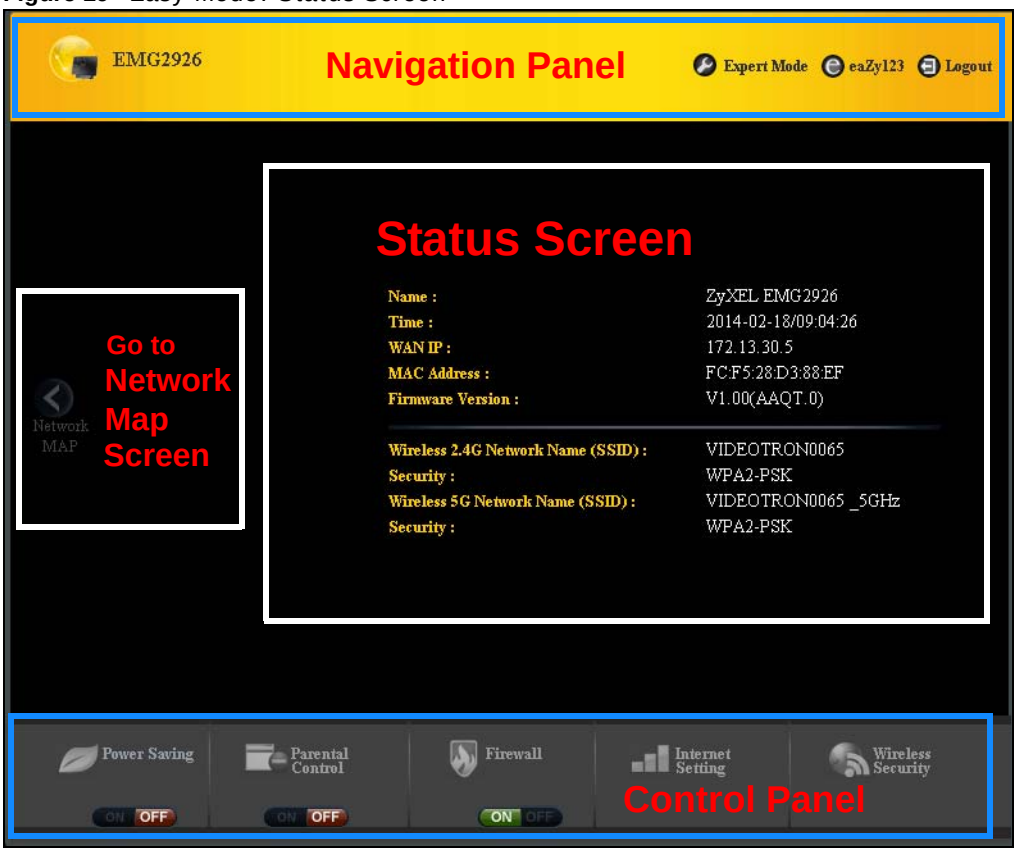
When you log in to the Web Configurator, the following screen opens.

Figure 18 Easy Mode: Network Map



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

Figure 19 Easy Mode: Status Screen



4.2 Navigation Panel

Use this navigation panel to opt out of the **Easy Mode**.

Figure 20 Control Panel

The following table describes the labels on this screen.

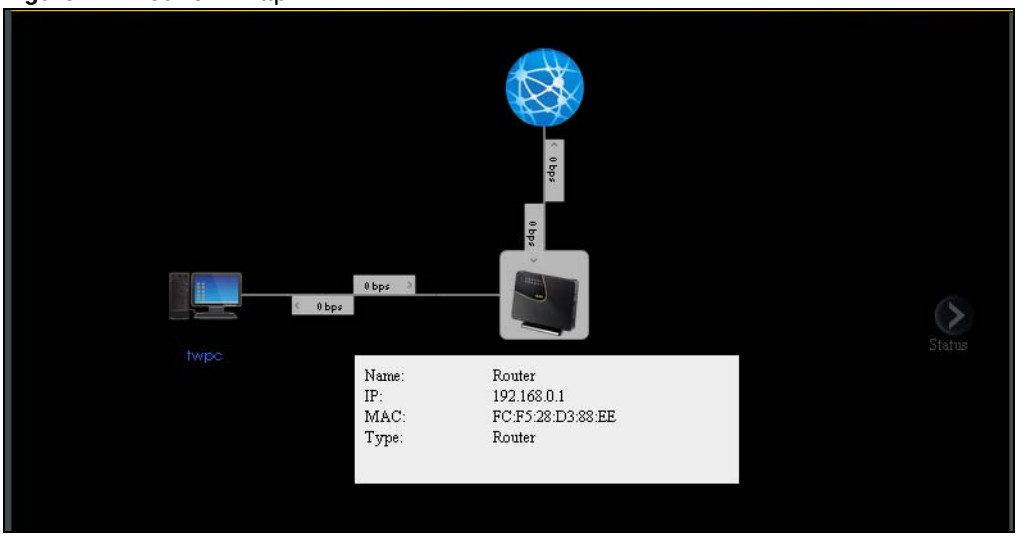
Table 10 Control Panel

ITEM	DESCRIPTION
Expert Mode	Click this to change to **Expert Mode** and customize features of the EMG2926-Q10A.
eaZy123	Click this icon to open the setup wizard.
Logout	Click this to end the Web Configurator session and go to the **Login** page.

4.3 Network Map

When you log into the Web Configurator, the Network Map is shown as follows.

Figure 21 Network Map

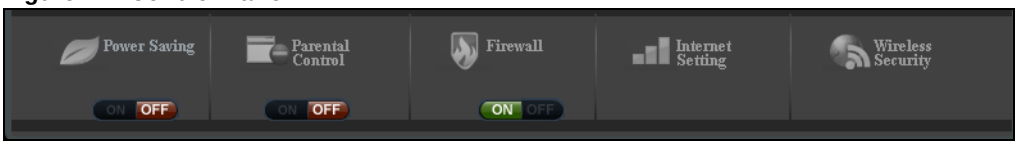


You can view the upstream and downstream transmission speeds between the EMG2926-Q10A and the Internet and/or between the EMG2926-Q10A and the connected device(s) (represented by icons indicating the kind of network device), including those connecting wirelessly. You can hover your cursor over a device icon to view details about the device, such as the name, IP address, MAC address and the device type.

4.4 Control Panel

The features configurable in **Easy Mode** are shown in the **Control Panel**.

Figure 22 Control Panel



Switch **ON** to enable the feature. Otherwise, switch **OFF**. If the feature is turned on, the green light flashes. If it is turned off, the red light flashes.

Additionally, click the feature to open a screen where you can edit its settings.

The following table describes the labels on this screen.

Table 11 Control Panel

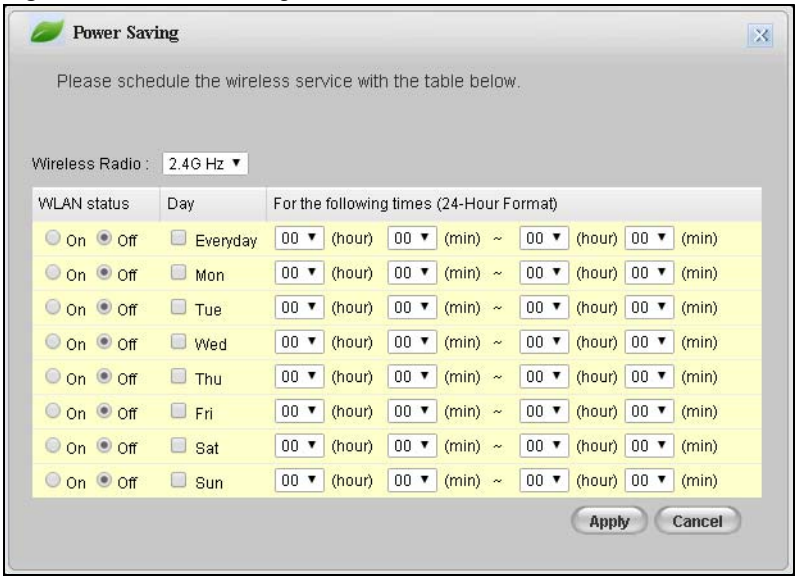
ITEM	DESCRIPTION
Power Saving	Click this to schedule the wireless feature of the EMG2926-Q10A. Disabling the wireless function helps lower the energy consumption of the EMG2926-Q10A. Switch **ON** to apply wireless scheduling. Otherwise, switch **OFF**. Refer to Section 4.4.1 on page 33 to see this screen.
Parental Control	Click this to restrict access to certain websites, based on keywords contained in URLs, that you do not want users in your network to open. Switch **ON** to apply website filtering. Otherwise, switch **OFF**. Refer to Section 4.4.2 on page 34 to see this screen.
Firewall	Switch **ON** to ensure that your network is protected from Denial of Service (DoS) attacks. Otherwise, switch **OFF**. Refer to Section 4.4.3 on page 35 to see this screen.
Internet Setting	Click this to configure the Internet connection settings. Refer to Section 4.4.4 on page 35 to see this screen.
Wireless Security	Click this to configure the wireless security, such as SSID, security mode and WPS key on your EMG2926-Q10A. Refer to Section 4.4.5 on page 37 to see this screen.

4.4.1 Power Saving

Use this screen to set the day of the week and time of the day when your wireless LAN is turned on and off. Wireless LAN scheduling is disabled by default. Click the **Power Saving** icon in the control panel of the **Easy Mode** to open the screen shown next.

Disabling the wireless capability lowers the energy consumption of the of the EMG2926-Q10A.

Figure 23 Power Saving



The following table describes the labels on this screen.

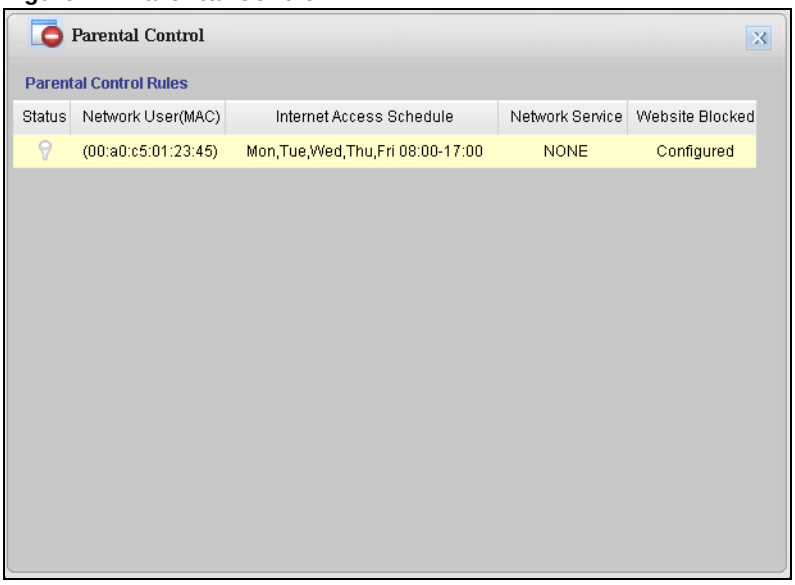
Table 12 Power Saving

LABEL	DESCRIPTION
Wireless Radio	Choose whether you want to apply the power saving schedule to **2.4G Hz** or **5G Hz** wireless radio.
WLAN Status	Select **On** or **Off** to specify whether the Wireless LAN is turned on or off (depending on what you selected in the **WLAN Status** field). 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 start 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 chose **On** earlier for the WLAN Status the Wireless LAN will turn on between the two times you enter in these fields. If you chose **Off** earlier for the WLAN Status the Wireless LAN will turn off between the two times you enter in these fields. In this time format, midnight is 00:00 and progresses up to 24:00. For example, 6:00 PM is 18:00.
Apply	Click **Apply** to save your changes back to the EMG2926-Q10A.
Cancel	Click **Cancel** to close this screen without saving any changes.

4.4.2 Parental Controls

Use this screen to view the parental control rules configured on the EMG2926-Q10A. Click the **Parental Control** icon in the control panel of the **Easy Mode** to open the screen shown next. See Chapter 17 on page 116 for how to enable and configure parental control rules.

Figure 24 Parental Control



The following table describes the labels on this screen.

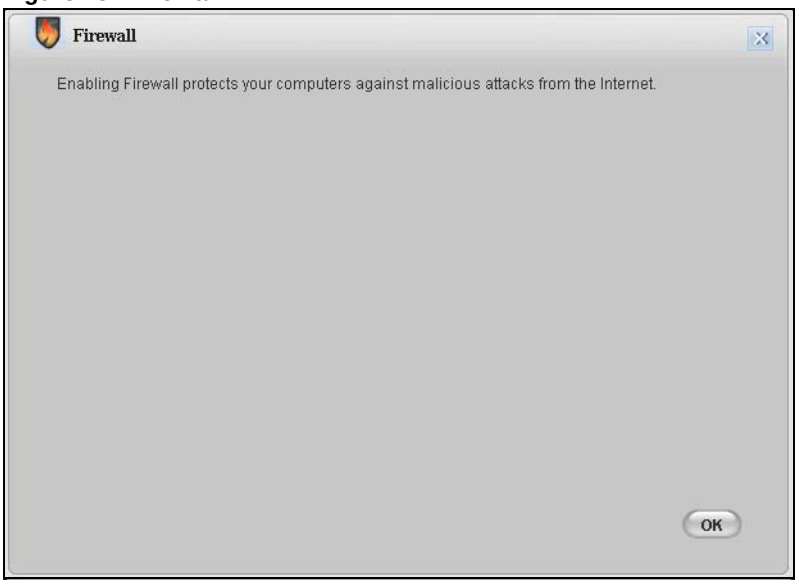
Table 13 Parental Controls

LABEL	DESCRIPTION
Status	This indicates whether the rule is active or not. A yellow bulb signifies that this rule is active. A gray bulb signifies that this rule is not active.
Network User (MAC)	This shows the MAC address of the LAN user's computer to which this rule applies.
Internet Access Schedule	This shows the day(s) and time when parental controls are enabled.
Network Service	This shows whether the network service is configured. If not, **NONE** will be shown.
Website Blocked	This shows whether the website block is configured. If not, **NONE** will be shown.

4.4.3 Firewall

Enable this feature to protect the network from Denial of Service (DoS) attacks. The EMG2926-Q10A blocks repetitive pings from the WAN that can otherwise cause systems to slow down or hang. Click the **Firewall** icon in the control panel of the **Easy Mode** to open the screen shown next. See Chapter 15 on page 110 for how to enable and configure firewall rules.

Figure 25 Firewall



Click **OK** to close this screen.

4.4.4 Internet Settings

Use this screen to configure your EMG2926-Q10A for Internet access. You should already have Internet account information from your ISP. The screen varies depending on the Internet connection type you selected. Click the **Internet Setting** icon in the control panel of the **Easy Mode** to open the screen shown next.

Figure 26 Internet Setting (IPoE)

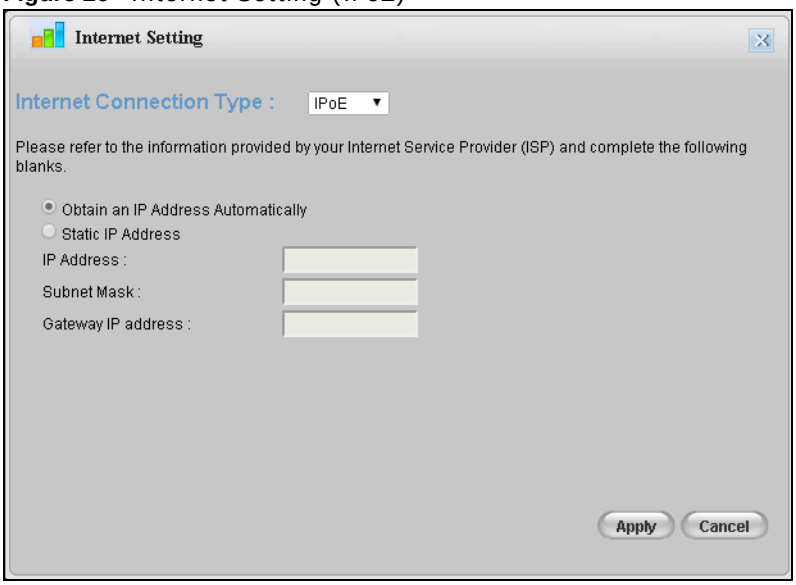
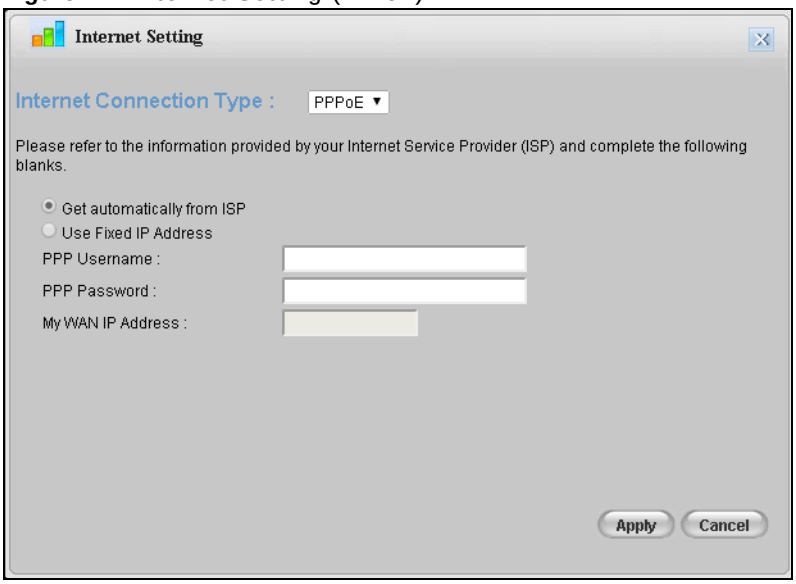


Figure 27 Internet Setting (PPPoE)



The following table describes the labels on this screen.

Table 14 Internet Settings

LABEL	DESCRIPTION
Internet Connection Type	Select the **IPoE** (IP over Ethernet) option when the WAN port is used as a regular Ethernet. Select the **PPPoE** (Point-to-Point Protocol over Ethernet) option for a dial-up connection.
The following fields are available if you select **IPoE**.	
Obtain an IP Address Automatically	Select this radio button if your ISP did not assign you a fixed IP address.
Static IP Address	Select this radio button if your ISP assigned an IP address for your Internet connection.
IP Address	Enter the IP address provided by your ISP.

Table 14 Internet Settings (continued)

LABEL	DESCRIPTION
Subnet Mask	Enter the IP subnet mask in this field.
Gateway IP Address	Enter the gateway IP address in this field.
The following fields are available if you select **PPPoE**.	
Get automatically from ISP	Select this radio button if your ISP did not assign you a fixed IP address.
Use Fixed IP Address	Select this radio button, provided by your ISP to give the EMG2926-Q10A a fixed, unique IP address.
PPP Username	Type the user name given to you by your ISP.
PPP Password	Type the password associated with the user name above.
My WAN IP Address	Type the name of your service provider.
Cancel	Click **Cancel** to close this screen.
Apply	Click **Apply** to save your changes back to the EMG2926-Q10A.

4.4.5 Wireless Security

Use this screen to configure security for your the wireless LAN. You can enter the SSID and select the wireless security mode in the following screen. Click the **Wireless Security** icon in the control panel of the **Easy Mode** to open the screen shown below.

Note: You can enable the wireless function of your EMG2926-Q10A by first turning on the switch in the side panel.

Figure 28 Wireless Security

The following table describes the labels on this screen.

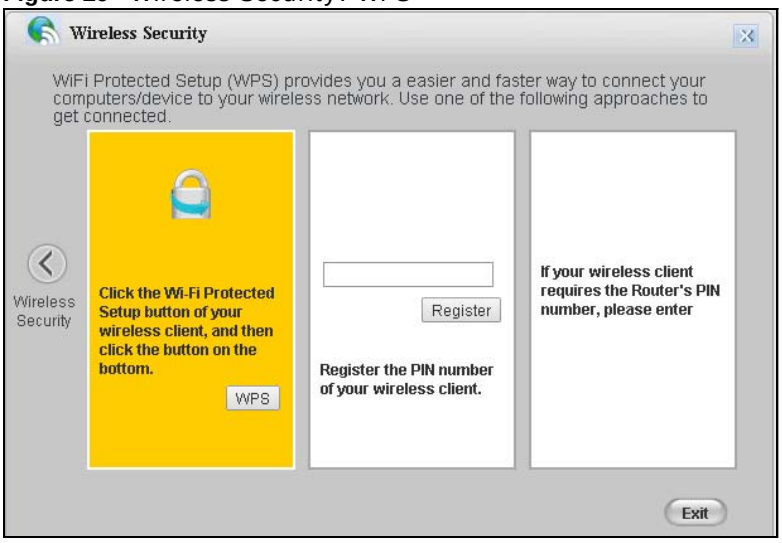
Table 15 Wireless Security

LABEL	DESCRIPTION
Wireless Radio	Choose whether you want to apply the wireless security to **2.4G Hz** or **5G Hz** wireless radio.
Wireless Network Name (SSID)	(Service Set IDentity) The SSID identifies the Service Set with which a wireless station is associated. Wireless stations associating to the access point (AP) must have the same SSID. Enter a descriptive name (up to 32 keyboard characters) for the wireless LAN.
Security mode	Select **WPA2-PSK** 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 appear on this screen. Select **No Security** to allow any client to connect to this network without authentication.
Wireless password	This field appears when you choose wither **WPA2-PSK** as the security mode. Type a pre-shared key from 8 to 63 case-sensitive keyboard characters.
Verify password	Type the password again to confirm.
Apply	Click **Apply** to save your changes back to the EMG2926-Q10A.
Cancel	Click **Cancel** to close this screen.
WPS	Click this to configure the WPS screen. You can transfer the wireless settings configured here (**Wireless Security** screen) to another wireless device that supports WPS.

4.4.6 WPS

Use this screen to add a wireless station to the network using WPS. Click **WPS** in the **Wireless Security** screen to open the following screen.

Figure 29 Wireless Security: WPS



The following table describes the labels on this screen.

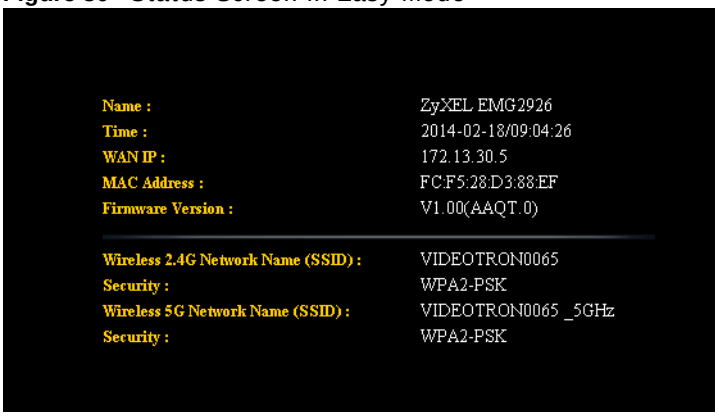
Table 16 Wireless Security: WPS

LABEL	DESCRIPTION
Wireless Security	Click this to go back to the **Wireless Security** screen.
WPS	Create a secure wireless network simply by pressing a button. The EMG2926-Q10A scans for a WPS-enabled device within the range and performs wireless security information synchronization. Note: After you click the **WPS** button on this screen, you have to press a similar button in the wireless station utility within 2 minutes. To add the second wireless station, you have to press these buttons on both the EMG2926-Q10A and the wireless station again after the first 2 minutes.
Register	Create a secure wireless network simply by entering a wireless client's PIN (Personal Identification Number) in the EMG2926-Q10A's interface and pushing this button. Type the same PIN number generated in the wireless station's utility. Then click **Register** to associate the two and perform the wireless security information synchronization.
Exit	Click **Exit** to close this screen.

4.5 Status Screen in Easy Mode

In the Network Map screen, click **Status** to view read-only information about the EMG2926-Q10A.

Figure 30 Status Screen in Easy Mode



The following table describes the labels on this screen.

Table 17 Status Screen in Easy Mode

ITEM	DESCRIPTION
Name	This is the name of the EMG2926-Q10A on the network.
Time	This is the current system date and time. The date is in YYYY:MM:DD (Year-Month-Day) format. The time is in HH:MM:SS (Hour:Minutes:Seconds) format.
WAN IP	This is the IP address of the WAN port.
MAC Address	This is the MAC address of the EMG2926-Q10A.

Table 17 Status Screen in Easy Mode (continued)

ITEM	DESCRIPTION
Firmware Version	This shows the firmware version of the EMG2926-Q10A. The firmware version format shows the trunk version, model code and release number.
Wireless 2.4G Network Name (SSID) Wireless 5G Network Name (SSID)	This shows the SSID of the wireless network. You can configure this in the Wireless Security screen (Section 4.4.5 on page 37; Section 9.2 on page 74).
Security	This shows the wireless security used by the EMG2926-Q10A.

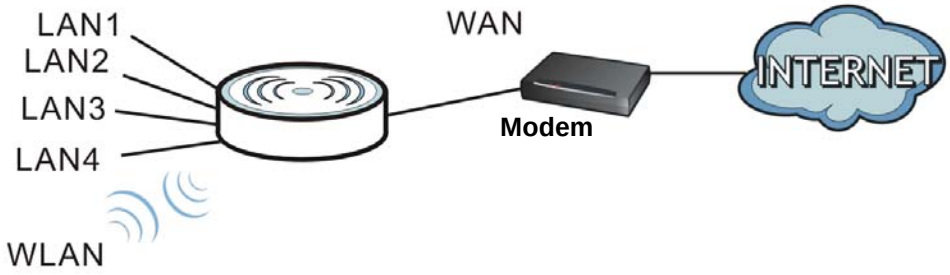
5

Router Mode

5.1 Overview

The EMG2926-Q10A is set to router mode by default. Routers are used to connect the local network to another network (for example, the Internet). In the figure below, the EMG2926-Q10A connects the local network (**LAN1** ~ **LAN4**) to the Internet.

Figure 31 EMG2926-Q10A Network

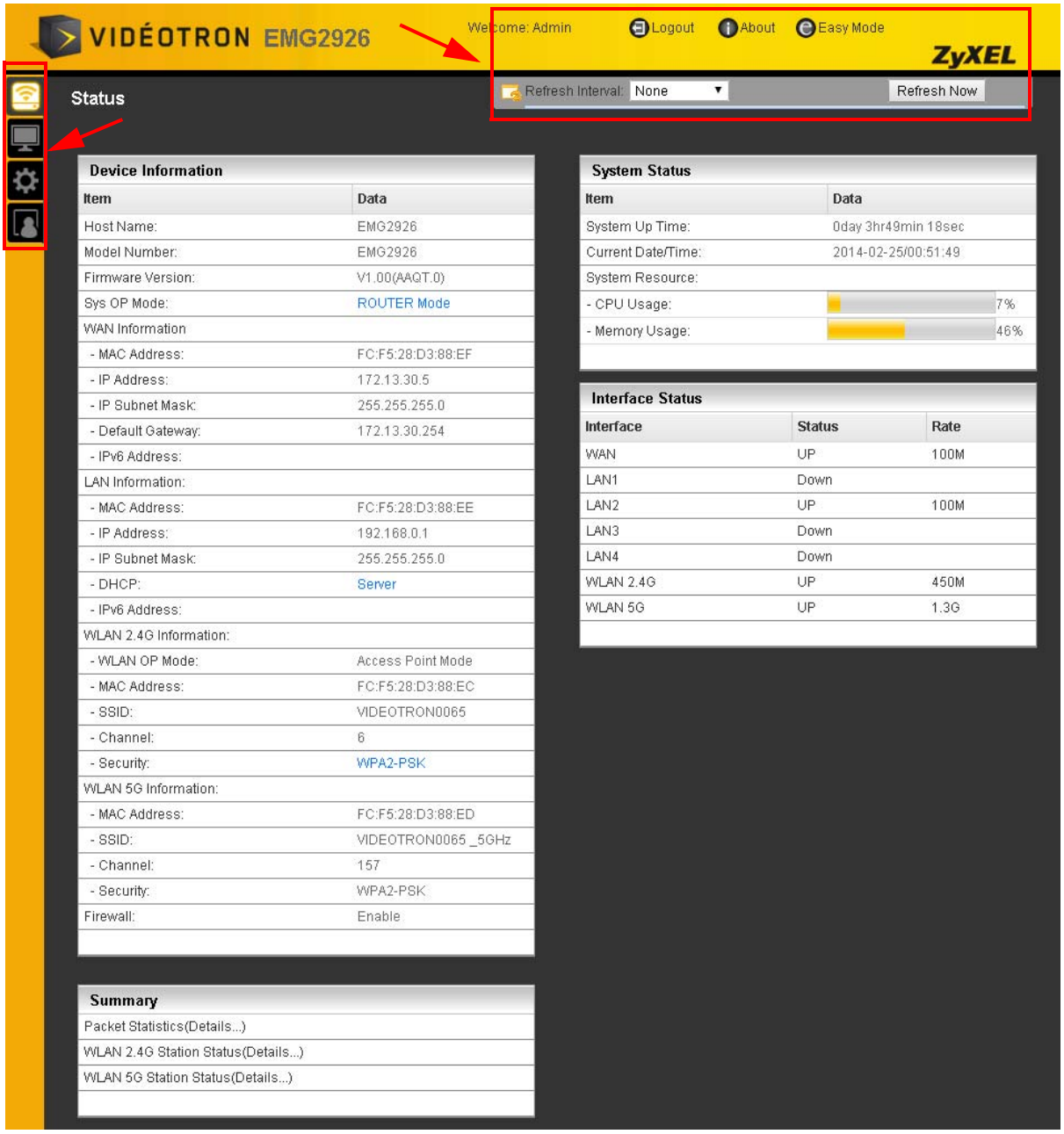


Note: The **Status** screen is shown after changing to the **Expert Mode** of the Web Configurator. It varies depending on the device mode of your EMG2926-Q10A.

5.2 Router Mode Status Screen

When you are in **Easy Mode**, click the **Expert Mode** icon (Expert Mode) in the upper right corner of the screen to go to **Expert Mode**. Click  in **Expert Mode** to open the status screen.

Figure 32 Status Screen: Router Mode



The following table describes the icons shown on the **Status** screen.

Table 18 Status Screen Icon Key

ICON	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.
Easy Mode	Click this icon to go to Easy Mode. See Chapter 4 on page 30.

Table 18 Status Screen Icon Key (continued)

ICON	DESCRIPTION
	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.
	Click this button to refresh the status screen statistics.
	Click this icon to see the **Status** page. The information on 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.
	Click this icon to see the **Maintenance** navigation menu.

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

Table 19 Status Screen: Router Mode

LABEL	DESCRIPTION
Device Information	
Host Name	This is the **System Name** you enter in the **Maintenance** > **General** screen. It is for identification purposes.
Model Number	This is the model name of your device.
Firmware Version	This is the firmware version and the date created.
Sys OP Mode	This is the device mode to which the EMG2926-Q10A is set - **Router Mode**.
WAN Information	
MAC Address	This shows the WAN Ethernet adapter MAC Address of your device.
IP Address	This shows the WAN port's IP address.
IP Subnet Mask	This shows the WAN port's subnet mask.
Default Gateway	This shows the WAN port's gateway IP address.
IPv6 Address	This shows the IPv6 address of the EMG2926-Q10A on the WAN.
LAN Information	
MAC Address	This shows the LAN Ethernet adapter MAC Address of your device.
IP Address	This shows the LAN port's IP address.
IP Subnet Mask	This shows the LAN port's subnet mask.
DHCP	This shows the LAN port's DHCP role - **Server** or **Disable**.
IPv6 Address	This shows the IPv6 address of the EMG2926-Q10A on the LAN.
WLAN 2.4G Information	
WLAN OP Mode	This is the device mode to which the EMG2926-Q10A's wireless LAN is set - **Access Point Mode**.
MAC Address	This shows the 2.4GHz wireless adapter MAC Address of your device.
SSID	This shows a descriptive name used to identify the EMG2926-Q10A in the 2.4GHz wireless LAN.
Channel	This shows the channel number which you select manually.
Security	This shows the level of wireless security the EMG2926-Q10A is using.
WLAN 5G Information	

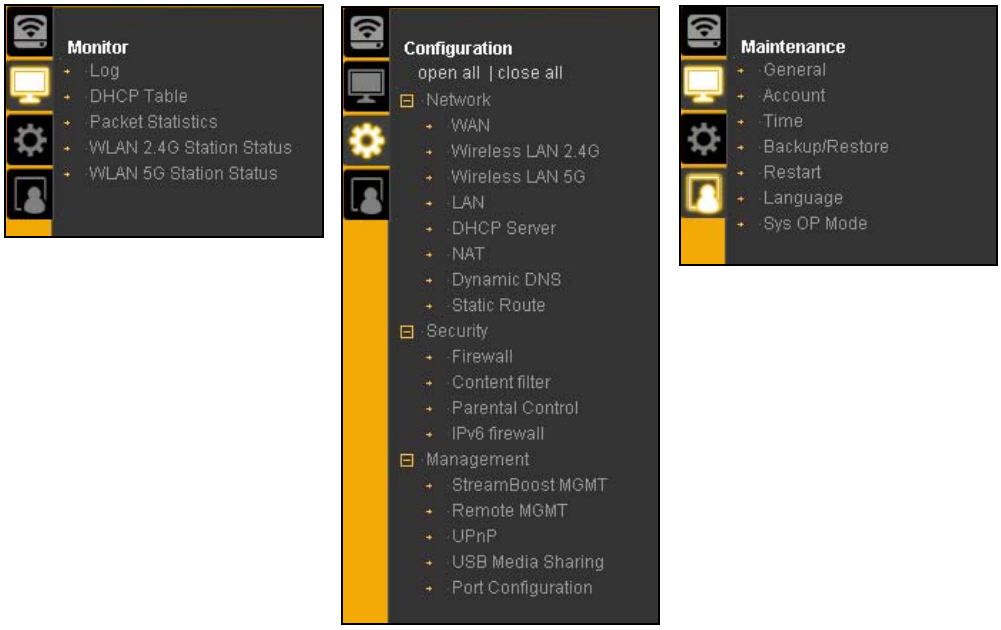
Table 19 Status Screen: Router Mode (continued)

LABEL	DESCRIPTION
MAC Address	This shows the 5GHz wireless adapter MAC Address of your device.
SSID	This shows a descriptive name used to identify the EMG2926-Q10A in the 5GHz wireless LAN.
Channel	This shows the channel number which you select manually.
Security	This shows the level of wireless security the EMG2926-Q10A is using.
Firewall	This shows whether the firewall is enabled or not.
Summary	
Packet Statistics	Click **Details...** to go to the **Monitor > Packet Statistics** screen (Section 7.4 on page 63). Use this screen to view port status and packet specific statistics.
WLAN 2.4G Station Status	Click **Details...** to go to the **Monitor > WLAN 2.4G Station Status** screen (Section 7.5 on page 64). Use this screen to view the wireless stations that are currently associated to the EMG2926-Q10A's 2.4GHz wireless LAN.
WLAN 5G Station Status	Click **Details...** to go to the **Monitor > WLAN 5G Station Status** screen (Section 7.5 on page 64). Use this screen to view the wireless stations that are currently associated to the EMG2926-Q10A's 5GHz wireless LAN.
System Status	
Item	This column shows the type of data the EMG2926-Q10A is recording.
Data	This column shows the actual data recorded by the EMG2926-Q10A.
System Up Time	This is the total time the EMG2926-Q10A has been on.
Current Date/Time	This field displays your EMG2926-Q10A's present date and time.
System Resource	
- CPU Usage	This displays what percentage of the EMG2926-Q10A's processing ability is currently being used. When this percentage is close to 100%, the EMG2926-Q10A is running at full load, and the throughput is not going to improve anymore. If you want some applications to have more throughput, you should turn off other applications (for example, using bandwidth management.)
- Memory Usage	This shows what percentage of the heap memory the EMG2926-Q10A is using.
Interface Status	
Interface	This displays the EMG2926-Q10A port types. The port types are: **WAN**, **LAN** and **WLAN**.
Status	For the LAN and WAN ports, this field displays **Down** (line is down) or **Up** (line is up or connected). For the 2.4GHz/5GHz WLAN, it displays **Up** when the 2.4GHz/5GHz WLAN is enabled or **Down** when the 2.4G/5G WLAN is disabled.
Rate	For the LAN ports, this displays the port speed and duplex setting or **N/A** when the line is disconnected. For the WAN port, it displays the port speed and duplex setting if you're using Ethernet encapsulation. This field displays **N/A** when the line is disconnected. For the 2.4GHz/5GHz WLAN, it displays the maximum transmission rate when the 2.4GHz/5GHz WLAN is enabled and **N/A** when the WLAN is disabled.

5.2.1 Navigation Panel

Use the sub-menus on the navigation panel to configure EMG2926-Q10A features.

Figure 33 Navigation Panel: Router Mode



The following table describes the sub-menus.

Table 20 Navigation Panel: Router Mode

LINK	TAB	FUNCTION
Status		This screen shows the EMG2926-Q10A's general device, system and interface status information. Use this screen to access summary statistics tables.
MONITOR		
Log	View Log	Use this screen to view the list of activities recorded by your EMG2926-Q10A.
	Log Setting	Use this screen to select the logs you wish to display.
DHCP Table		Use this screen to view current DHCP client information.
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 wireless stations that are currently associated to the EMG2926-Q10A's 2.4GHz wireless LAN.
WLAN 5G Station Status	Association List	Use this screen to view the wireless stations that are currently associated to the EMG2926-Q10A's 5GHz wireless LAN.
CONFIGURATION		
Network		
WAN	Internet Connection	This screen allows you to configure ISP parameters, WAN IP address assignment, DNS servers and the WAN MAC address.
	Advanced	Use this screen to configure other advanced properties.

Table 20 Navigation Panel: Router Mode (continued)

LINK	TAB	FUNCTION
Wireless LAN 2.4G/5G	General	Use this screen to enable the wireless LAN and configure wireless LAN and wireless security settings.
	More AP	Use this screen to configure multiple BSSs on the EMG2926-Q10A.
	MAC Filter	Use the MAC filter screen to configure the EMG2926-Q10A to block access to devices or block the devices from accessing the EMG2926-Q10A.
	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.
LAN	IP	Use this screen to configure LAN IP address and subnet mask.
	IP Alias	Use this screen to have the EMG2926-Q10A apply IP alias to create LAN subnets.
	IPv6 LAN	Use this screen to configure the IPv6 address for the EMG2926-Q10A on the LAN.
DHCP Server	General	Use this screen to enable the EMG2926-Q10A's DHCP server.
	Advanced	Use this screen to assign IP addresses to specific individual computers based on their MAC addresses and to have DNS servers assigned by the DHCP server.
	Client List	Use this screen to view information related to your DHCP status.
NAT	General	Use this screen to enable NAT.
	Port Forwarding	Use this screen to configure servers behind the EMG2926-Q10A and forward incoming service requests to the server(s) on your local network.
	Port Trigger	Use this screen to change your EMG2926-Q10A's port triggering settings.
Dynamic DNS	Dynamic DNS	Use this screen to set up dynamic DNS.
Static Route	Static Route	Use this screen to configure IP static routes.
Security		
Firewall	General	Use this screen to activate/deactivate the firewall.
	Services	This screen shows a summary of the IPv4 firewall rules, and allows you to edit/add an IPv4 firewall rule.
Content Filter	Content Filter	Use this screen to restrict web features and designate a trusted computer.
Parental Control		Use this screen to block certain web features and sites containing certain keywords in the URL.
IPv6 firewall	Services	Use this screen to configure IPv6 firewall rules.
Management		

Table 20 Navigation Panel: Router Mode (continued)

LINK	TAB	FUNCTION
Streamboost Management	Network	Use this screen to view transmission data rates between the EMG2926-Q10A and the Internet or connected devices.
	Bandwidth	Use this screen to configure the maximum allowable bandwidth and enable automatic updates.
	Priorities	Use this screen to change the priority of the connected devices.
	Up Time	Use this screen to view the top five traffic flows transmitting to/from the selected LAN device(s).
	Downloads	Use this screen to view the type and percentage of most download traffic.
	All Events	Use this screen to view the time at which a traffic flow is given bandwidth for optimal, good or best-effort performance.
Remote Management	WWW	Use this screen to configure through which interface(s) and from which IP address(es) users can use HTTP to manage the EMG2926-Q10A.
	SNMP	Use this screen to change your EMG2926-Q10A's SNMP settings.
	Wake On LAN	Use this screen to enable Wake on LAN to remotely turn on a device on the local network.
UPnP	General	Use this screen to enable UPnP on the EMG2926-Q10A.
USB Media Sharing	DLNA	Use this screen to have the EMG2926-Q10A function as a DLNA-compliant media server, that lets DLNA-compliant media clients play video, audio, and photo content files stored on the connected USB storage device.
	SAMBA	Use this screen to enable file sharing through the EMG2926-Q10A.
	FTP	Use this screen to have the EMG2926-Q10A act as a FTP server.
Port Configuration		Use this screen to change the Ethernet port speed and duplex settings.
MAINTENANCE		
General	General	Use this screen to view and change administrative settings such as system and domain names.
Account	Account Setup	Use this screen to change the password of your EMG2926-Q10A.
Time	Time Setting	Use this screen to change your EMG2926-Q10A's time and date.
Backup/ Restore	Backup/ Restore	Use this screen to backup and restore the configuration or reset the factory defaults to your EMG2926-Q10A.
Restart	System Restart	This screen allows you to reboot the EMG2926-Q10A without turning the power off.
Language	Language	This screen allows you to select the language you prefer.
Sys OP Mode	Sys OP Mode	This screen allows you to select whether your device acts as a router, or an access point.

6

Tutorials

6.1 Overview

This chapter provides tutorials for setting up your EMG2926-Q10A.

- Set Up a Wireless Network with WPS
- Configure Wireless Security without WPS
- Using Multiple SSIDs on the EMG2926-Q10A

6.2 Set Up a Wireless Network with WPS

This section gives you an example of how to set up a wireless network using WPS. This example uses the EMG2926-Q10A as the AP and NWD210N as the wireless client which connects to a notebook.

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

There are two WPS methods for creating a secure connection. This tutorial shows you how to do both.

- **Push Button Configuration (PBC)** - create a secure wireless network simply by pressing a button. See Section 6.2.1 on page 48.This is the easier method.
- **PIN Configuration** - create a secure wireless network simply by entering a wireless client's PIN (Personal Identification Number) in the EMG2926-Q10A's interface. See Section 6.2.2 on page 49. This is the more secure method, since one device can authenticate the other.

6.2.1 Push Button Configuration (PBC)

1. Make sure that your EMG2926-Q10A is turned on. Make sure the **WIFI** button (at the side panel of the EMG2926-Q10A) is pushed in, and that the device is placed within range of your notebook.
2. Make sure that you have installed the wireless client (this example uses the NWD210N) driver and utility in your notebook.
3. In the wireless client's utility, find the WPS settings. Enable WPS and press the WPS button (**Start** or **WPS** button)
4. Log into EMG2926-Q10A's Web Configurator and press the **Push Button** in the **Configuration > Network > Wireless LAN 2.4G > WPS Station** screen.

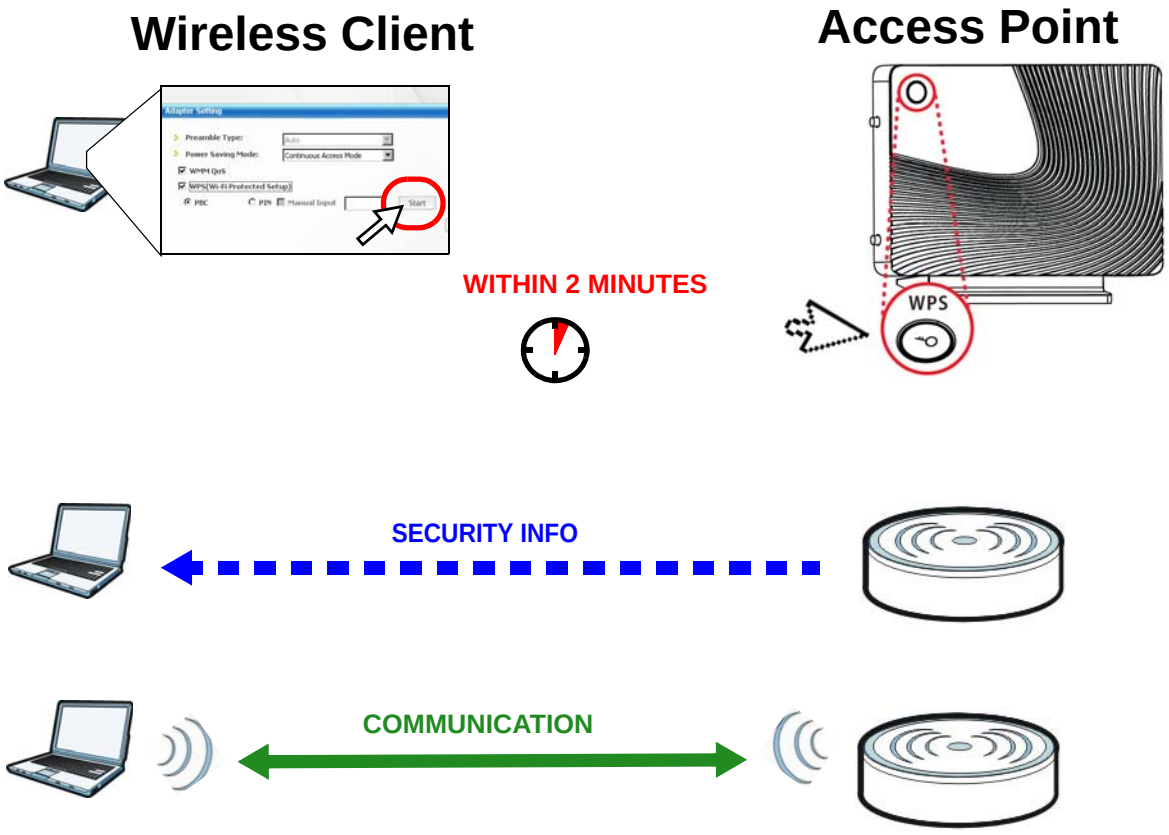
Note: Your EMG2926-Q10A has a WPS button located on its panel, as well as a WPS button in its configuration utility. Both buttons have exactly the same function; you can use one or the other.

Note: It doesn't matter which button is pressed first. You must press the second button within two minutes of pressing the first one.

The EMG2926-Q10A sends the proper configuration settings to the wireless client. This may take up to two minutes. Then the wireless client is able to communicate with the EMG2926-Q10A securely.

The following figure shows you an example of how to set up wireless network and security by pressing a button on both EMG2926-Q10A and wireless client (the NWD210N in this example).

Figure 34 Example WPS Process: PBC Method



6.2.2 PIN Configuration

When you use the PIN configuration method, you need to use both EMG2926-Q10A's configuration interface and the client's utilities.

1 Launch your wireless client's configuration utility. Go to the WPS settings and select the PIN method to get a PIN number.

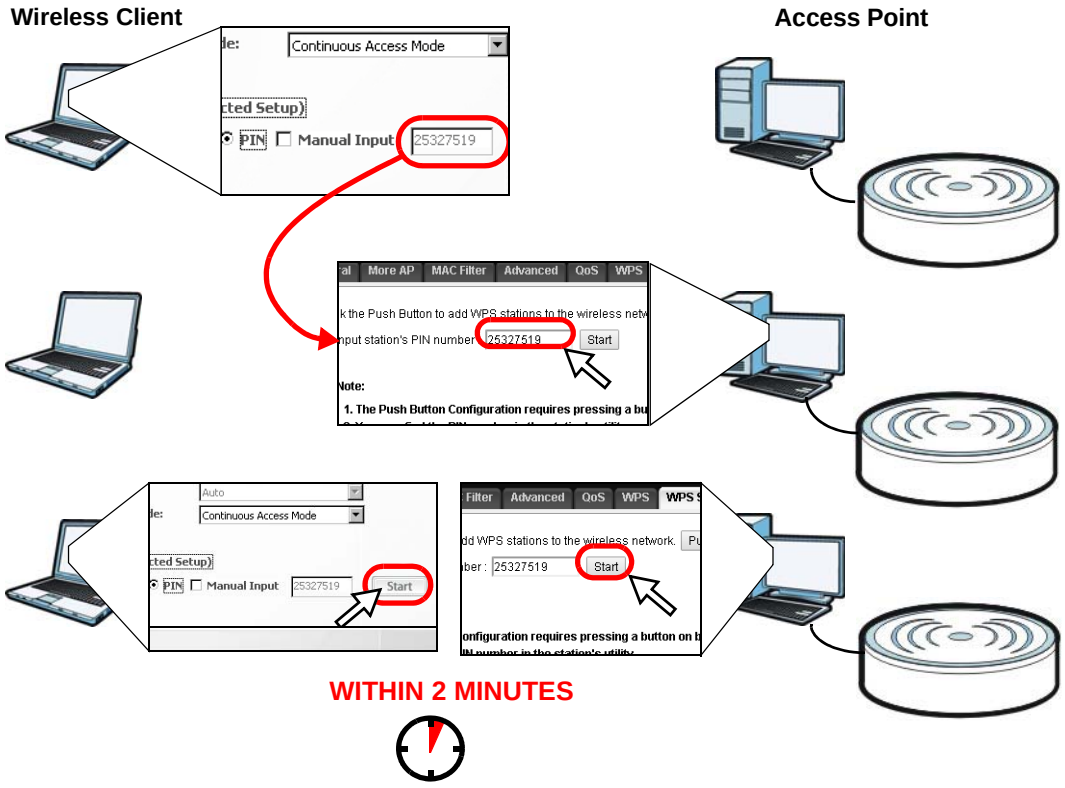
2 Enter the PIN number to the **PIN** field in the **Configuration > Network > Wireless LAN 2.4G > WPS Station** screen on the EMG2926-Q10A.

3 Click **Start** buttons (or button next to the PIN field) on both the wireless client utility screen and the EMG2926-Q10A's **WPS Station** screen within two minutes.

The EMG2926-Q10A authenticates the wireless client and sends the proper configuration settings to the wireless client. This may take up to two minutes. Then the wireless client is able to communicate with the EMG2926-Q10A securely.

The following figure shows you an example of how to set up wireless network and security on EMG2926-Q10A and wireless client (ex. NWD210N in this example) by using the PIN method.

Figure 35 Example WPS Process: PIN Method



6.3 Configure Wireless Security without WPS

This example shows you how to configure wireless security settings with the following parameters on your EMG2926-Q10A.

SSID	SSID_Example3
Channel	6
Security	WPA2-PSK (Pre-Shared Key: ThisismyWPA-PSKpre-sharedkey)

Follow the steps below to configure the wireless settings on your EMG2926-Q10A.

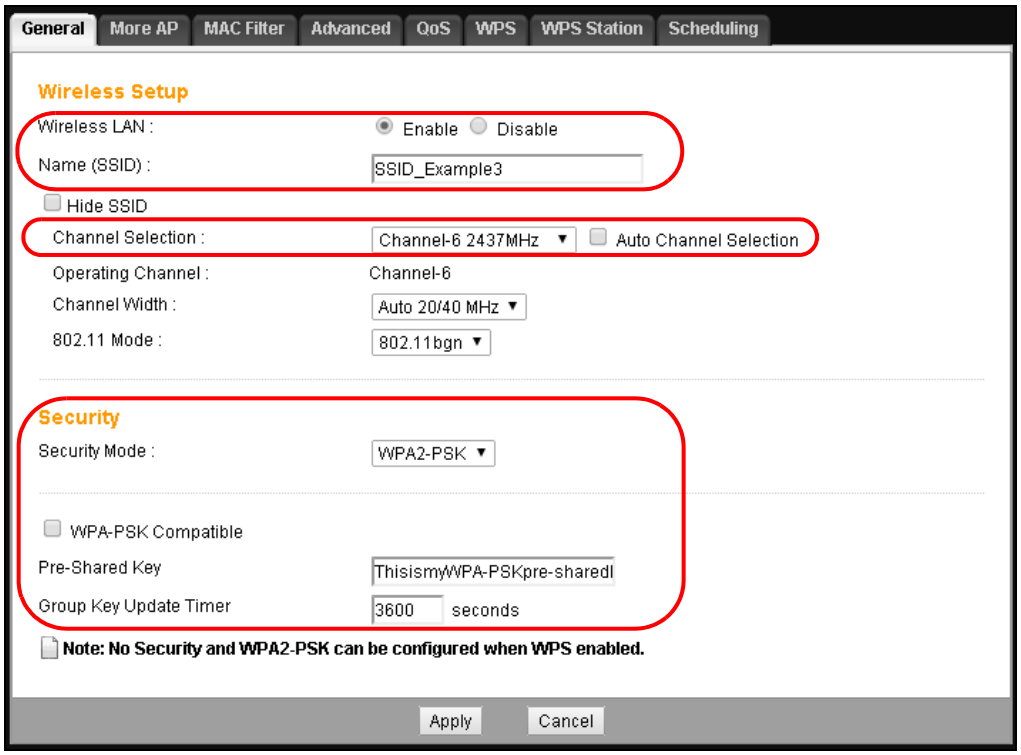
The instructions require that your hardware be connected (see the Quick Start Guide) and that you be logged into the Web Configurator through your LAN connection (see Section 2.2 on page 17).

1 Make sure the **WIFI** switch (at the side panel of the EMG2926-Q10A) is set to **ON**.

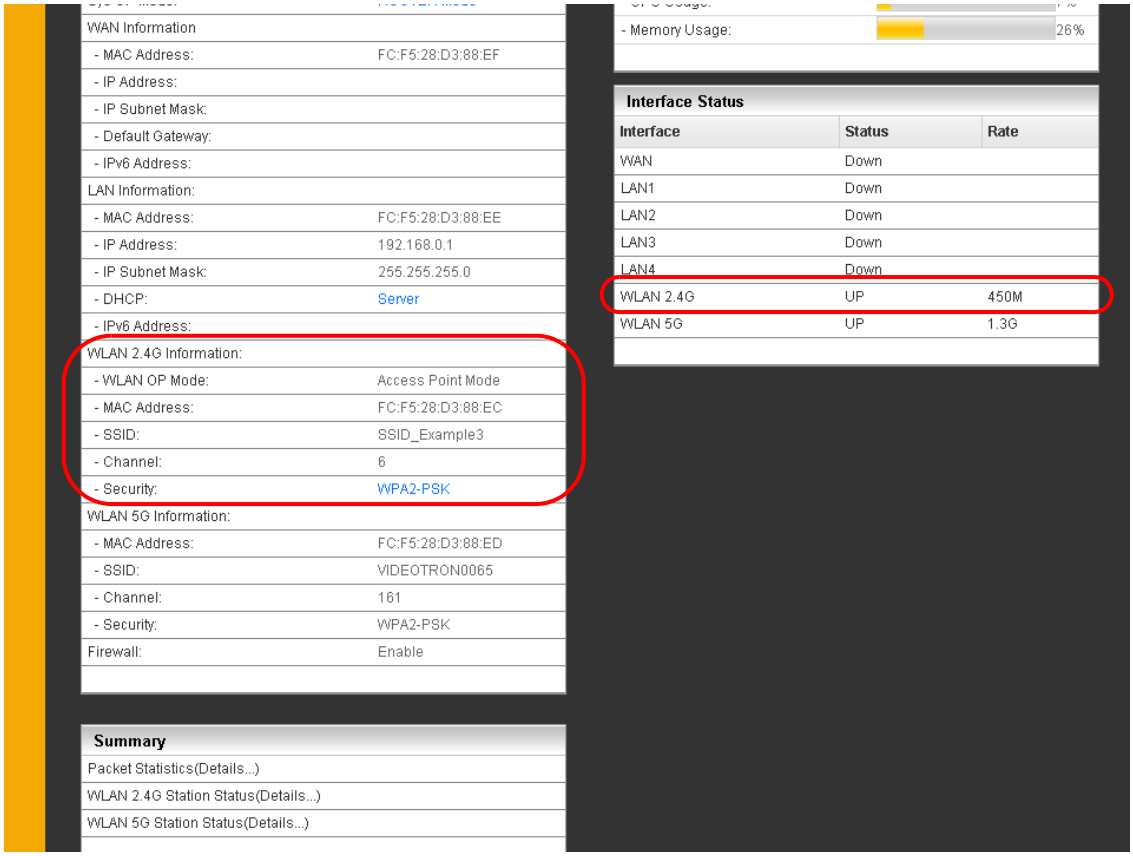
2 Open the **Configuration > Network** > **Wireless LAN 2.4G > General** screen in the AP's Web Configurator.

3 Confirm that the wireless LAN is enabled on the EMG2926-Q10A.

4 Enter **SSID_Example3** as the SSID and select **Channel-06** as the channel. Set security mode to **WPA2-PSK** and enter **ThisismyWPA-PSKpre-sharedkey** in the **Pre-Shared Key** field. Click **Apply**.



5 Open the **Status** screen. Verify your wireless and wireless security settings under **Device Information** and check if the WLAN connection is **UP** under **Interface Status**.



6.3.1 Configure Your Notebook

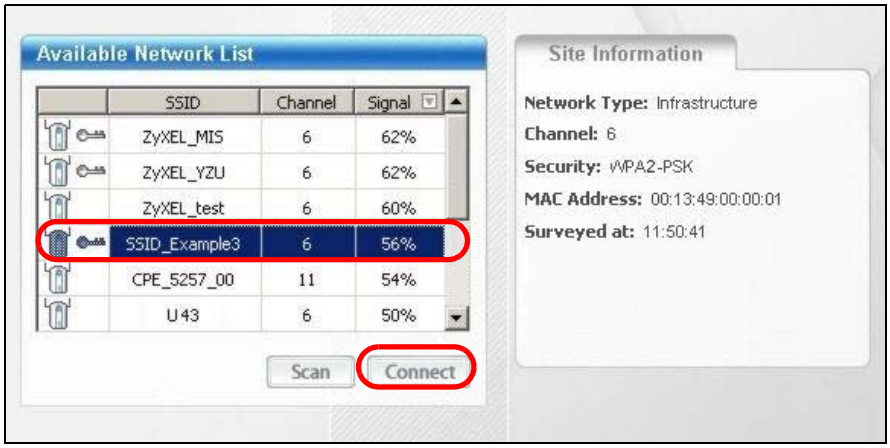
Note: We use the ZyXEL NWD2205 wireless adapter utility screens as an example for the wireless client. The screens may vary for different models.

1 The EMG2926-Q10A supports IEEE 802.11a, IEEE 802.11b, IEEE 802.11g and IEEE 802.11n wireless clients. Make sure that your notebook or computer's wireless adapter supports one of these standards.

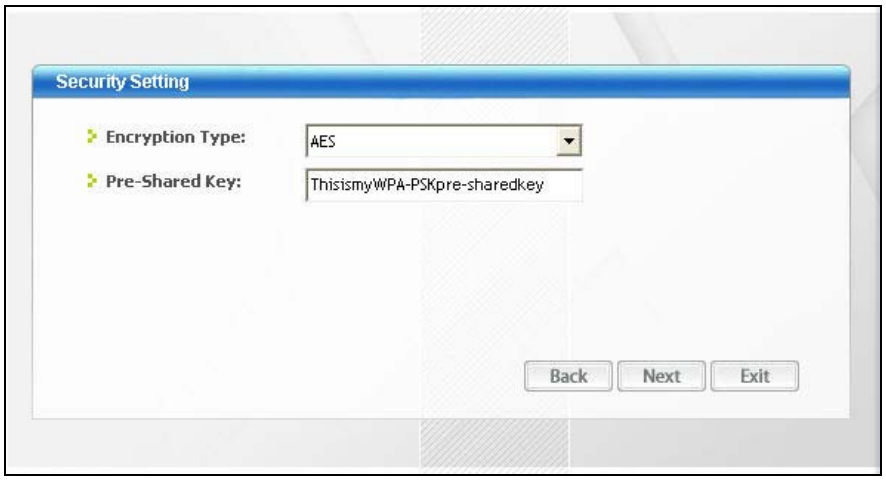
2 Wireless adapters come with software sometimes called a "utility" that you install on your computer. See your wireless adapter's User's Guide for information on how to do that.

3 After you've installed the utility, open it. If you cannot see your utility's icon on your screen, go to **Start > Programs** and click on your utility in the list of programs that appears. The utility displays a list of APs within range, as shown in the example screen below.

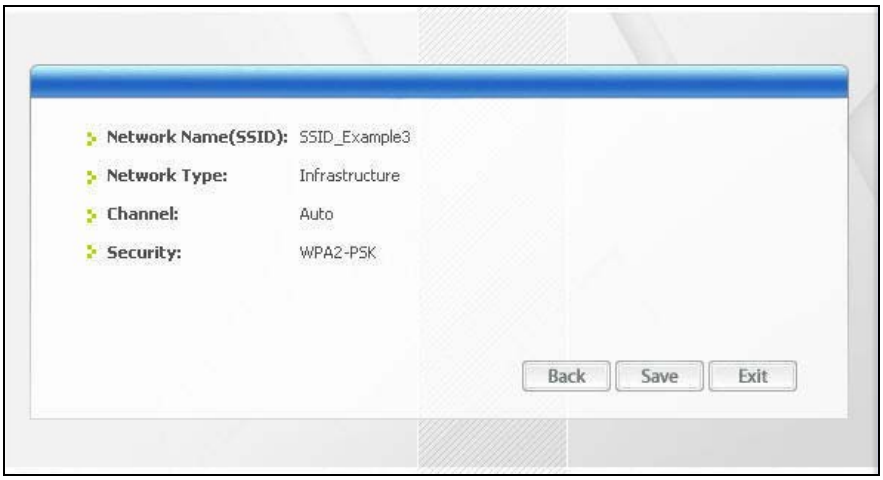
4 Select SSID_Example3 and click **Connect**.



5 Select **AES** and type the security key in the following screen. Click **Next**.



6 The **Confirm Save** window appears. Check your settings and click **Save** to continue.



7 Check the status of your wireless connection in the screen below. If your wireless connection is weak or you have no connection, see the Troubleshooting section of this User's Guide.

If your connection is successful, open your Internet browser and enter http://www.zyxel.com or the URL of any other web site in the address bar. If you are able to access the web site, your wireless connection is successfully configured.

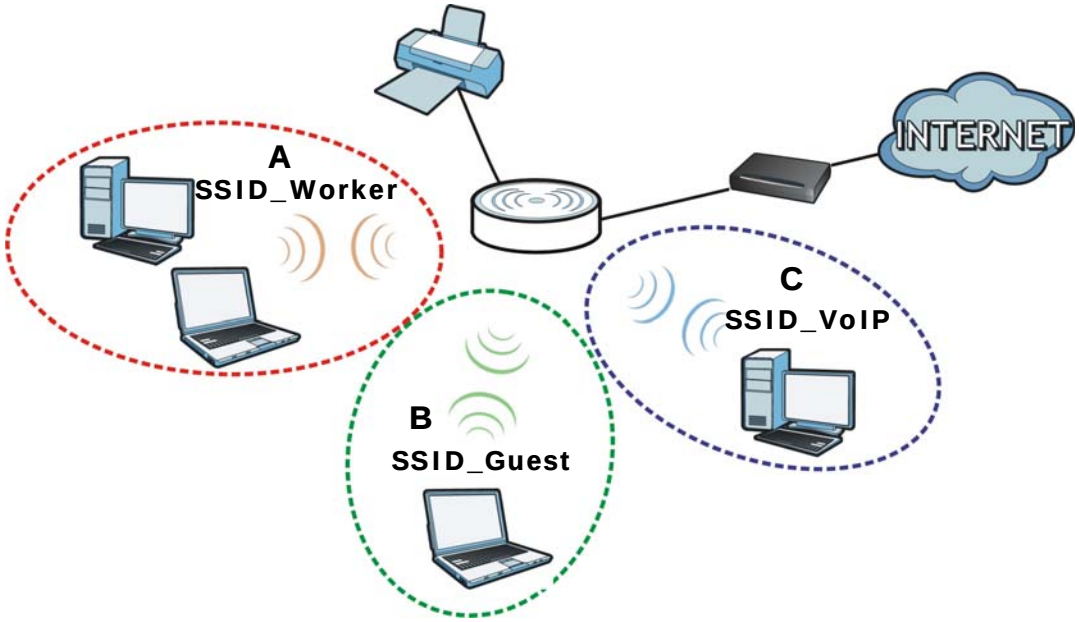
6.4 Using Multiple SSIDs on the EMG2926-Q10A

You can configure more than one SSID on a EMG2926-Q10A. See Section 9.4 on page 82.

This allows you to configure multiple independent wireless networks on the EMG2926-Q10A as if there were multiple APs (virtual APs). Each virtual AP has its own SSID, wireless security type and MAC filtering settings. That is, each SSID on the EMG2926-Q10A represents a different access point/wireless network to wireless clients in the network.

Clients can associate only with the SSIDs for which they have the correct security settings. Clients using different SSIDs can access the Internet and the wired network behind the EMG2926-Q10A (such as a printer).

For example, you may set up three wireless networks (**A**, **B** and **C**) in your office. **A** is for workers, **B** is for guests and **C** is specific to a VoIP device in the meeting room.



6.4.1 Configuring Security Settings of Multiple SSIDs

The EMG2926-Q10A is in router mode by default.

This example shows you how to configure the SSIDs with the following parameters on your EMG2926-Q10A (in router mode).

SSID	SECURITY TYPE	KEY	MAC FILTERING
SSID_Worker	WPA2-PSK WPA Compatible	DoNotStealMyWirelessNetwork	Disable
SSID_VoIP	WPA-PSK	VoIPOnly12345678	Allow 00:A0:C5:01:23:45
SSID_Guest	WPA-PSK	keyexample123	Disable

1 Connect your computer to the LAN port of the EMG2926-Q10A using an Ethernet cable.

2 The default IP address of the EMG2926-Q10A in router mode is “192.168.0.1”. In this case, your computer must have an IP address in the range between “192.168.0.2” and “192.168.0.254”.

3 Click **Start > Run** on your computer in Windows. Type “cmd” in the dialog box. Enter “ipconfig” to show your computer’s IP address.

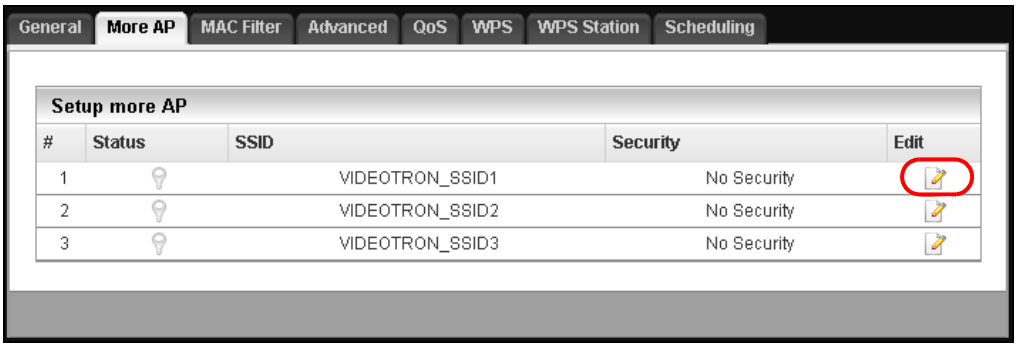
4 After you’ve set up your computer’s IP address, open a web browser such as Internet Explorer and type “http://192.168.0.1” as the web address in your web browser.

5 Enter “admin” (default) as the user name and click **Login**.

6 Type a new password and retype it to confirm, then click **Apply**. Otherwise, click **Ignore**.

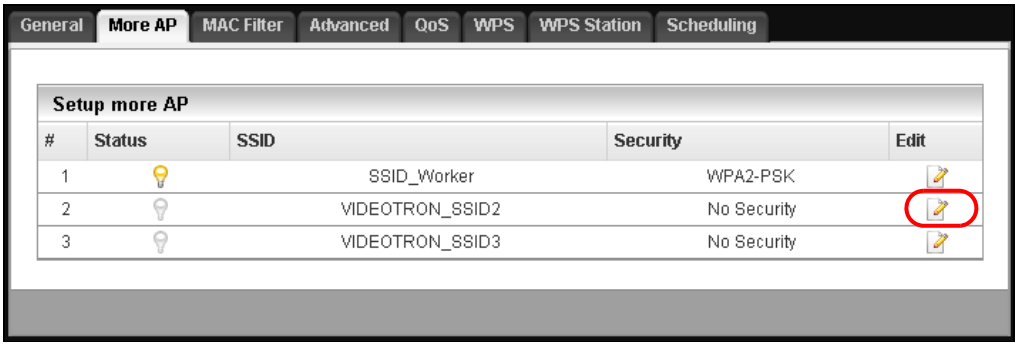
7 The **Easy Mode** appears. Click **Expert Mode** in the navigation panel.

8 Go to **Configuration > Network > Wireless LAN 2.4G > More AP**. Click the **Edit** icon of the first entry to configure wireless and security settings for **SSID_Worker**.

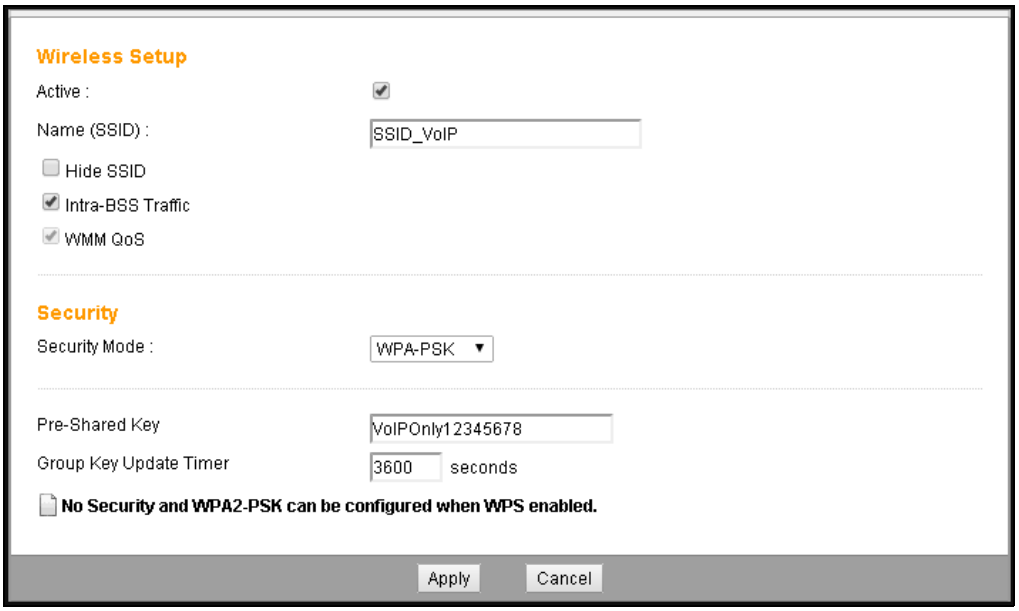


9 Configure the screen as follows. In this example, you enable **Intra-BSS Traffic** for **SSID_Worker** to allow wireless clients on the same wireless network to communicate with each other. Click **Apply**.

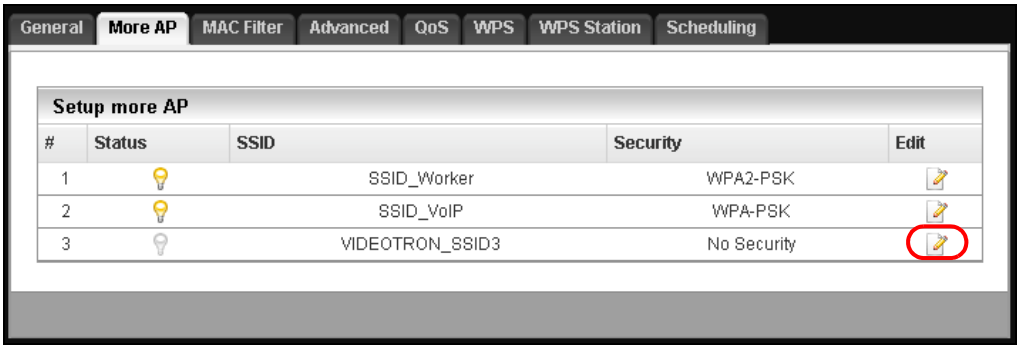
10 Click the **Edit** icon of the second entry to configure wireless and security settings for **SSID_VoIP**.



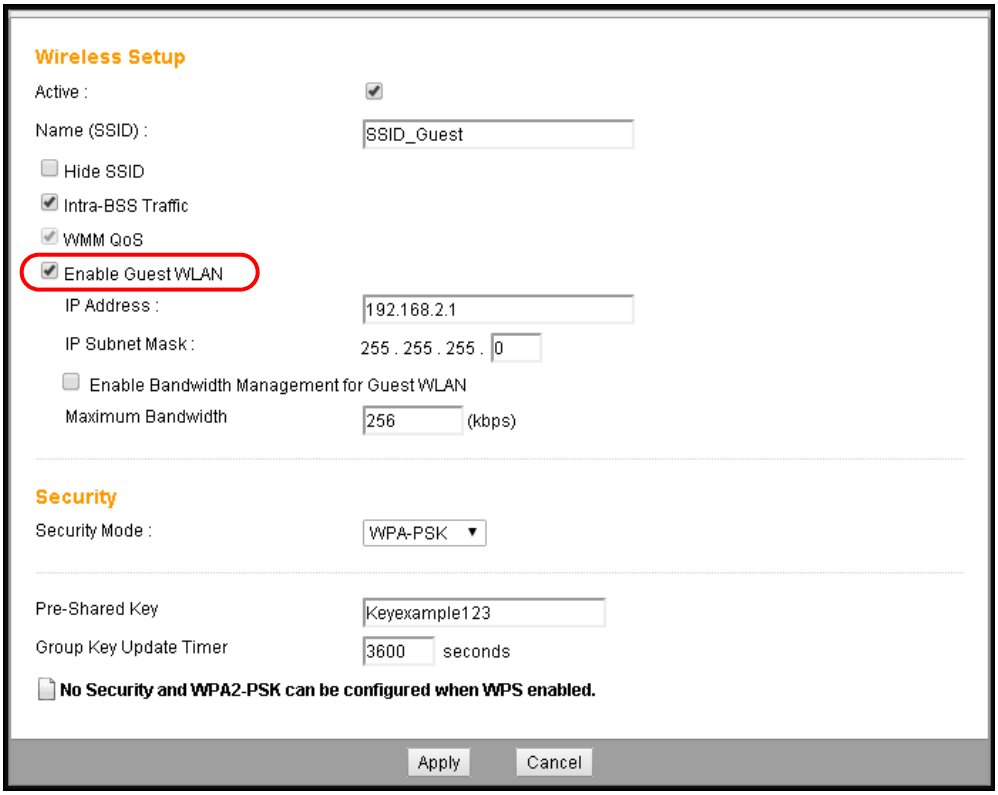
11 Configure the screen as follows. You do not enable **Intra-BSS Traffic** for **SSID_VoIP**. Click **Apply**.



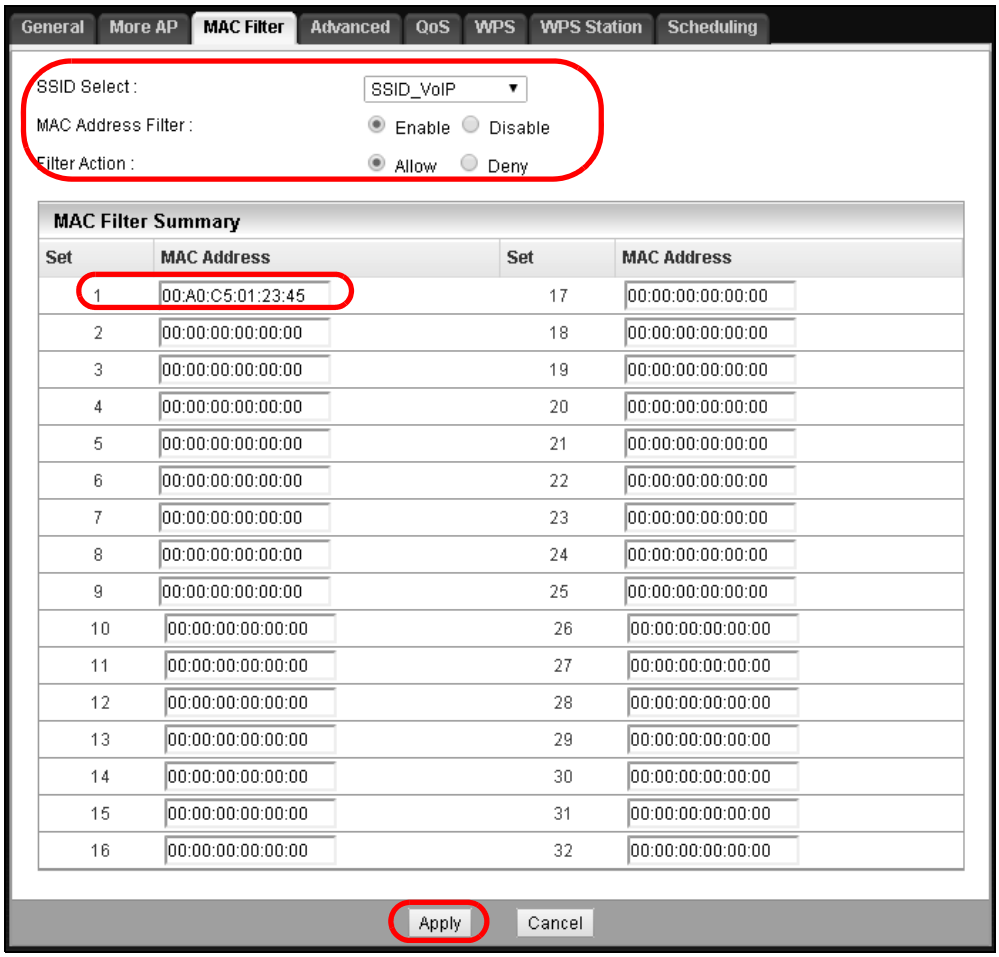
12 Click the **Edit** icon of the third entry to configure wireless and security settings for **SSID_Guest**.



13 Configure the screen as follows. In this example, you enable **Intra-BSS Traffic** for **SSID_Guest** to allow wireless clients on the same wireless network to communicate with each other. Select **Enable Guest WLAN** to allow clients to access the Internet only. Click **Apply**.



14 Click the **MAC Filter** tab to configure MAC filtering for the **SSID_VoIP** wireless network. Select **SSID_VoIP** from the **SSID Select** drop-down list, enable MAC address filtering and set the **Filter Action** to **Allow**. Enter the VoIP device's MAC address in the **Mac Address** field and click **Apply** to allow only the VoIP device to associate with the EMG2926-Q10A using this SSID.


General
More AP
MAC Filter
Advanced
QoS
WPS
WPS Station
Scheduling
SSID Select :
SSID_VoIP
MAC Address Filter :
Enable
Disable
Filter Action :
Allow
Deny
MAC Filter Summary
Set
MAC Address
Set
MAC Address
1 00:A0:C5:01:23:45
17 00:00:00:00:00:00
2 00:00:00:00:00:00
18 00:00:00:00:00:00
3 00:00:00:00:00:00
19 00:00:00:00:00:00
4 00:00:00:00:00:00
20 00:00:00:00:00:00
5 00:00:00:00:00:00
21 00:00:00:00:00:00
6 00:00:00:00:00:00
22 00:00:00:00:00:00
7 00:00:00:00:00:00
23 00:00:00:00:00:00
8 00:00:00:00:00:00
24 00:00:00:00:00:00
9 00:00:00:00:00:00
25 00:00:00:00:00:00
10 00:00:00:00:00:00
26 00:00:00:00:00:00
11 00:00:00:00:00:00
27 00:00:00:00:00:00
12 00:00:00:00:00:00
28 00:00:00:00:00:00
13 00:00:00:00:00:00
29 00:00:00:00:00:00
14 00:00:00:00:00:00
30 00:00:00:00:00:00
15 00:00:00:00:00:00
31 00:00:00:00:00:00
16 00:00:00:00:00:00
32 00:00:00:00:00:00
Apply
Cancel

PART II
Technical Reference

7

Monitor

7.1 Overview

This chapter discusses read-only information related to the device state of the EMG2926-Q10A.

To access the **Monitor** screens, go to **Expert Mode** after login, then click  .

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 EMG2926-Q10A.

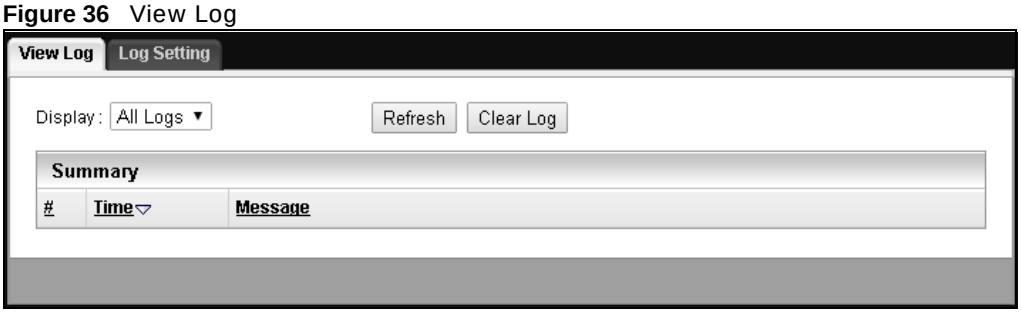
7.2 The Log Screen

The Web Configurator allows you to look at all of the EMG2926-Q10A's logs in one location and select the logs you wish to display.

7.2.1 View Log

Use the **View Log** screen to see the logged messages for the EMG2926-Q10A. The log wraps around and deletes the old entries after it fills. Select what logs you want to see from the **Display** drop list. The log choices depend on your settings in the **Log Setting** screen. Click **Refresh** to renew the log screen. Click **Clear Log** to delete all the logs.

Figure 36 View Log



7.2.2 Log Setting

You can configure which logs to display on 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.

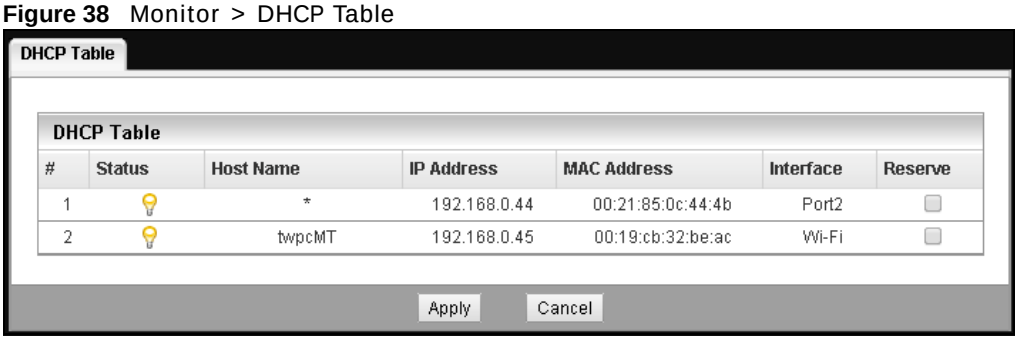
Figure 37 Log Settings

7.3 DHCP Table

DHCP (Dynamic Host Configuration Protocol, RFC 2131 and RFC 2132) allows individual clients to obtain TCP/IP configuration at start-up from a server. You can configure the EMG2926-Q10A's LAN as a DHCP server or disable it. When configured as a server, the EMG2926-Q10A provides the TCP/IP configuration for the clients. If DHCP service is disabled, you must have another DHCP server on that network, or else the computer must be manually configured.

Click **Monitor > DHCP Table** or **Configuration > Network > DHCP Server > Client List**. Read-only information here relates to your DHCP status. The DHCP table shows current DHCP client information (including **MAC Address**, and **IP Address**) of all network clients using the EMG2926-Q10A's DHCP server.

Figure 38 Monitor > DHCP Table



The following table describes the labels on this screen.

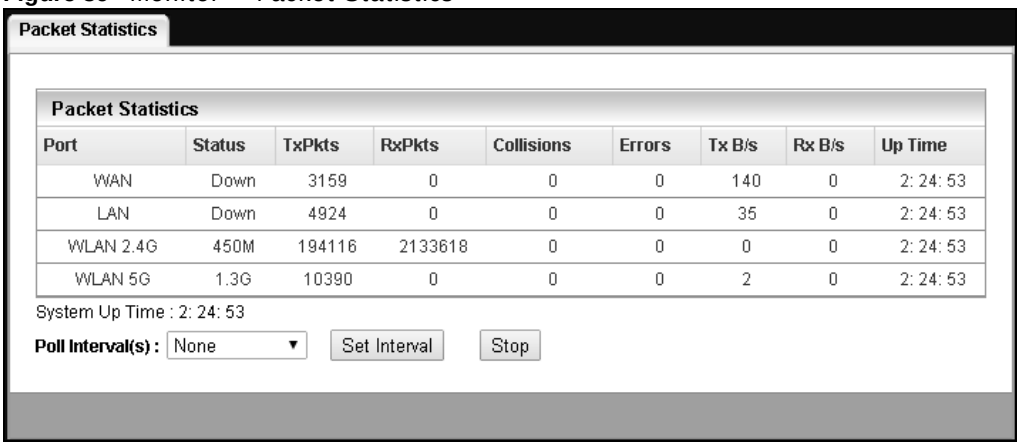
Table 21 Monitor > DHCP Table

LABEL	DESCRIPTION
#	This is the index number of the host computer.
Status	This field displays whether the connection to the host computer is up (a yellow bulb) or down (a gray bulb).
Host Name	This field displays the computer's host name.
IP Address	This field displays the IP address relative to the # field listed above.
MAC Address	This field shows the MAC address of the computer with the name in the **Host Name** field. Every Ethernet device has a unique MAC (Media Access Control) address which identifies a device. The MAC address is assigned at the factory and consists of six pairs of hexadecimal characters, for example, 00:A0:C5:00:00:02.
Interface	This field shows the interface to which the host computer is connected.
Reserve	Select this if you want to reserve the IP address for this specific MAC address.
Apply	Click **Apply** to save your changes back to the EMG2926-Q10A.
Cancel	Click **Cancel** to reload the previous configuration for this screen.

7.4 Packet Statistics

Click **Monitor > Packet Statistics** or the **Packet Statistics (Details...)** hyperlink in the **Status** screen. 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 39 Monitor > Packet Statistics



The following table describes the labels on this screen.

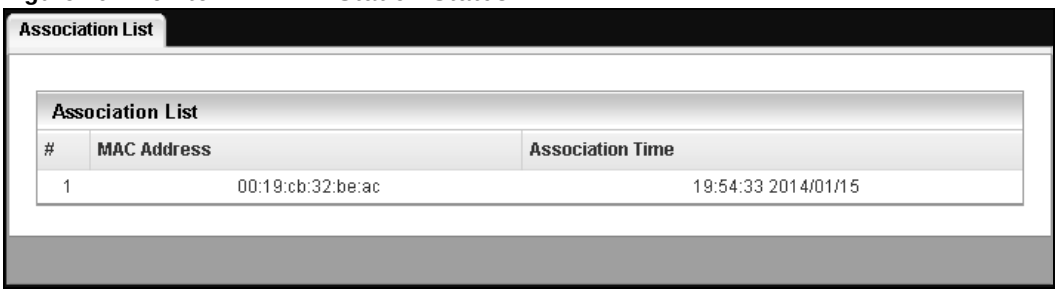
Table 22 Monitor > Packet Statistics

LABEL	DESCRIPTION
Port	This is the EMG2926-Q10A's interface type.
Status	For the LAN ports, this displays the port speed and duplex setting or **Down** when the line is disconnected. For the WAN port, it displays the port speed and duplex setting if you're using Ethernet encapsulation and **Idle** (line (ppp) idle), **Dial** (starting to trigger a call) and **Drop** (dropping a call) if you're using PPPoE encapsulation. This field displays **Down** when the line is disconnected. For the 2.4GHz or 5GHz 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 EMG2926-Q10A has been on for each session.
System Up Time	This is the total time the EMG2926-Q10A 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.

7.5 WLAN Station Status

Click **Monitor > WLAN 2.4G/5G Station Status** or the **WLAN 2.4G/5G Station Status (Details...)** hyperlink in the **Status** screen. View the wireless stations that are currently associated to the EMG2926-Q10A's 2.4GHz or 5GHz wireless network 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 AP (or wireless router) using the same SSID, channel and security settings.

Figure 40 Monitor > WLAN Station Status



The following table describes the labels on this screen.

Table 23 Monitor > WLAN Station Status

LABEL	DESCRIPTION
#	This is the index number of an associated wireless station.
MAC Address	This field displays the MAC address of an associated wireless station.
Association Time	This field displays the time a wireless station first associated with the EMG2926-Q10A's WLAN.

8

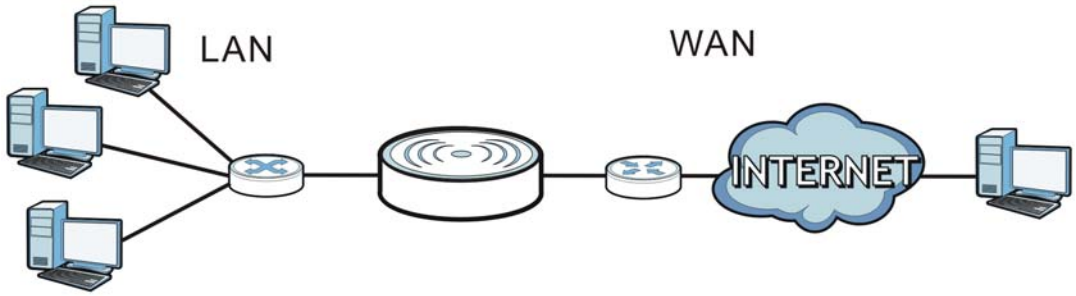
WAN

8.1 Overview

This chapter discusses the EMG2926-Q10A's **WAN** screens. Use these screens to configure your EMG2926-Q10A for Internet access.

A WAN (Wide Area Network) connection is an outside connection to another network or the Internet. It connects your private networks such as a LAN (Local Area Network) to other networks, so that a computer in one location can communicate with computers in other locations.

Figure 41 LAN and WAN



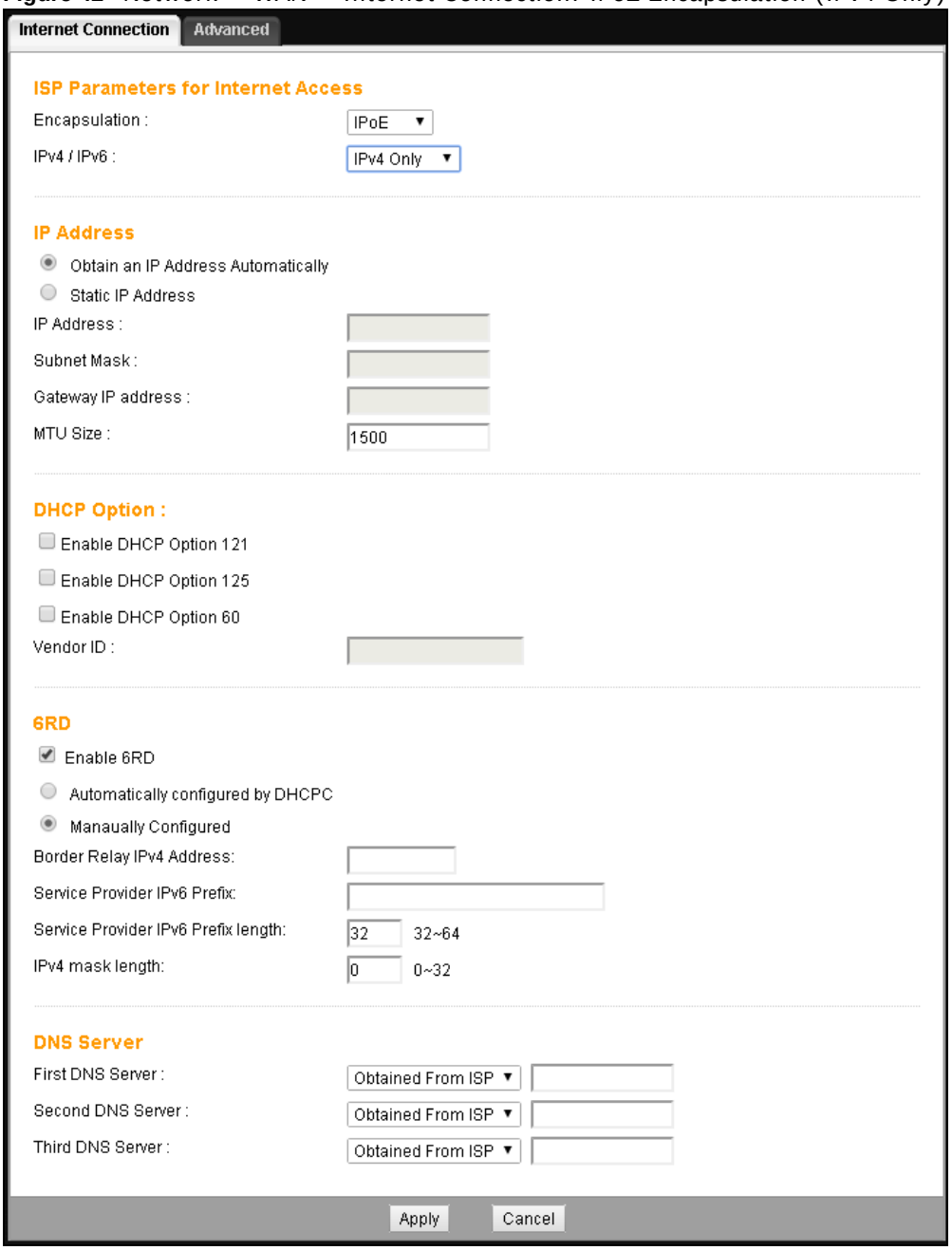
8.2 Internet Connection

Use this screen to change your EMG2926-Q10A's Internet access settings. Click **Network** > **WAN** from the **Configuration** menu. The screen differs according to the encapsulation and IPv4/IPv6 mode you choose.

8.2.1 IPoE Encapsulation

This screen displays when you select **IPoE** encapsulation.

Figure 42 Network > WAN > Internet Connection: IPoE Encapsulation (IPv4 Only)



The following table describes the labels on this screen.

Table 24 Network > WAN > Internet Connection: IPoE Encapsulation

LABEL	DESCRIPTION
ISP Parameters for Internet Access	
Encapsulation	You must choose the **IPoE** option when the WAN port is used as a regular Ethernet.
IPv4 / IPv6	Select **IPv4 Only** if you want the EMG2926-Q10A to run IPv4 only. Select **Dual Stack** to allow the EMG2926-Q10A to run IPv4 and IPv6 at the same time. Select **IPv6 Only** if you want the EMG2926-Q10A to run IPv6 only.

Table 24 Network > WAN > Internet Connection: IPoE Encapsulation (continued)

LABEL	DESCRIPTION
IP Address	
Obtain an IP Address Automatically	Select this option if your ISP did not assign you a fixed IP address. This is the default selection.
Static IP Address	Select this option if the ISP assigned a fixed IP address.
IP Address	Enter your WAN IP address in this field if you selected **Static IP Address**.
Subnet Mask	Enter the **Subnet Mask** in this field.
Gateway IP Address	Enter a **Gateway IP Address** (if your ISP gave you one) in this field.
MTU Size	Enter the MTU (Maximum Transmission Unit) size for each packet. If a larger packet arrives, the EMG2926-Q10A divides it into smaller fragments.
DHCP Option	
Enable DHCP Option 121	Select this to enable the classless route option 121.
Enable DHCP Option 125	Select this to add vendor specific information to DHCP requests that the EMG2926-Q10A sends to a DHCP server when getting a WAN IP address.
Enable DHCP Option 60	Select this to identify the vendor and functionality of the EMG2926-Q10A in DHCP requests that the EMG2926-Q10A sends to a DHCP server when getting a WAN IP address.
Vendor ID	Enter the Vendor Class Identifier (Option 60), such as the type of hardware or firmware.
6RD Use IPv6 Rapid Deployment (6rd) when the local network uses IPv6 and the ISP has an IPv4 network. When the EMG2926-Q10A has an IPv4 WAN address and you set IPv6/IPv4 mode to **IPv4 Only**, you can enable 6rd to encapsulate IPv6 packets in IPv4 packets to cross the ISP's IPv4 network. The EMG2926-Q10A generates a global IPv6 prefix from its IPv4 WAN address and tunnels IPv6 traffic to the ISP's Border Relay router to connect to the native IPv6 Internet. The local network can also use IPv4 services. The EMG2926-Q10A uses its configured IPv4 WAN IP to route IPv4 traffic to the IPv4 Internet. This is available only when you select **IPv4 Only** in the **IPv6/IPv4** field.	
Enable 6RD	Enable IPv6 rapid deployment to tunnel IPv6 traffic from the local network through the ISP's IPv4 network.
Automatically configured by DHCP	Select this to have the EMG2926-Q10A detect the relay server's IP address automatically through DHCP.
Manually Configured	Select this if you have the IPv4 address of the relay server.
Border Relay IPv4 Address	Specify the relay server's IPv4 address.
Service Provider IPv6 Prefix	Enter an IPv6 prefix for tunneling IPv6 traffic to the ISP's Border Relay router and connecting to the native IPv6 Internet.
Service Provider IPv6 Prefix length	Enter the IPv6 prefix length. An IPv6 prefix length specifies how many most significant bits (starting from the left) in the address compose the network address.
IPv4 mask length	Enter the subnet mask number (1~32) for the IPv4 network.
DNS Server	

Table 24 Network > WAN > Internet Connection: IPoE Encapsulation (continued)

LABEL	DESCRIPTION
First DNS Server Second DNS Server Third DNS Server	Select **Obtained From ISP** if your ISP dynamically assigns DNS server information (and the EMG2926-Q10A's WAN 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.
IPv6 Address This is not available when you select **IPv4 Only** in the **IPv6/IPv4** field.	
Obtain an IP Address Automatically	Select this if you want to obtain an IPv6 address from a DHCPv6 server.
Static IP Address	Select this if you have a fixed IPv6 address assigned by your ISP.
IPv6 Address	Enter the IPv6 address assigned by your ISP.
Prefix length	Enter the address prefix length to specify how many most significant bits in an IPv6 address compose the network address.
IPv6 Default Gateway	Enter the IP address of the next-hop gateway. The gateway is a router or switch on the same segment as your EMG2926-Q10A's interface(s). The gateway helps forward packets to their destinations.
IPv6 DNS server This is not available when you select **IPv4 Only** in the **IPv6/IPv4** field.	
Obtain IPv6 DNS info Automatically	Select this to have the EMG2926-Q10A get the IPv6 DNS server addresses from the ISP automatically.
Use the following Static DNS IPv6 Address	Select this to have the EMG2926-Q10A use the IPv6 DNS server addresses you configure manually.
IPv6 DNS Server	Enter the IPv6 DNS server address assigned by the ISP.
Apply	Click **Apply** to save your changes back to the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

8.2.2 PPPoE Encapsulation

The EMG2926-Q10A supports PPPoE (Point-to-Point Protocol over Ethernet). PPPoE is an IETF standard (RFC 2516) specifying how a personal computer (PC) interacts with a broadband modem (DSL, cable, wireless, etc.) connection. The **PPP over Ethernet** option is for a dial-up connection using PPPoE.

For the service provider, PPPoE offers an access and authentication method that works with existing access control systems (for example Radius).

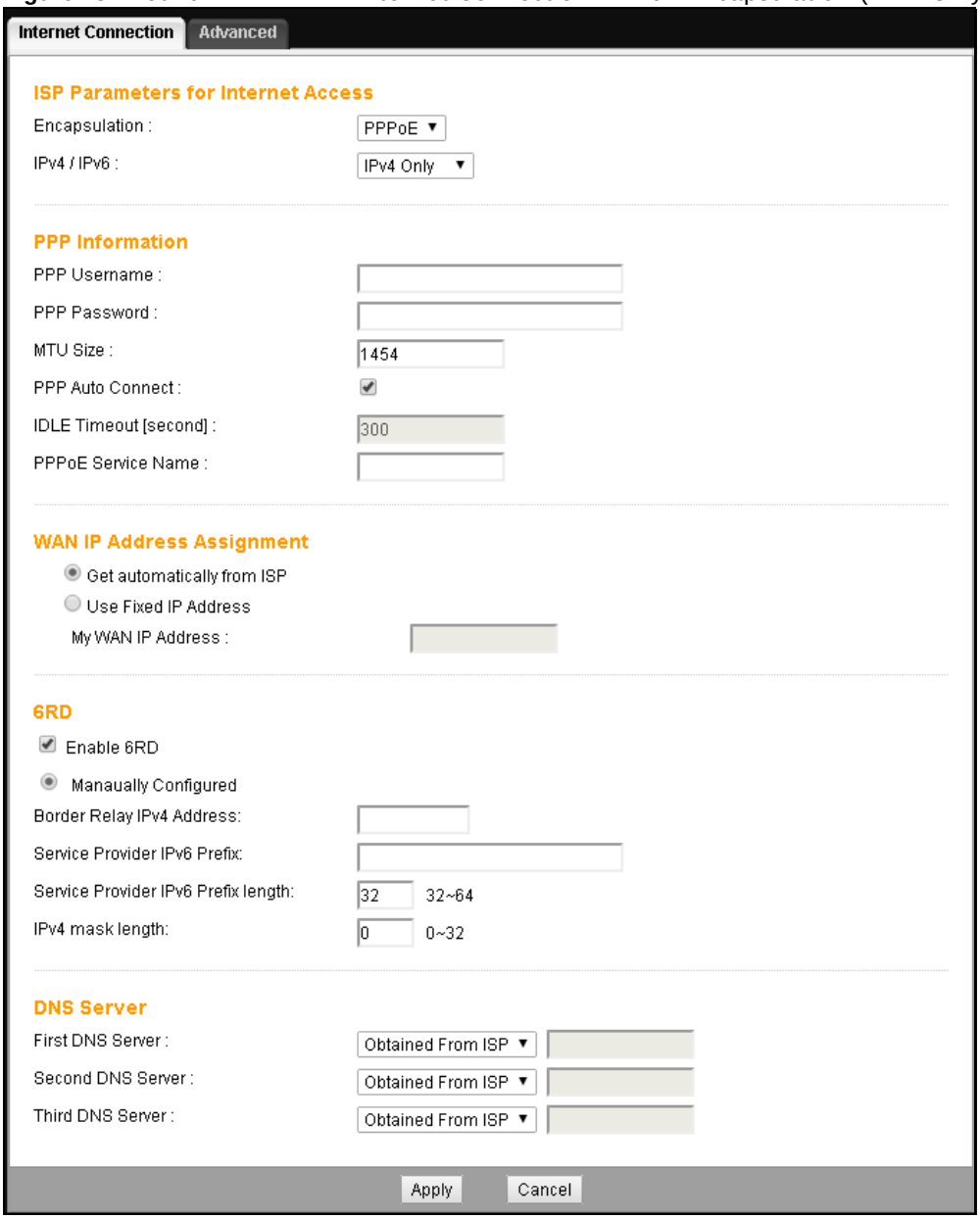
One of the benefits of PPPoE is the ability to let you access one of multiple network services, a function known as dynamic service selection. This enables the service provider to easily create and offer new IP services for individuals.

Operationally, PPPoE saves significant effort for both you and the ISP or carrier, as it requires no specific configuration of the broadband modem at the customer site.

By implementing PPPoE directly on the EMG2926-Q10A (rather than individual computers), the computers on the LAN do not need PPPoE software installed, since the EMG2926-Q10A does that part of the task. Furthermore, with NAT, all of the LANs' computers will have access.

This screen displays when you select **PPPoE** encapsulation.

Figure 43 Network > WAN > Internet Connection: PPPoE Encapsulation (IPv4 Only)



The following table describes the labels on this screen.

Table 25 Network > WAN > Internet Connection: PPPoE Encapsulation

LABEL	DESCRIPTION
ISP Parameters for Internet Access	
Encapsulation	Select **PPPoE** if you connect to your Internet via dial-up.

Table 25 Network > WAN > Internet Connection: PPPoE Encapsulation (continued)

LABEL	DESCRIPTION
IPv4 / IPv6	Select **IPv4 Only** if you want the EMG2926-Q10A to run IPv4 only. Select **Dual Stack** to allow the EMG2926-Q10A to run IPv4 and IPv6 at the same time. Select **IPv6 Only** if you want the EMG2926-Q10A to run IPv6 only.
PPP Information	
PPP Username	Type the username given to you by your ISP.
PPP Password	Type the password associated with the username above.
MTU Size	Enter the Maximum Transmission Unit (MTU) or the largest packet size per frame that your EMG2926-Q10A can receive and process.
PPP Auto Connect	Select this option if you do not want the connection to time out.
Idle Timeout (second)	This value specifies the time in minutes that elapses before the router automatically disconnects from the PPPoE server.
PPPoE Service Name	Enter the PPPoE service name specified in the ISP account.
WAN IP Address Assignment	
Get automatically from ISP	Select this option if your ISP did not assign you a fixed IP address. This is the default selection.
Use Fixed IP Address	Select this option if the ISP assigned a fixed IP address.
My WAN IP Address	Enter your WAN IP address in this field if you selected **Use Fixed IP Address**.
6RD This is available only when you select **IPv4 Only** in the **IPv6/IPv4** field.	
Enable 6RD	Enable IPv6 rapid deployment to tunnel IPv6 traffic from the local network through the ISP's IPv4 network.
Automatically configured by DHCP	Select this to have the EMG2926-Q10A detect the relay server IP address automatically through DHCP.
Manually Configured	Select this if you have the IPv4 address of the relay server.
Border Relay IPv4 Address	Specify the relay server IPv4 address.
Service Provider IPv6 Prefix	Enter an IPv6 prefix for tunneling IPv6 traffic to the ISP's Border Relay router and connecting to the native IPv6 Internet.
Service Provider IPv6 Prefix length	Enter the IPv6 prefix length. An IPv6 prefix length specifies how many most significant bits (starting from the left) in the address compose the network address.
IPv4 mask length	Enter the subnet mask number (1~32) for the IPv4 network.
DNS Server	
First DNS Server Second DNS Server Third DNS Server	Select **Obtained From ISP** if your ISP dynamically assigns DNS server information (and the EMG2926-Q10A's WAN 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.

Table 25 Network > WAN > Internet Connection: PPPoE Encapsulation (continued)

LABEL	DESCRIPTION
IPv6 DNS server This is not available when you select **IPv4 Only** in the **IPv6/IPv4** field.	
Obtain IPv6 DNS info Automatically	Select this to have the EMG2926-Q10A get the IPv6 DNS server addresses from the ISP automatically.
Use the following Static DNS IPv6 Address	Select this to have the EMG2926-Q10A use the IPv6 DNS server addresses you configure manually.
IPv6 DNS Server	Enter the IPv6 DNS server address assigned by the ISP.
Apply	Click **Apply** to save your changes back to the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

8.3 Advanced WAN Screen

To change your EMG2926-Q10A's advanced WAN settings, click **Network** > **WAN** > **Advanced**. The screen appears as shown.

Figure 44 Network > WAN > Advanced

The following table describes the labels on this screen.

Table 26 Network > WAN > Advanced

LABEL	DESCRIPTION
Multicast Setup	
Multicast	Select **IGMPv1/v2** to enable multicasting. This applies to traffic routed from the WAN to the LAN. Select **None** to disable this feature. This may cause incoming traffic to be dropped or sent to all connected network devices.
Auto-Subnet Configuration	
Enable Auto-IP-Change mode	Select this option to have the EMG2926-Q10A change its LAN IP address to 10.0.0.1 or 192.168.0.1 accordingly when the EMG2926-Q10A gets a dynamic WAN IP address in the same subnet as the LAN IP address 192.168.0.1 or 10.0.0.1. The NAT, DHCP server and firewall functions on the EMG2926-Q10A are still available in this mode.

Table 26 Network > WAN > Advanced (continued)

LABEL	DESCRIPTION
Apply	Click **Apply** to save your changes back to the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

9

Wireless LAN

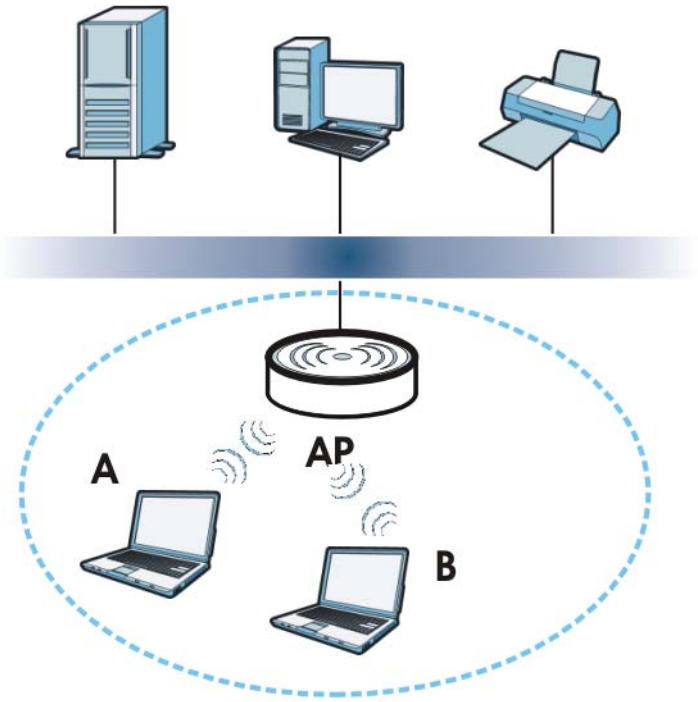
9.1 Overview

This chapter discusses how to configure the wireless network settings in your EMG2926-Q10A. The EMG2926-Q10A is able to function on both 2.4GHz and 5GHz networks at the same time. You can have different wireless and wireless security settings for 2.4GHz and 5GHz wireless LANs. Click **Configuration > Network > Wireless LAN 2.4G** or **Wireless LAN 5G** to do so.

See the appendices for more detailed information about wireless networks.

The following figure provides an example of a wireless network.

Figure 45 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 EMG2926-Q10A is the AP.

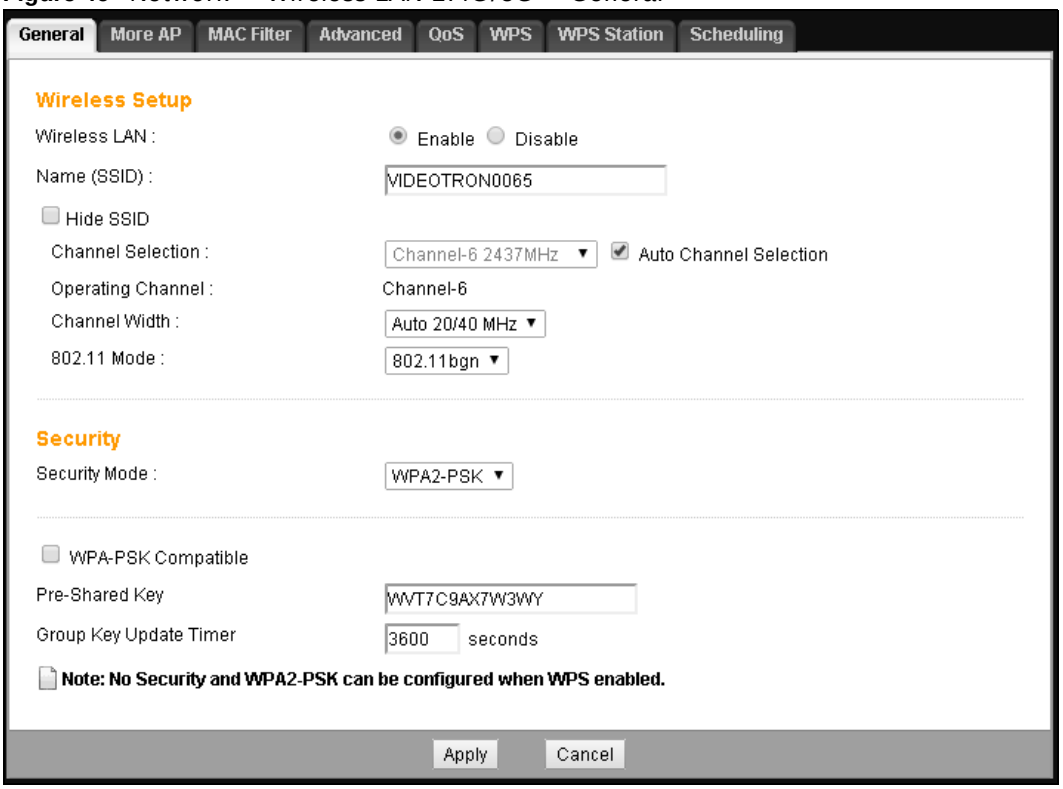
9.2 General Wireless LAN Screen

Use this screen to configure the SSID and wireless security of the wireless LAN.

Note: If you are configuring the EMG2926-Q10A from a computer connected to the wireless LAN and you change the EMG2926-Q10A'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 EMG2926-Q10A's new settings.

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

Figure 46 Network > Wireless LAN 2.4G/5G > General



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

Table 27 Network > Wireless LAN 2.4G/5G > General

LABEL	DESCRIPTION
Wireless LAN	Select **Enable** to activate the 2.4GHz and/or 5GHz wireless LAN. Select **Disable** to turn it off. You can enable or disable both 2.4GHz and 5GHz wireless LANs by using the **WIFI** button located on the side panel of the EMG2926-Q10A.
Name (SSID)	The SSID (Service Set IDentity) identifies the Service Set with which a wireless client is associated. Enter a descriptive name (up to 32 printable characters found on a typical English language keyboard) for the wireless LAN.
Hide SSID	Select this check box to hide the SSID in the outgoing beacon frame so a station cannot obtain the SSID through scanning using a site survey tool.
Channel Selection	Set the operating frequency/channel depending on your particular region. Select a channel from the drop-down list box. The options vary depending on the frequency band and the country you are in. Refer to the Connection Wizard chapter for more information on channels. This option is only available if **Auto Channel Selection** is disabled.

Table 27 Network > Wireless LAN 2.4G/5G > General (continued)

LABEL	DESCRIPTION
Auto Channel Selection	Select this check box for the EMG2926-Q10A to automatically choose the channel with the least interference. Deselect this check box if you wish to manually select the channel using the **Channel Selection** field.
Operating Channel	This displays the channel the EMG2926-Q10A is currently using.
Channel Width	Select the wireless channel width used by EMG2926-Q10A. A standard 20 MHz channel offers transfer speeds of up to 144Mbps (2.4GHz) or 217Mbps (5GHZ) whereas a 40MHz channel uses two standard channels and offers speeds of up to 300Mbps (2.4GHz) or 450Mbps (5GHZ). An IEEE 802.11ac-specific 80MHz channel offers speeds of up to 1.3Gbps. Because not all devices support 40 MHz and/or 80 MHz channels, select **Auto 20/40 MHz** or **Auto 20/40/80 MHz** to allow the EMG2926-Q10A 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	If you are in the **Wireless LAN 2.4G > General** screen, you can select from the following: • **802.11b**: allows either IEEE 802.11b or IEEE 802.11g compliant WLAN devices to associate with the EMG2926-Q10A. 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 EMG2926-Q10A 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 EMG2926-Q10A. The EMG2926-Q10A 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 EMG2926-Q10A. This can increase transmission rates, although IEEE 802.11b or IEEE 802.11g clients will not be able to connect to the EMG2926-Q10A. I • **802.11gn**: allows either IEEE 802.11g or IEEE 802.11n compliant WLAN devices to associate with the EMG2926-Q10A. The transmission rate of your EMG2926-Q10A might be reduced. • **802.11 bgn**: allows IEEE802.11b, IEEE802.11g and IEEE802.11n compliant WLAN devices to associate with the EMG2926-Q10A. The transmission rate of your EMG2926-Q10A might be reduced. If you are in the **Wireless LAN 5G > General** screen, you can select from the following: • **802.11a**: allows only IEEE 802.11a compliant WLAN devices to associate with the EMG2926-Q10A. • **802.11an**: allows both IEEE802.11n and IEEE802.11a compliant WLAN devices to associate with the EMG2926-Q10A. The transmission rate of your EMG2926-Q10A might be reduced. • **802.11ac**: allows only IEEE 802.11ac compliant WLAN devices to associate with the EMG2926-Q10A.
Security Mode	Note: If the WPS function is enabled (default), only **No Security** and **WPA2-PSK** are available in this field. Select **Static WEP**, **WPA-PSK**, **WPA**, **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 appear on this screen. See Section 9.3 on page 77 for detailed information on different security modes. Or you can select **No Security** to allow any client to associate this network without authentication.

Table 27 Network > Wireless LAN 2.4G/5G > General (continued)

LABEL	DESCRIPTION
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to reload the previous configuration for this screen.

See the rest of this chapter for information on the other labels in this screen.

9.3 Wireless Security

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

9.3.1 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 EMG2926-Q10A, your network is accessible to any wireless networking device that is within range.

Figure 47 Network > Wireless LAN 2.4G/5G > General: No Security

The following table describes the labels on this screen.

Table 28 Network > Wireless LAN 2.4G/5G > General: No Security

LABEL	DESCRIPTION
Security Mode	Choose **No Security** from the drop-down list box.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to reload the previous configuration for this screen.

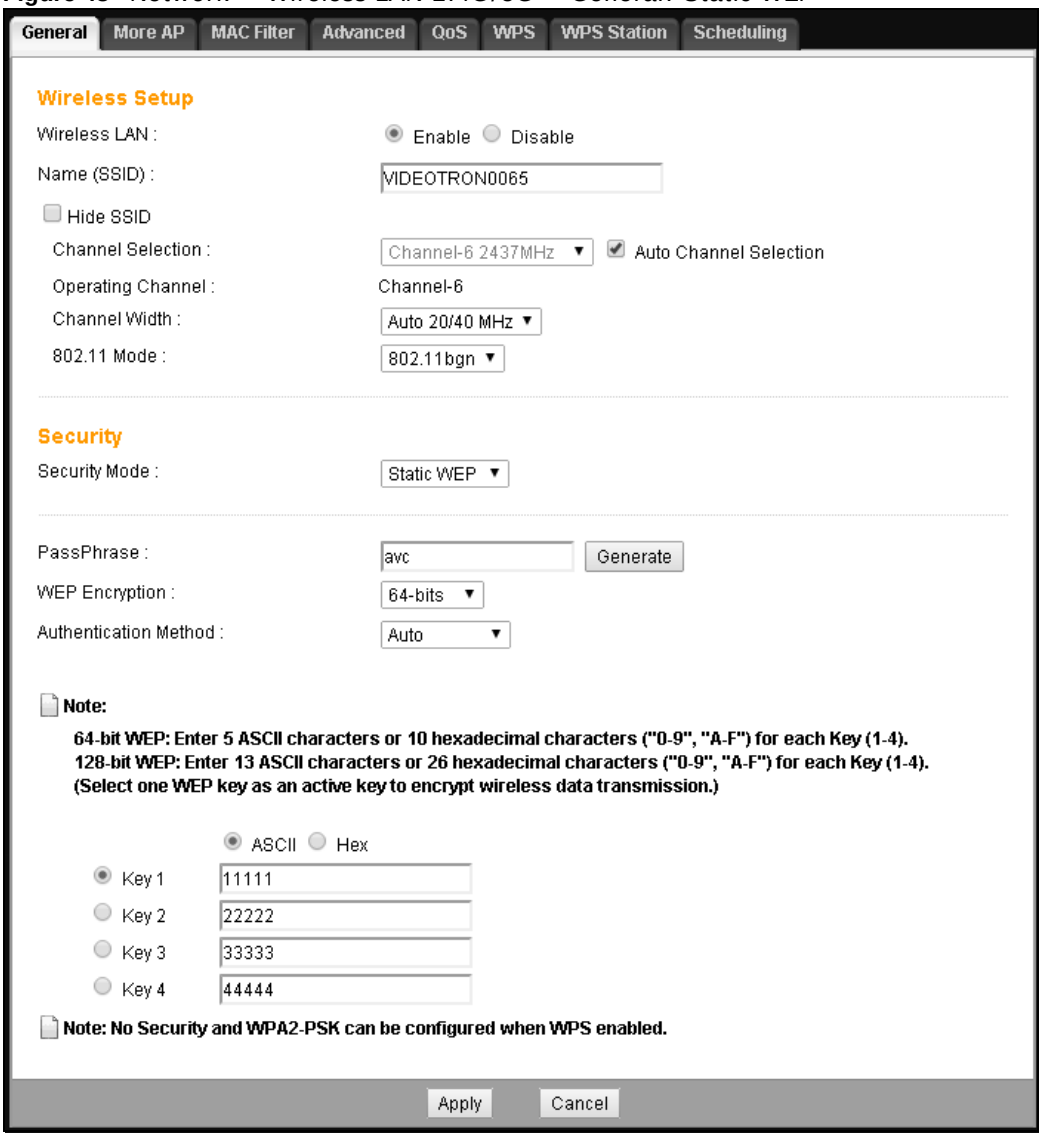
9.3.2 WEP Encryption

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

Your EMG2926-Q10A allows you to configure up to four 64-bit or 128-bit WEP keys but only one key can be enabled at any one time.

Select **Static WEP** from the **Security Mode** list.

Figure 48 Network > Wireless LAN 2.4G/5G > General: Static WEP



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

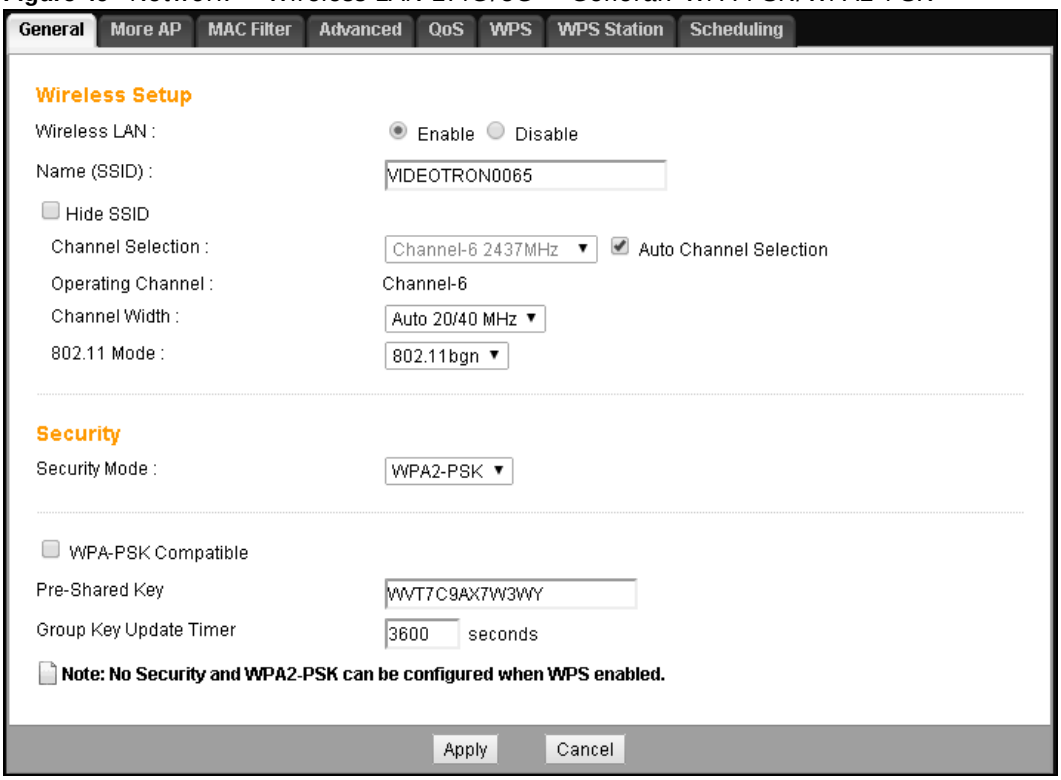
Table 29 Network > Wireless LAN 2.4G/5G > General: Static WEP

LABEL	DESCRIPTION
Security Mode	Select **Static WEP** to enable data encryption.
PassPhrase	Enter a Passphrase (up to 26 printable characters) and click **Generate**. A passphrase functions like a password. In WEP security mode, it is further converted by the EMG2926-Q10A into a complicated string that is referred to as the “key”. This key is requested from all devices wishing to connect to a wireless network.
WEP Encryption	Select **64-bits** or **128-bits**. This dictates the length of the security key that the network is going to use.
Authentication Method	Select **Auto** or **Shared Key** from the drop-down list box. This field specifies whether the wireless clients have to provide the WEP key to login to the wireless client. Keep this setting at **Auto** unless you want to force a key verification before communication between the wireless client and the EMG2926-Q10A occurs. Select **Shared Key** to force the clients to provide the WEP key prior to communication.
ASCII	Select this option in order to enter ASCII characters as a WEP key.
Hex	Select this option in order to enter hexadecimal characters as a WEP key. The preceding "0x", that identifies a hexadecimal key, is entered automatically.
Key 1 to Key 4	The WEP keys are used to encrypt data. Both the EMG2926-Q10A and the wireless stations must use the same WEP key for data transmission. If you chose **64-bits**, then enter any 5 ASCII characters or 10 hexadecimal characters ("0-9", "A-F"). If you chose **128-bits**, then enter 13 ASCII characters or 26 hexadecimal characters ("0-9", "A-F"). You must configure at least one key, only one key can be activated at any one time. The default key is key 1.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to reload the previous configuration for this screen.

9.3.3 WPA-PSK/WPA2-PSK

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

Figure 49 Network > Wireless LAN 2.4G/5G > General: WPA-PSK/WPA2-PSK



The following table describes the labels in this screen.

Table 30 Network > Wireless LAN 2.4G/5G > General: WPA-PSK/WPA2-PSK

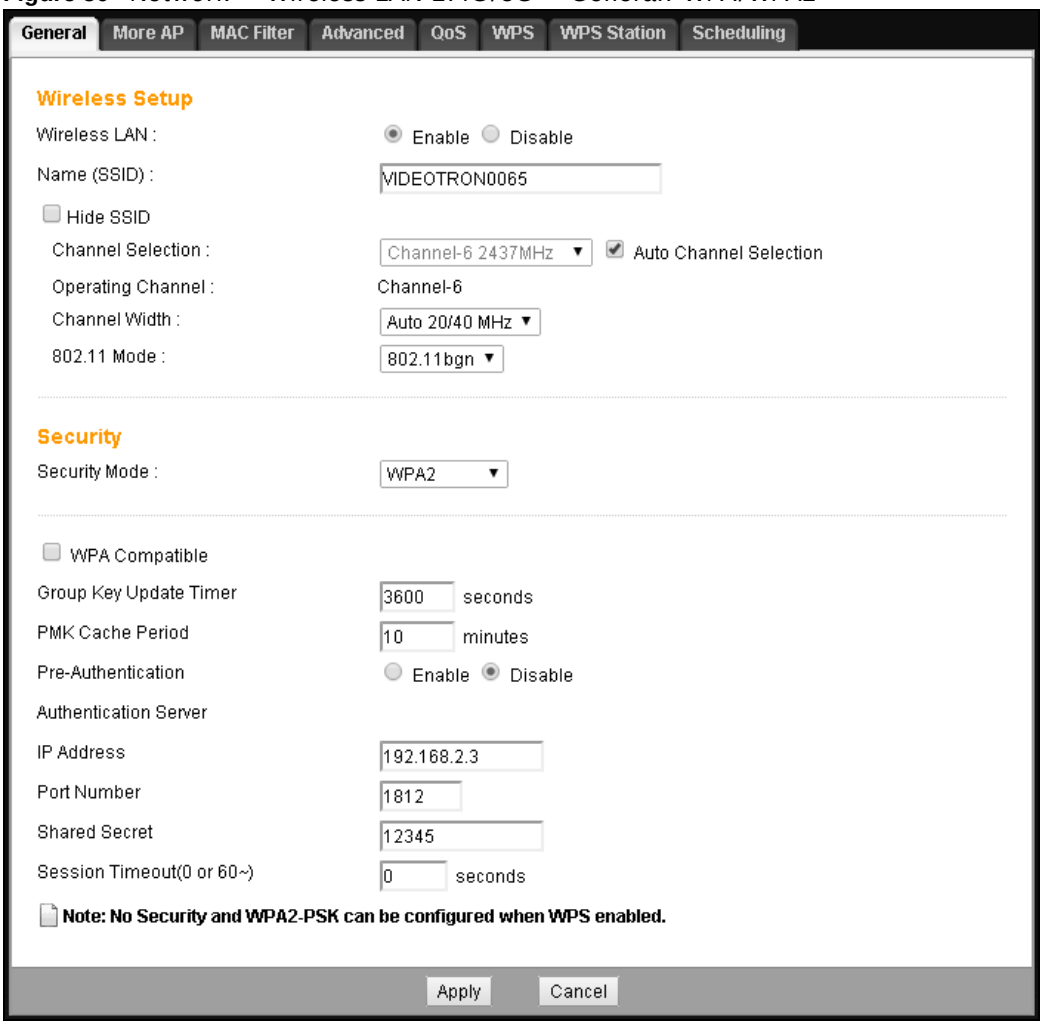
LABEL	DESCRIPTION
Security Mode	Select **WPA-PSK** or **WPA2-PSK** to enable data encryption.
WPA-PSK Compatible	This field appears when you choose **WPA2-PSK** as the **Security Mode**. Check this field to allow wireless devices using **WPA-PSK** security mode to connect to your EMG2926-Q10A.
Pre-Shared Key	**WPA-PSK / WPA2-PSK** uses a simple common password for authentication. Type a pre-shared key from 8 to 63 case-sensitive keyboard characters.
Group Key Update Timer	The **Group Key Update Timer** is the rate at which the AP sends a new group key out to all clients. The default is 3,600 seconds (60 minutes).
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to reload the previous configuration for this screen.

9.3.4 WPA/WPA2

Select **WPA** or **WPA2** from the **Security Mode** list.

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

Figure 50 Network > Wireless LAN 2.4G/5G > General: WPA/WPA2



The following table describes the labels on this screen.

Table 31 Network > Wireless LAN 2.4G/5G > General: WPA/WPA2

LABEL	DESCRIPTION
Security Mode	Select **WPA** or **WPA2** to enable data encryption.
WPA Compatible	This check box is available only when you select **WPA2-PSK** or **WPA2** in the **Security Mode** field. Select the check box to have both WPA2 and WPA wireless clients be able to communicate with the EMG2926-Q10A even when the EMG2926-Q10A is using WPA2-PSK or WPA2.
Group Key Update Timer	The **Group Key Update Timer** is the rate at which the AP (if using **WPA-PSK/WPA2-PSK** key management) or RADIUS server (if using **WPA/WPA2** key management) sends a new group key out to all clients. The re-keying process is the WPA/WPA2 equivalent of automatically changing the WEP key for an AP and all stations in a WLAN on a periodic basis. You can set the **Group Key Update Timer** in **WPA-PSK/WPA2-PSK** mode.

Table 31 Network > Wireless LAN 2.4G/5G > General: WPA/WPA2 (continued)

LABEL	DESCRIPTION
PMK Cache Period	This field is available only when you select **WPA2**. Specify how often wireless clients have to resend usernames and passwords in order to stay connected. Enter a time interval between 10 and 999,999 minutes. Note: If wireless client authentication is done using a RADIUS server, the reauthentication timer on the RADIUS server has priority.
Pre-Authentication	This field is available only when you select **WPA2**. 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 Server	
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.
Shared Secret	Enter a password (up to 127 alphanumeric characters) as the key to be shared between the external authentication server and the EMG2926-Q10A. The key must be the same on the external authentication server and your EMG2926-Q10A. The key is not sent over the network.
Session Timeout	The EMG2926-Q10A 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 999,999.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to reload the previous configuration for this screen.

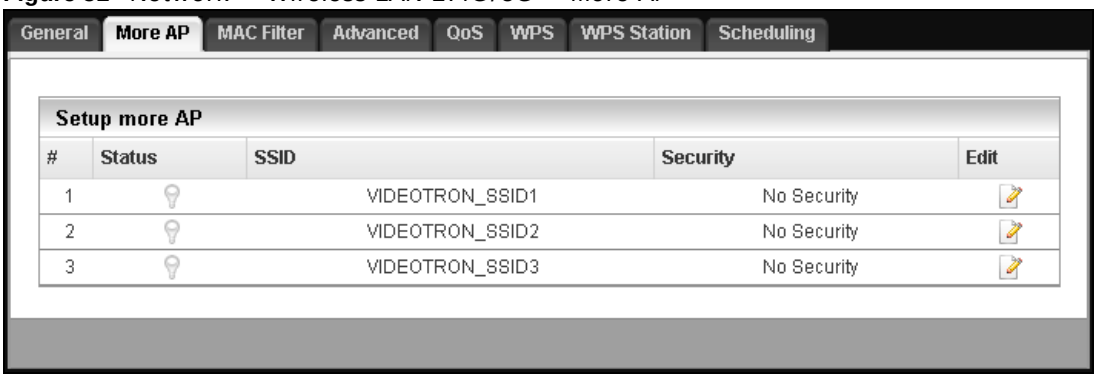
9.4 More AP Screen

This screen allows you to enable and configure multiple wireless networks and guest wireless network settings on the EMG2926-Q10A.

You can configure up to four SSIDs to enable multiple BSSs (Basic Service Sets) on the EMG2926-Q10A. 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/5G > More AP**. The following screen displays:

Figure 51 Network > Wireless LAN 2.4G/5G > More AP



The following table describes the labels on this screen.

Table 32 Network > Wireless LAN 2.4G/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 bulb) or not (a gray bulb).
SSID	An SSID profile is the set of parameters relating to one of the EMG2926-Q10A'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 seen in the wireless client utility.
Security	This field indicates the security mode of the SSID profile.
Edit	Click the **Edit** icon to configure the SSID profile.

9.4.1 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 52 Network > Wireless LAN 2.4G/5G > More AP: Edit

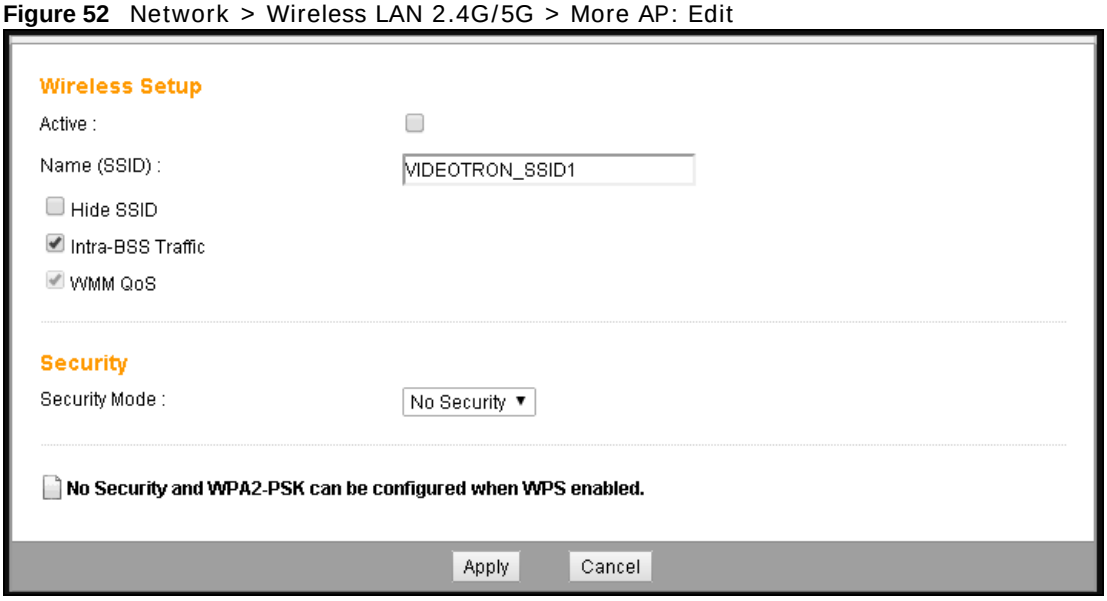
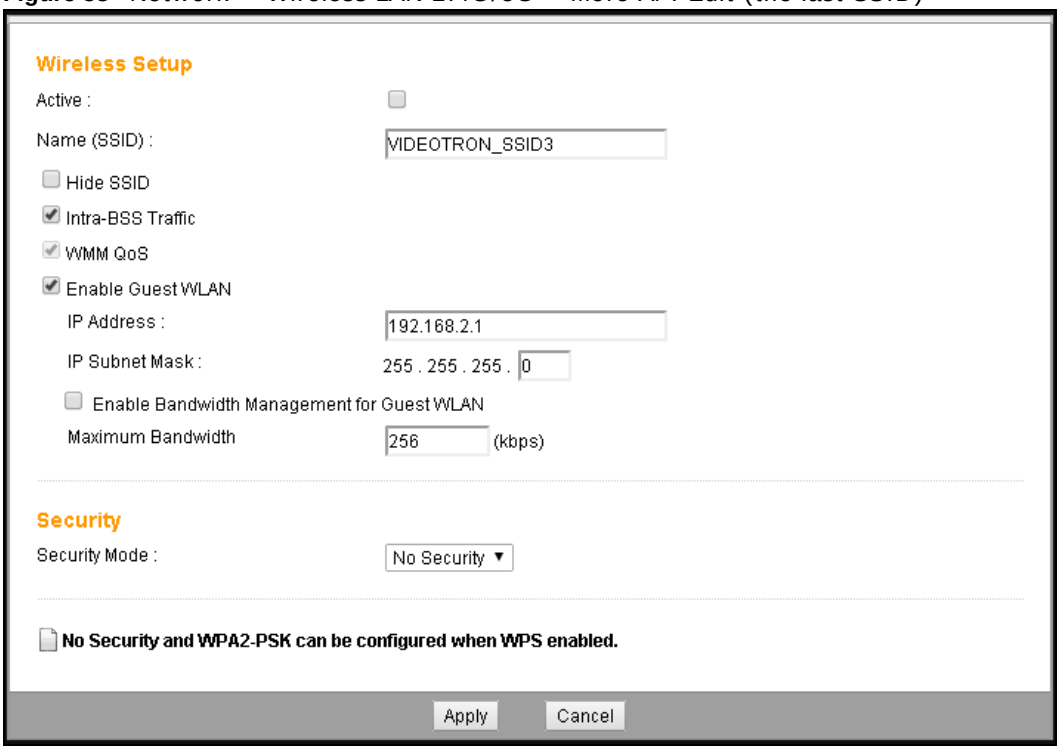


Figure 53 Network > Wireless LAN 2.4G/5G > More AP: Edit (the last SSID)



The following table describes the labels in this screen.

Table 33 Network > Wireless LAN 2.4G/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 station cannot obtain the SSID through scanning using a site survey tool.
Intra-BSS Traffic	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 is enabled, wireless clients can access the wired network and communicate with each other. When Intra-BSS is disabled, wireless clients can still access the wired network but cannot communicate with each other.
WMM QoS	Check this to have the EMG2926-Q10A 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.
Enable Guest WLAN	Select the check box to activate guest wireless LAN. This is available only for the last SSID on the EMG2926-Q10A.
IP Address	Type an IP address for the devices on the Guest WLAN using this as the gateway IP address.
IP Subnet Mask	Type the subnet mask for the guest wireless LAN.

Table 33 Network > Wireless LAN 2.4G/5G > More AP: Edit (continued)

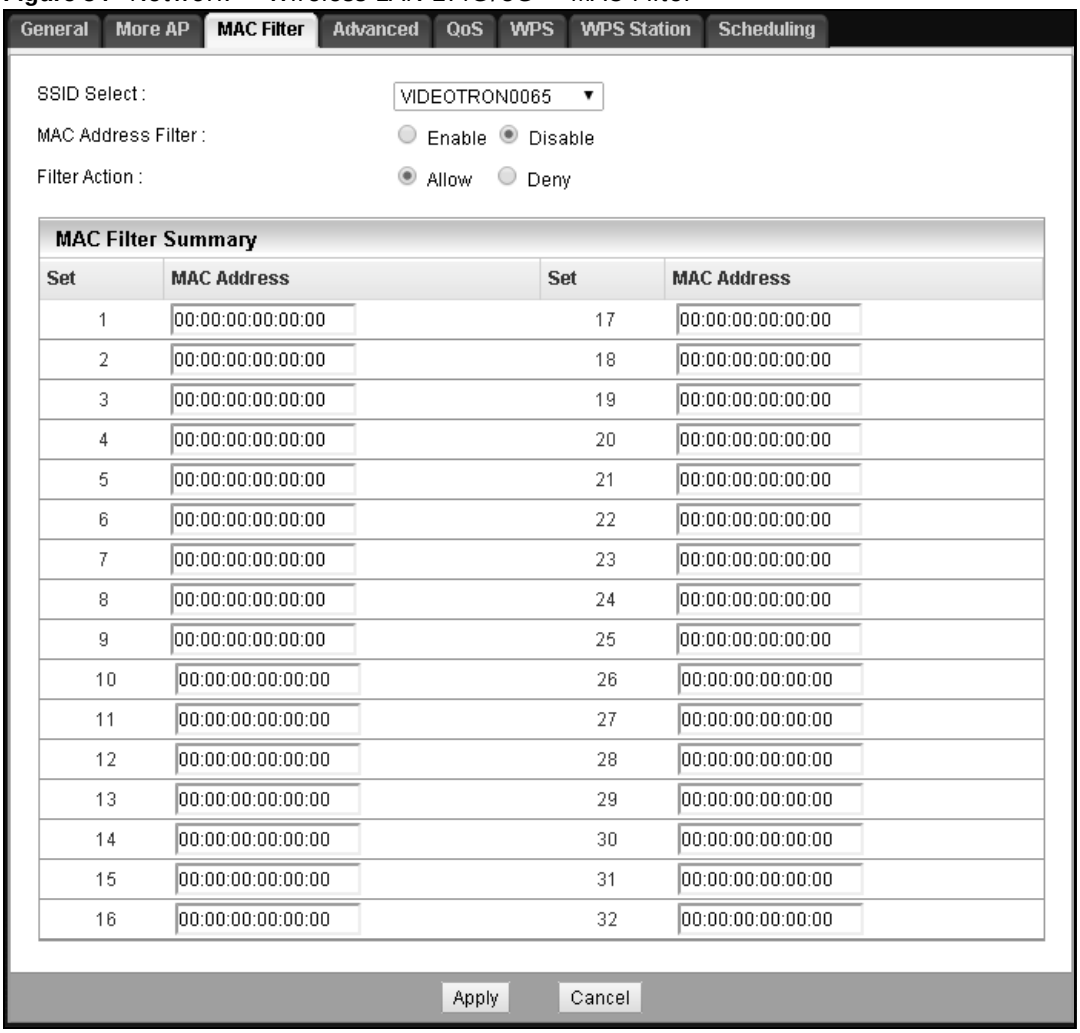
LABEL	DESCRIPTION
Enable Bandwidth Management for Guest WLAN	Select this to turn on bandwidth management for the Guest WLAN network.
Maximum Bandwidth	Enter a number to specify maximum bandwidth the Guest WLAN network can use.
Security Mode	Note: If the WPS function is enabled (default), only **No Security** and **WPA2-PSK** are available in this field. Select **Static WEP**, **WPA-PSK**, **WPA**, **WPA2-PSK** or **WPA2** to add security on this wireless network. The wireless clients that want to associate to this network must have the same wireless security settings as this device. After you select to use a security, additional options appears in this screen. See Section 9.3 on page 77 for detailed information on different security modes. Or you can select **No Security** to allow any client to associate with this network without authentication.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to reload the previous configuration for this screen.

9.5 MAC Filter Screen

The MAC filter screen allows you to configure the EMG2926-Q10A to give exclusive access to devices (**Allow**) or exclude devices from accessing the EMG2926-Q10A (**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 EMG2926-Q10A's MAC filter settings, click **Network** > **Wireless LAN 2.4G/5G** > **MAC Filter**. The screen appears as shown.

Figure 54 Network > Wireless LAN 2.4G/5G > MAC Filter



The following table describes the labels on this screen.

Table 34 Network > Wireless LAN 2.4G/5G > MAC Filter

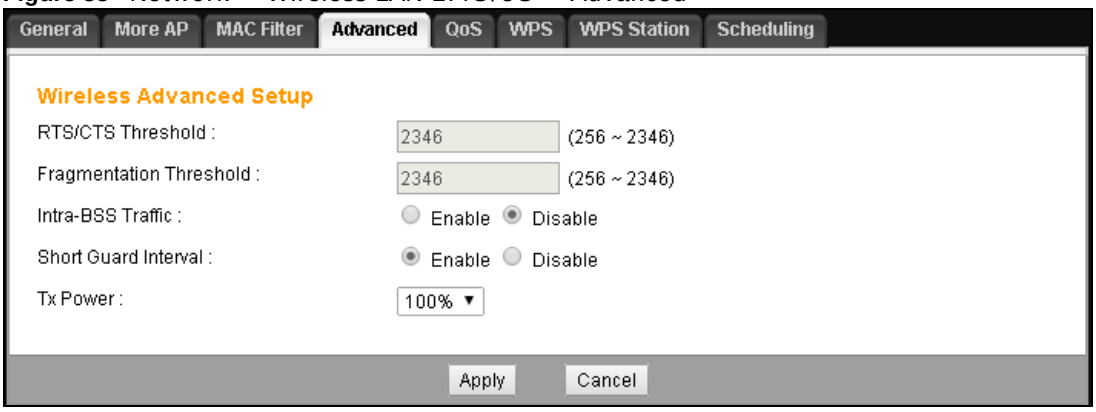
LABEL	DESCRIPTION
SSID Select	Select the SSID for which you want to configure MAC filtering.
MAC Address Filter	Select to turn on (**Enable**) or off (**Disable**) MAC address filtering.
Filter Action	Define the filter action for the list of MAC addresses in the MAC Filter Summary table. Select **Allow** to permit access to the EMG2926-Q10A, MAC addresses not listed will be denied access to the EMG2926-Q10A. Select **Deny** to block access to the EMG2926-Q10A, MAC addresses not listed will be allowed to access the EMG2926-Q10A.
MAC Filter Summary	
Set	This is the index number of the MAC address.
MAC Address	Enter the MAC address of the wireless station that is allowed or denied access to the EMG2926-Q10A.
Apply	Click **Apply** to save your changes back to the EMG2926-Q10A.
Cancel	Click **Cancel** to reload the previous configuration for this screen.

9.6 Wireless LAN Advanced Screen

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

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

Figure 55 Network > Wireless LAN 2.4G/5G > Advanced



The following table describes the labels on this screen.

Table 35 Network > Wireless LAN 2.4G/5G > Advanced

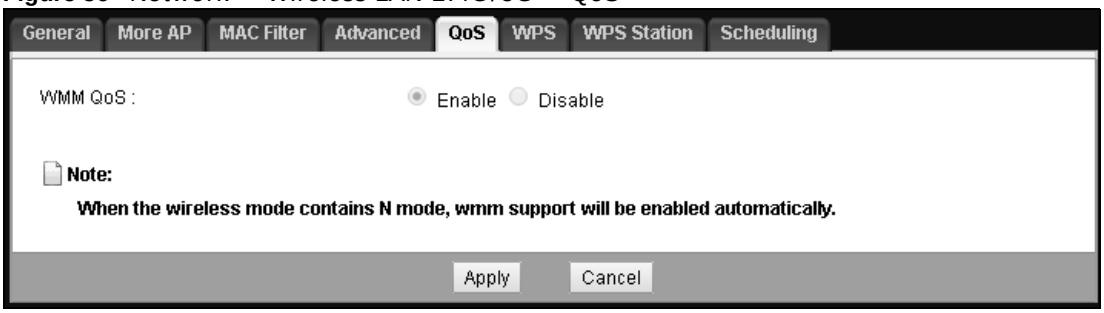
LABEL	DESCRIPTION
RTS/CTS Threshold	Data with its frame size larger than this value will perform the RTS (Request To Send)/ CTS (Clear To Send) handshake. This field is not configurable and the EMG2926-Q10A automatically changes to use the maximum value if you select **802.11n**, **802.11an**, **802.11gn**, **802.11bgn** or **802.11ac** on the **Wireless LAN 2.4G/5G > General** screen.
Fragmentation Threshold	The threshold (number of bytes) of the fragmentation boundary for directed messages. It is the maximum data fragment size that can be sent. This field is not configurable and the EMG2926-Q10A automatically changes to use the maximum value if you select **802.11n**, **802.11an**, **802.11gn**, **802.11bgn** or **802.11ac** on the **Wireless LAN 2.4G/5G > General** screen.
Intra-BSS Traffic	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 is enabled, wireless clients can access the wired network and communicate with each other. When Intra-BSS is disabled, wireless clients can still access the wired network but cannot communicate with each other.
Short Guard 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. Select **Enable** to use the short guard interval. Otherwise, select **Disable** to use the long guard interval.
Tx Power	Set the output power of the EMG2926-Q10A in this field. If there is a high density of APs in an area, decrease the output power of the EMG2926-Q10A 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 with the EMG2926-Q10A.
Cancel	Click **Cancel** to reload the previous configuration for this screen.

9.7 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/5G** > **QoS**. The following screen appears:

Figure 56 Network > Wireless LAN 2.4G/5G > QoS



The following table describes the labels on this screen.

Table 36 Network > Wireless LAN 2.4G/5G > QoS

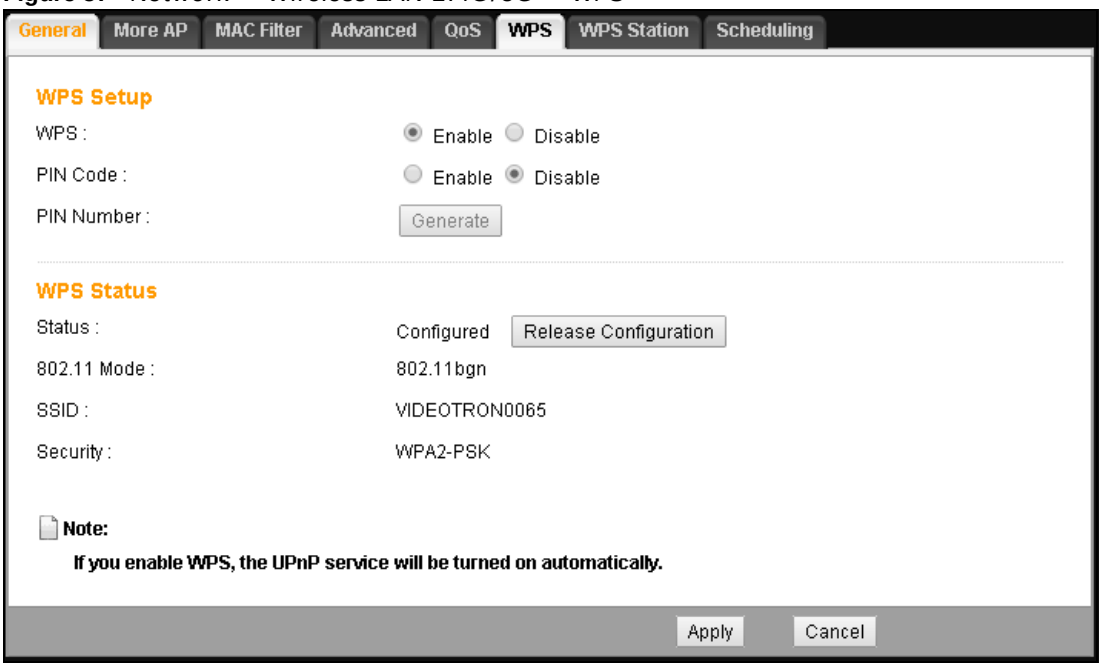
LABEL	DESCRIPTION
WMM QoS	Select **Enable** to have the EMG2926-Q10A automatically give a service a priority level according to the ToS value in the IP header of packets it sends. WMM QoS (Wifi MultiMedia Quality of Service) gives high priority to voice and video, which makes them run more smoothly. This field is not configurable and the EMG2926-Q10A automatically enables WMM QoS if you select **802.11n**, **802.11an**, **802.11gn**, **802.11bgn** or **802.11ac** in the **Wireless LAN 24G/5G > General** screen.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to reload the previous configuration for this screen.

9.8 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/5G** > **WPS**.

Note: With WPS, wireless clients can only connect to the wireless network using the first SSID on the EMG2926-Q10A.

Figure 57 Network > Wireless LAN 2.4G/5G > WPS



The following table describes the labels on this screen.

Table 37 Network > Wireless LAN 2.4G/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 EMG2926-Q10A. Enter this PIN in the configuration utility of the device you want to connect to the EMG2926-Q10A using WPS. The PIN is not necessary when you use WPS push-button method. Click **Generate** to generate a new PIN number.
WPS Status	
Status	This displays **Configured** when the EMG2926-Q10A has connected to a wireless network using WPS or when **WPS Enable** is selected and wireless or wireless security settings have been changed. The current wireless and wireless security settings also appear in the screen. This displays **Unconfigured** if WPS is disabled and there are no wireless or wireless security changes on the EMG2926-Q10A 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 EMG2926-Q10A.
802.11 Mode	This is the 802.11 mode used. Only compliant WLAN devices can associate with the EMG2926-Q10A.
SSID	This is the name of the wireless network (the EMG2926-Q10A's first SSID).
Security	This is the type of wireless security employed by the network.

Table 37 Network > Wireless LAN 2.4G/5G > WPS (continued)

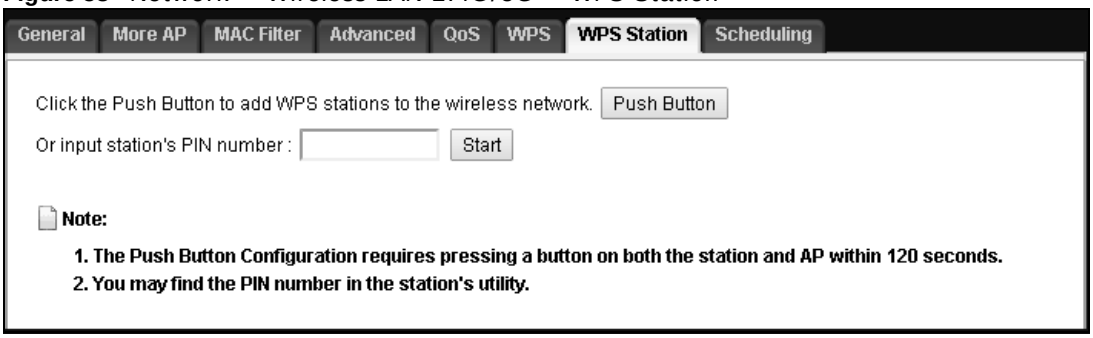
LABEL	DESCRIPTION
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to reload the previous configuration for this screen.

9.9 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/5G** > **WPS Station** tab.

Note: After you click **Push Button** on this screen, you have to press a similar button in the wireless station utility within 2 minutes. To add the second wireless station, you have to press these buttons on both the EMG2926-Q10A and the wireless station again after the first 2 minutes.

Figure 58 Network > Wireless LAN 2.4G/5G > WPS Station



The following table describes the labels on this screen.

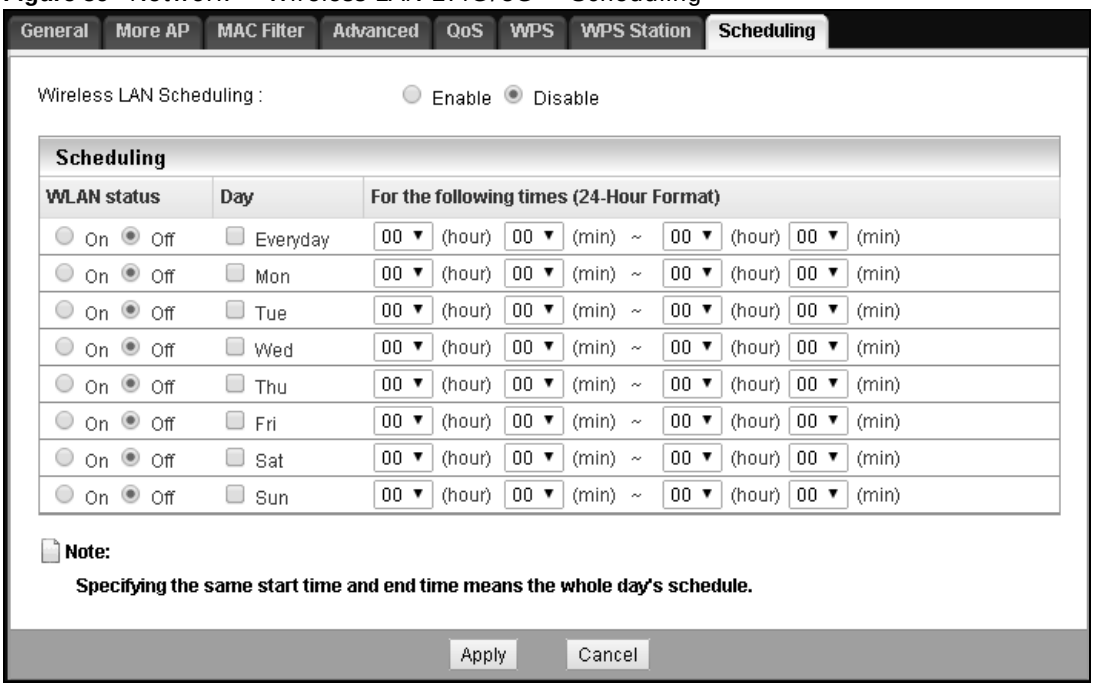
Table 38 Network > Wireless LAN 2.4G/5G > WPS Station

LABEL	DESCRIPTION
Push Button	Use this button when you use the PBC (Push Button Configuration) method to configure wireless stations'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.

9.10 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/5G** > **Scheduling** tab.

Figure 59 Network > Wireless LAN 2.4G/5G > Scheduling



The following table describes the labels on this screen.

Table 39 Network > Wireless LAN 2.4G/5G > Scheduling

LABEL	DESCRIPTION
Wireless LAN Scheduling	
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 cannot 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 chose **On** earlier for the WLAN Status the Wireless LAN will turn on between the two times you enter in these fields. If you chose **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 with the EMG2926-Q10A.
Cancel	Click **Cancel** to reload the previous configuration for this screen.

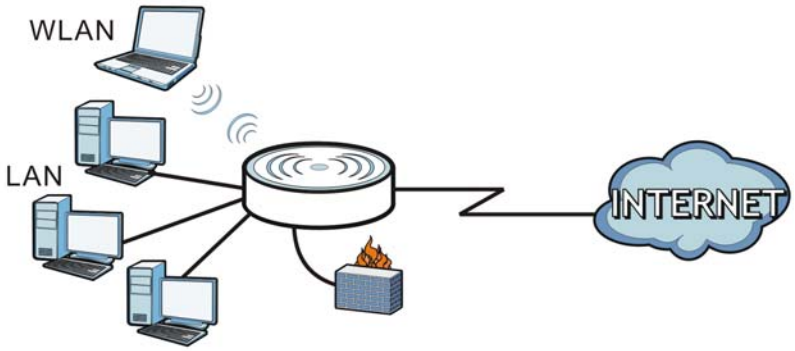
10 LAN

10.1 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.

Figure 60 LAN Example

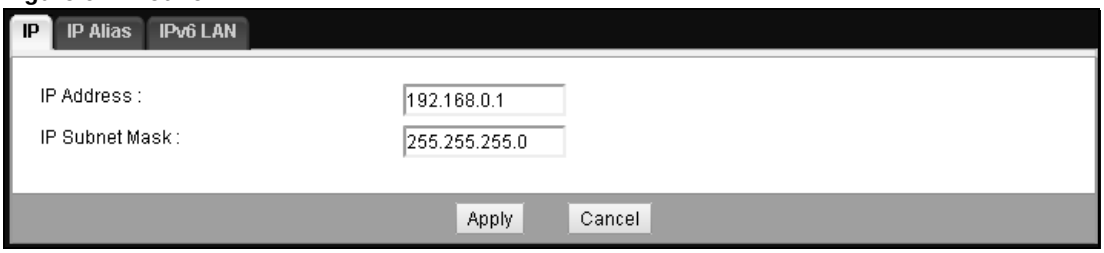


The LAN screens can help you configure a management IP address, and partition your physical network into logical networks.

10.2 LAN IP Screen

Use this screen to change the IPv4 address for your EMG2926-Q10A. Click **Network > LAN > IP**.

Figure 61 Network > LAN > IP



The following table describes the labels on this screen.

Table 40 Network > LAN > IP

LABEL	DESCRIPTION
IP Address	Type the IP address of your EMG2926-Q10A in dotted decimal notation.
IP Subnet Mask	The subnet mask specifies the network number portion of an IP address. Your EMG2926-Q10A will automatically calculate the subnet mask based on the IP address that you assign. Unless you are implementing subnetting, use the subnet mask computed by the EMG2926-Q10A.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

10.3 IP Alias Screen

Use this screen to have the EMG2926-Q10A use IP aliasing to create LAN subnets. Click **LAN** > **IP Alias**.

Figure 62 Network > LAN > IP Alias

The following table describes the labels on this screen.

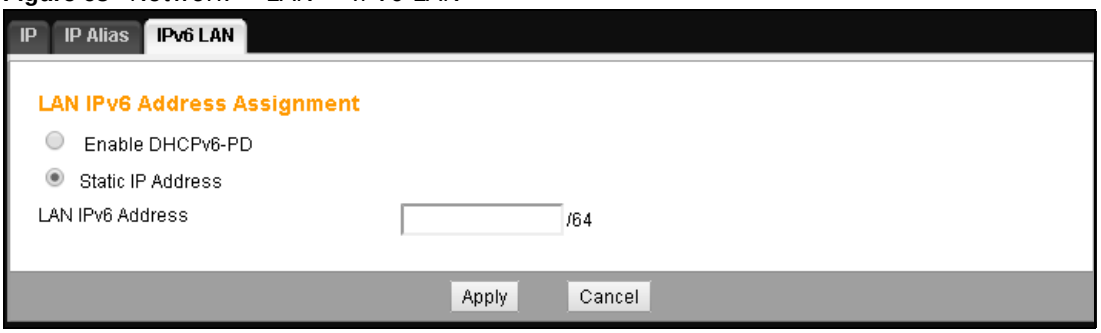
Table 41 Network > LAN > IP Alias

LABEL	DESCRIPTION
IP Alias 1, 2	Check this to enable IP aliasing to configure another LAN network for the EMG2926-Q10A.
IP Address	Type the IP alias address of your EMG2926-Q10A in dotted decimal notation.
IP Subnet Mask	The subnet mask specifies the network number portion of an IP address. Your EMG2926-Q10A will automatically calculate the subnet mask based on the IP address that you assign. Unless you are implementing subnetting, use the subnet mask computed by the EMG2926-Q10A.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

10.4 IPv6 LAN Screen

Use this screen to configure the IPv6 address for your EMG2926-Q10A on the LAN. Click **Network > LAN > IPv6 LAN**.

Figure 63 Network > LAN > IPv6 LAN



The following table describes the labels on this screen.

Table 42 Network > LAN > IPv6 LAN

LABEL	DESCRIPTION
Enable DHCPv6-PD	Select this option to use DHCPv6 prefix delegation. The EMG2926-Q10A will obtain an IPv6 prefix from the ISP or a connected uplink router for the LAN.
Static IP Address	Select this option to manually enter an IPv6 address if you want to use a static IP address.
LAN IPv6 Address	Enter the IPv6 address for the EMG2926-Q10A on the LAN.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

11

DHCP Server

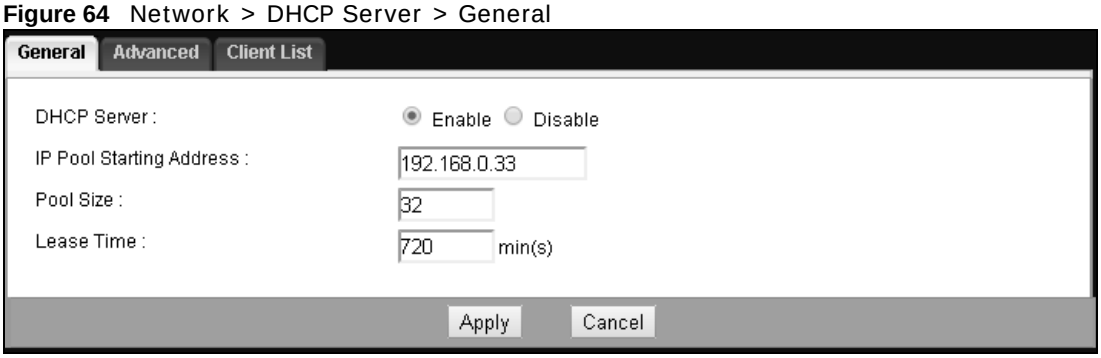
11.1 Overview

DHCP (Dynamic Host Configuration Protocol, RFC 2131 and RFC 2132) allows individual clients to obtain TCP/IP configuration at start-up from a server. You can configure the EMG2926-Q10A's LAN as a DHCP server or disable it. When configured as a server, the EMG2926-Q10A provides the TCP/IP configuration for the clients. If DHCP service is disabled, you must have another DHCP server on your LAN, or else the computer must be manually configured.

11.2 DHCP Server General Screen

Use this screen to enable the DHCP server. Click **Network** > **DHCP Server**. The following screen displays:

Figure 64 Network > DHCP Server > General



The following table describes the labels on this screen.

Table 43 Network > DHCP Server > General

LABEL	DESCRIPTION
DHCP Server	Select **Enable** to activate DHCP for LAN. DHCP (Dynamic Host Configuration Protocol, RFC 2131 and RFC 2132) allows individual clients (computers) to obtain TCP/IP configuration at startup from a server. Enable the DHCP server unless your ISP instructs you to do otherwise. Select **Disable** to stop the EMG2926-Q10A acting as a DHCP server. When configured as a server, the EMG2926-Q10A provides TCP/IP configuration for the clients. If not, DHCP service is disabled and you must have another DHCP server on your LAN, or else the computers must be manually configured. When set as a server, fill in the following four fields.
IP Pool Starting Address	This field specifies the first of the contiguous addresses in the IP address pool for LAN.
Pool Size	This field specifies the size, or count of the IP address pool for LAN.

Table 43 Network > DHCP Server > General (continued)

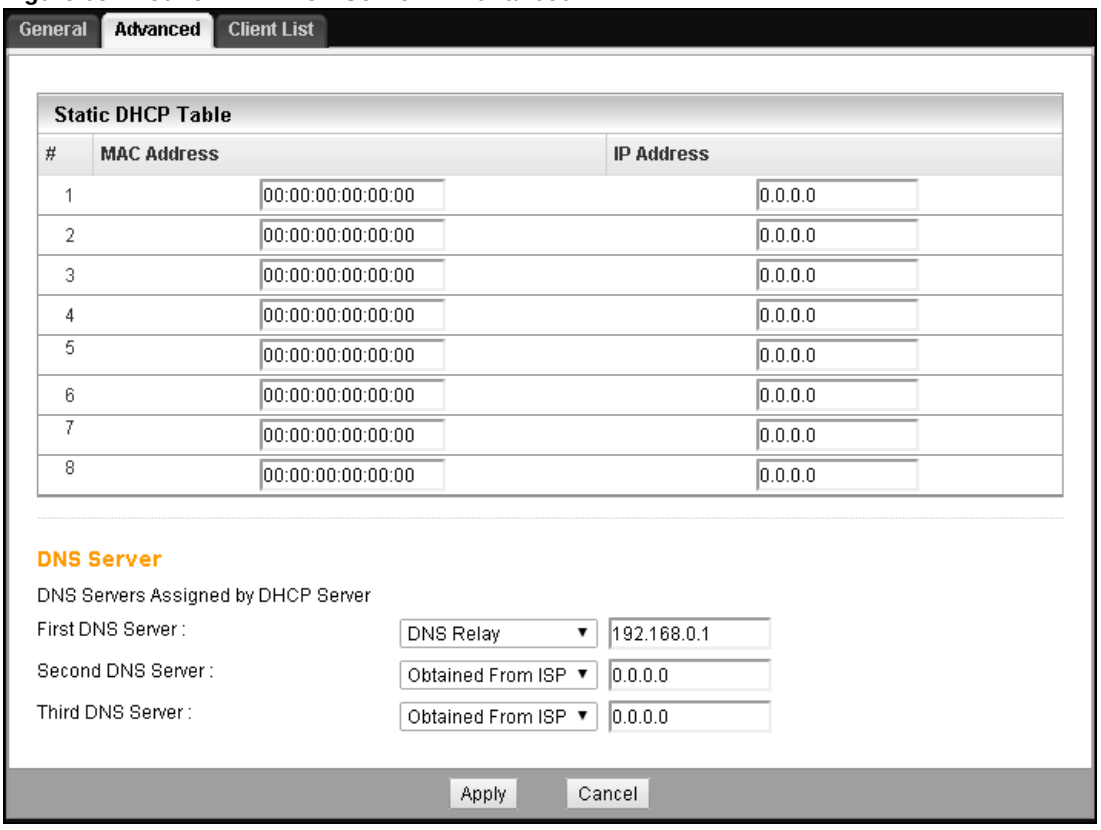
LABEL	DESCRIPTION
Lease Time	Specify how long each computer can use the IP address before it has to request the information again.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

11.3 DHCP Server Advanced Screen

This screen allows you to assign IP addresses on the LAN to specific individual computers based on their MAC addresses. You can also use this screen to configure the DNS server information that the EMG2926-Q10A sends to the DHCP clients.

To change your EMG2926-Q10A's static DHCP settings, click **Network** > **DHCP Server** > **Advanced**. The following screen displays:

Figure 65 Network > DHCP Server > Advanced



The following table describes the labels on this screen.

Table 44 Network > DHCP Server > Advanced

LABEL	DESCRIPTION
Static DHCP Table	
#	This is the index number of the static IP table entry (row).

Table 44 Network > DHCP Server > Advanced (continued)

LABEL	DESCRIPTION
MAC Address	Type the MAC address (with colons) of a computer on your LAN.
IP Address	Type the LAN IP address of a computer on your LAN.
DNS Server	
DNS Servers Assigned by DHCP Server	The EMG2926-Q10A sends a DNS (Domain Name System) server IP address (in the order you specify here) to the DHCP clients. The EMG2926-Q10A only sends this information to the LAN DHCP clients when you enable **DHCP Server**. When you disable **DHCP Server**, DHCP service is disabled and you must have another DHCP server on your LAN, or else the computers must have their DNS server addresses manually configured.
First DNS Server Second DNS Server Third DNS Server	Select **Obtained From ISP** if your ISP dynamically assigns DNS server information (and the EMG2926-Q10A's WAN 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. If you chose **User-Defined**, but leave the IP address set to 0.0.0.0, **User-Defined** changes to **None** after you click **Apply**. If you set a second choice to **User-Defined**, and enter the same IP address, the second **User-Defined** changes to **None** after you click **Apply**. Select **DNS Relay** to have the EMG2926-Q10A act as a DNS proxy. The EMG2926-Q10A's LAN IP address displays in the field to the right (read-only). The EMG2926-Q10A tells the DHCP clients on the LAN that the EMG2926-Q10A itself is the DNS server. When a computer on the LAN sends a DNS query to the EMG2926-Q10A, the EMG2926-Q10A forwards the query to the EMG2926-Q10A's system DNS server (configured in the **WAN > Internet Connection** screen) and relays the response back to the computer. You can only select **DNS Relay** for one of the three servers; if you select **DNS Relay** for a second or third DNS server, that choice changes to **None** after you click **Apply**. 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 with the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

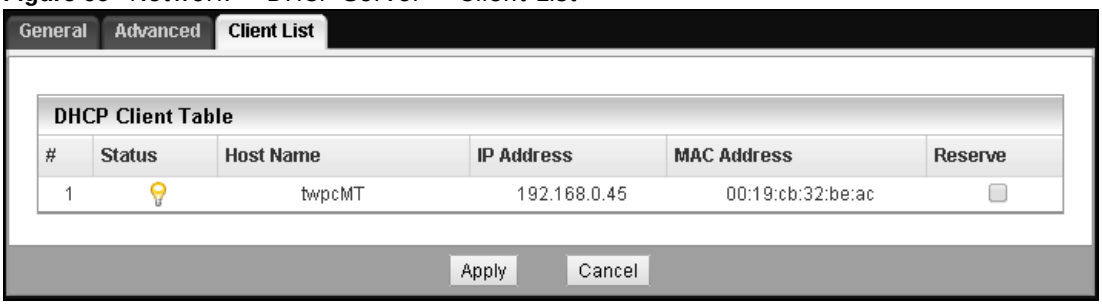
11.4 DHCP Client List Screen

The DHCP table shows current DHCP client information (including IP Address, Host Name and MAC Address) of network clients using the EMG2926-Q10A's DHCP servers.

Configure this screen to always assign an IP address to a MAC address (and host name). Click **Network > DHCP Server > Client List**.

Note: You can also view a read-only client list by clicking **Monitor > DHCP Server**.

Figure 66 Network > DHCP Server > Client List



The following table describes the labels on this screen.

Table 45 Network > DHCP Server > Client List

LABEL	DESCRIPTION
#	This is the index number of the host computer.
Status	This field displays whether the connection to the host computer is up (a yellow bulb) or down (a gray bulb).
Host Name	This field displays the computer host name.
IP Address	This field displays the IP address relative to the # field listed above.
MAC Address	This field shows the MAC address of the computer with the name in the **Host Name** field. Every Ethernet device has a unique MAC (Media Access Control) address which uniquely identifies a device. The MAC address is assigned at the factory and consists of six pairs of hexadecimal characters, for example, 00:A0:C5:00:00:02.
Reserve	Select this if you want to reserve the IP address for this specific MAC address.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to reload the previous configuration for this screen.

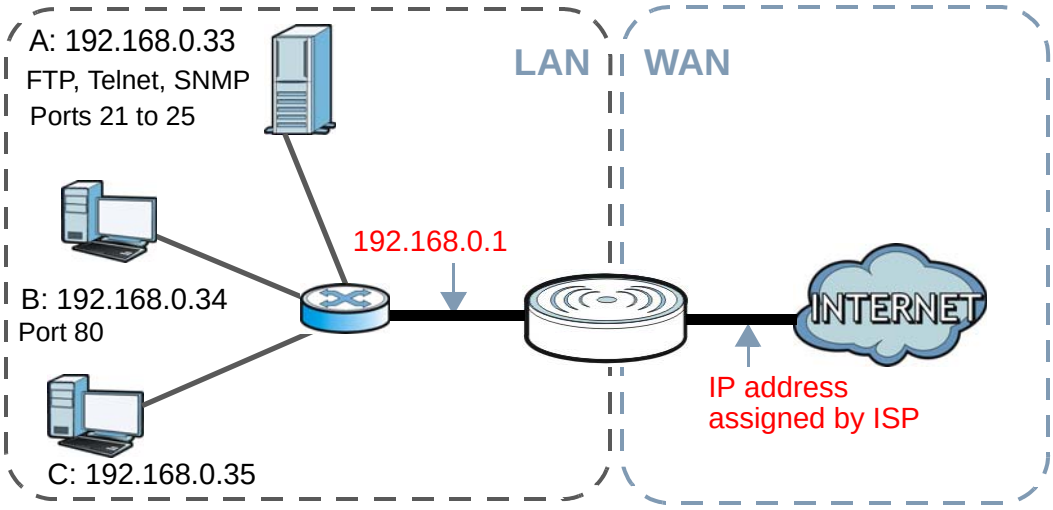
12.1 Overview

NAT (Network Address Translation - NAT, RFC 1631) is the translation of the IP address of a host in a packet. For example, the source address of an outgoing packet used within one network is changed to a different IP address known within another network.

The figure below is a simple illustration of a NAT network. You want to assign ports 21-25 to one FTP, Telnet and SMTP server (**A** in the example), port 80 to another (**B** in the example) and assign a default server IP address of 192.168.0.35 to a third (**C** in the example).

You assign the LAN IP addresses to the devices (**A** to **D**) connected to your EMG2926-Q10A. The ISP assigns the WAN IP address. The NAT network appears as a single host on the Internet. All traffic coming from **A** to **D** going out to the Internet uses the IP address of the EMG2926-Q10A, which is 192.168.0.1.

Figure 67 NAT Example



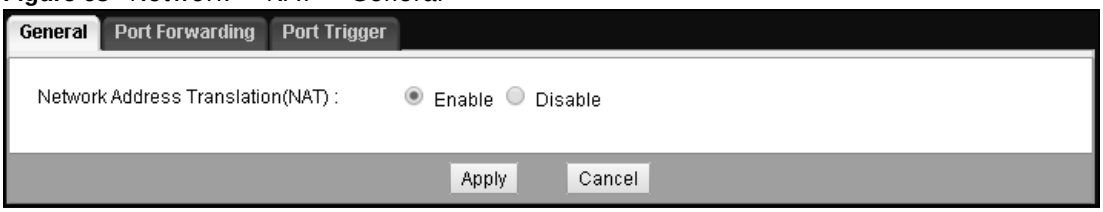
This chapter discusses how to configure NAT on the EMG2926-Q10A.

Note: You must create a firewall rule in addition to setting up NAT, to allow traffic from the WAN to be forwarded through the EMG2926-Q10A.

12.2 NAT General Screen

Use this screen to enable NAT and set a default server. Click **Network > NAT** to open the **General** screen.

Figure 68 Network > NAT > General



The following table describes the labels on this screen.

Table 46 Network > NAT > General

LABEL	DESCRIPTION
Network Address Translation (NAT)	Network Address Translation (NAT) allows the translation of an Internet protocol address used within one network (for example a private IP address used in a local network) to a different IP address known within another network (for example a public IP address used on the Internet). Select **Enable** to activate NAT. Select **Disable** to turn it off.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

12.3 Port Forwarding Screen

Use this screen to forward incoming service requests to the server(s) on your local network and set a default server. You may enter a single port number or a range of port numbers to be forwarded, and the local IP address of the desired server. The port number identifies a service; for example, web service is on port 80 and FTP on port 21. In some cases, such as for unknown services or where one server can support more than one service (for example both FTP and web service), it might be better to specify a range of port numbers.

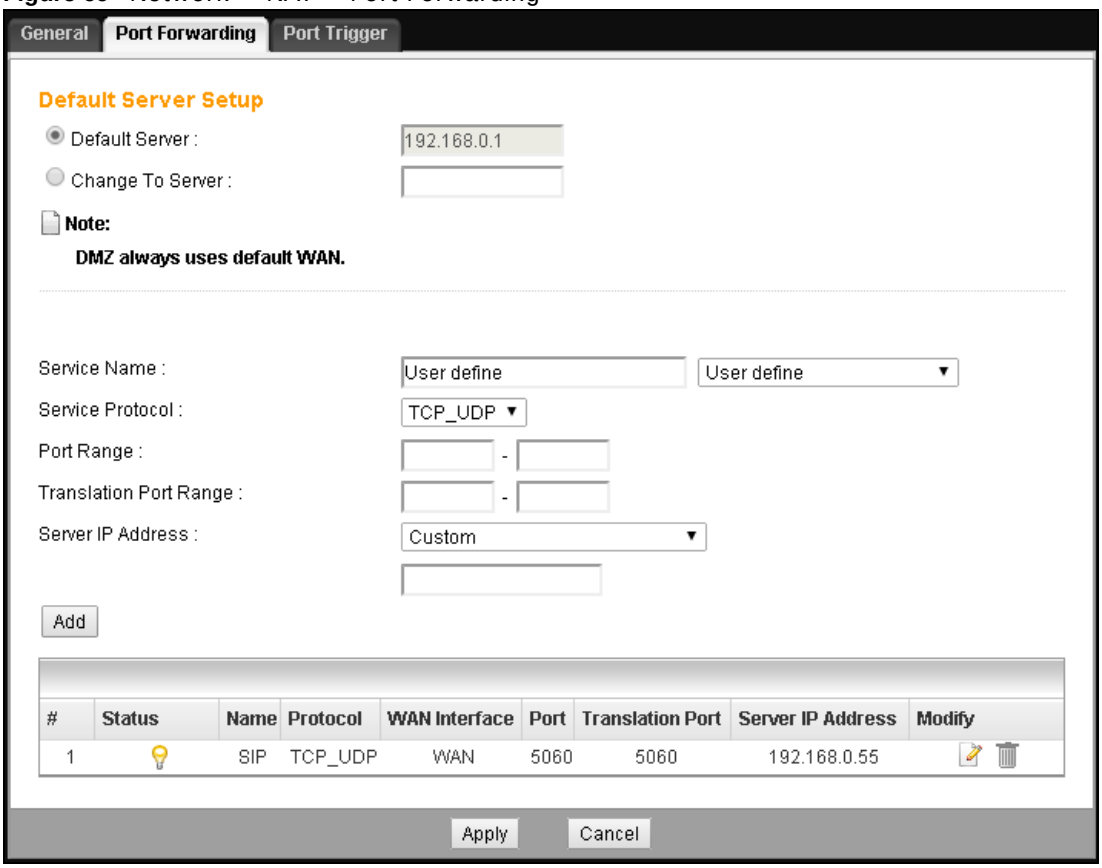
In addition to the servers used for specified services, NAT supports a default server. A service request that does not have a server explicitly designated for it is forwarded to the default server. If the default is not defined, the service request is simply discarded.

Note: Many residential broadband ISP accounts do not allow you to run any server processes (such as a Web or FTP server) from your location. Your ISP may periodically check for servers and may suspend your account if it discovers any active services at your location. If you are unsure, refer to your ISP.

Port forwarding allows you to define the local servers to which the incoming services will be forwarded. To change your EMG2926-Q10A's port forwarding settings, click **Network > NAT** > **Port Forwarding**. The screen appears as shown below.

Note: If you do not assign a **Default Server**, the EMG2926-Q10A discards all packets received for ports that are not specified in this screen or remote management.

Figure 69 Network > NAT > Port Forwarding



The following table describes the labels on this screen.

Table 47 Network > NAT > Port Forwarding

LABEL	DESCRIPTION
Default Server Setup	
Default Server	In addition to the servers for specified services, NAT supports a default server. A default server receives packets from ports that are not specified on the **Port Forwarding** screen. You can decide whether you want to use the default server or specify a server manually. Select this to use the default server.
Change to Server	Select this and manually enter the server's IP address.
Service Name	Select a pre-defined service in the second field next to **Service Name**. The pre-defined service port number(s) and protocol will be displayed in the port forwarding summary table. Otherwise, select **User define** and type a name (of up to 31 printable characters) to identify this rule in the first field next to **Service Name**. You need to manually enter the port number(s) and select the IP protocol.
Service Protocol	Select the transport layer protocol supported by this virtual server. Choices are **TCP**, **UDP**, or **TCP_UDP**. If you have chosen a pre-defined service in the **Service Name** field, this field will not be available.
Port Range	Type the first and last internal port number that identifies a service.
Translation Port Range	Type the first and last external port number that identifies a service.

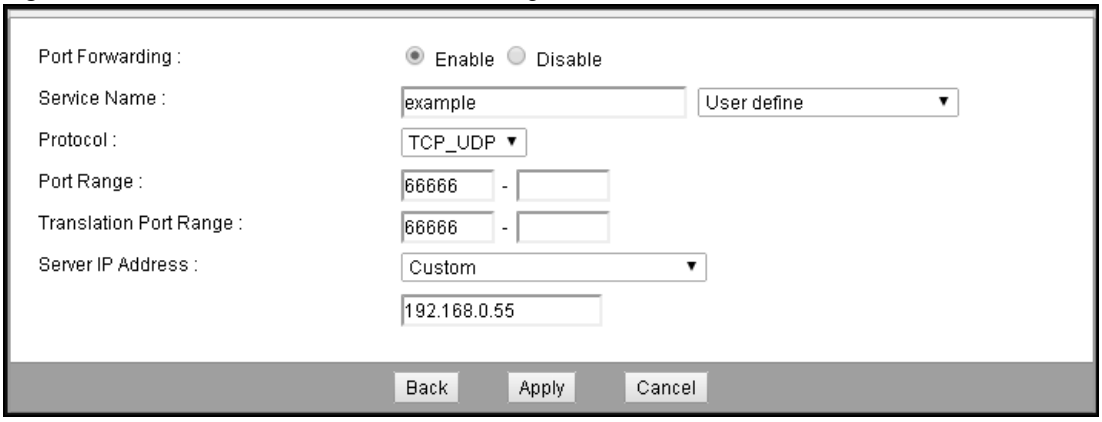
Table 47 Network > NAT > Port Forwarding (continued)

LABEL	DESCRIPTION
Server IP Address	Select a DHCP client as the virtual server and click **Add** to add it in the port forwarding summary table. Otherwise, select **Custom** and manually enter the inside IP address of the virtual server here.
#	This is the number of an individual port forwarding server entry.
Status	This icon is turned on when the rule is enabled.
Name	This field displays a name to identify this rule.
Protocol	This is the transport layer protocol used for the service.
WAN Interface	This is the WAN interface of the rule.
Port	This is the internal port number(s) that identifies the service.
Translation Port Range	This is the external port number(s) that identifies the service.
Server IP Address	This field displays the inside IP address of the server.
Modify	Click the **Edit** icon to open the edit screen where you can modify an existing rule. Click the **Delete** icon to remove a rule.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

12.3.1 Port Forwarding Edit Screen

This screen lets you edit a port forwarding rule. Click a rule's **Edit** icon on the **Port Forwarding** screen to open the following screen:

Figure 70 Network > NAT > Port Forwarding Edit



The following table describes the labels on this screen.

Table 48 Network > NAT > Port Forwarding Edit

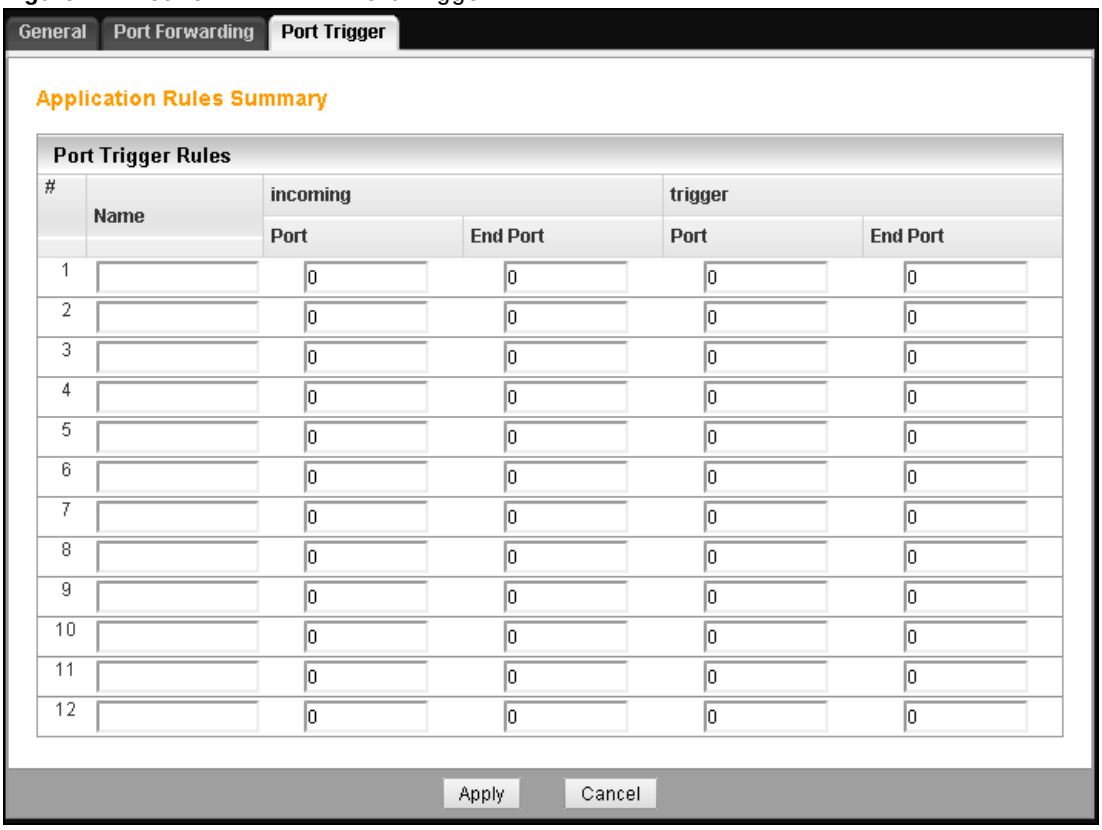
LABEL	DESCRIPTION
Port Forwarding	Select **Enable** to turn on this rule and the requested service can be forwarded to the host with a specified internal IP address. Select **Disable** to disallow forwarding of these ports to an inside server without having to delete the entry.
Service Name	Type a name (of up to 31 printable characters) to identify this rule in the first field next to **Service Name**. Otherwise, select a predefined service in the second field next to **Service Name**.
Protocol	Select the transport layer protocol supported by this virtual server. Choices are **TCP**, **UDP**, or **TCP_UDP**. If you have chosen a pre-defined service in the **Service Name** field, the protocol will be configured automatically.
Port Range	Type an internal port number(s) to define the service to be forwarded to the specified server. To specify a range of ports, enter the first port and the last port.
Translation Port Range	Type the first and last external port number that identifies a service.
Server IP Address	Type the IP address of the server on your LAN that receives packets from the port(s) specified in the **Port** field.
Back	Click **Back** to return to the previous screen.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

12.4 Port Trigger Screen

To change your EMG2926-Q10A's trigger port settings, click **Network > NAT > Port Trigger**. The screen appears as shown below.

Note: Only one LAN computer can use a trigger port (range) at a time.

Figure 71 Network > NAT > Port Trigger



The following table describes the labels on this screen.

Table 49 Network > NAT > Port Trigger

LABEL	DESCRIPTION
#	This is the rule index number (read-only).
Name	Type a unique name (up to 15 characters) for identification purposes. All characters are permitted - including spaces.
Incoming	Incoming is a port (or a range of ports) that a server on the WAN uses when it sends out a particular service. The EMG2926-Q10A forwards the traffic with this port (or range of ports) to the client computer on the LAN that requested the service.
Port	Type a port number or the starting port number in a range of port numbers.
End Port	Type a port number or the ending port number in a range of port numbers.
Trigger	The trigger port is a port (or a range of ports) that causes (or triggers) the EMG2926-Q10A to record the IP address of the LAN computer that sent the traffic to a server on the WAN.
Port	Type a port number or the starting port number in a range of port numbers.
End Port	Type a port number or the ending port number in a range of port numbers.

Table 49 Network > NAT > Port Trigger (continued)

LABEL	DESCRIPTION
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

13

DDNS

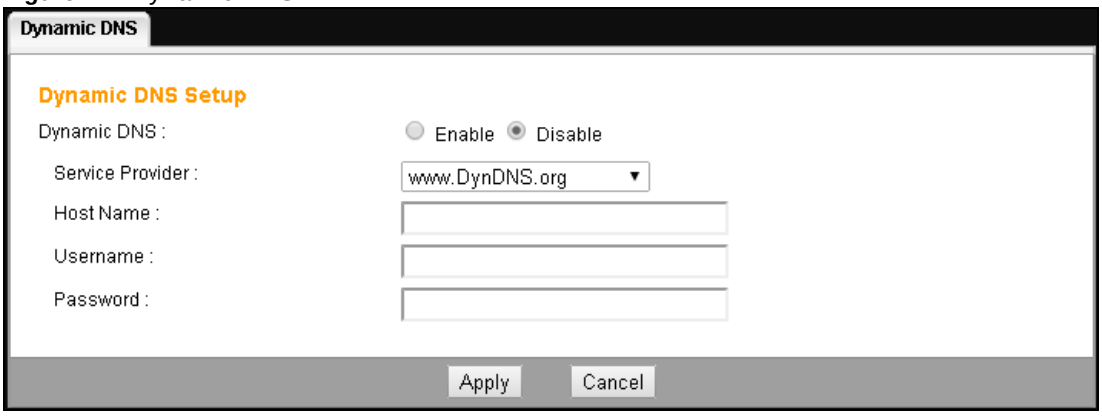
13.1 Overview

DDNS services let you use a domain name with a dynamic IP address.

13.2 General

To change your EMG2926-Q10A's DDNS, click **Network > DDNS**. The screen appears as shown.

Figure 72 Dynamic DNS



The following table describes the labels on this screen.

Table 50 Dynamic DNS

LABEL	DESCRIPTION
Dynamic DNS	Select **Enable** to use dynamic DNS. Select **Disable** to turn this feature off.
Service Provider	Select the name of your Dynamic DNS service provider.
Host Name	Enter a host name in the field provided. You can specify up to two host names in the field separated by a comma (",").
Username	Enter your user name.
Password	Enter the password assigned to you.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

14

Static Route

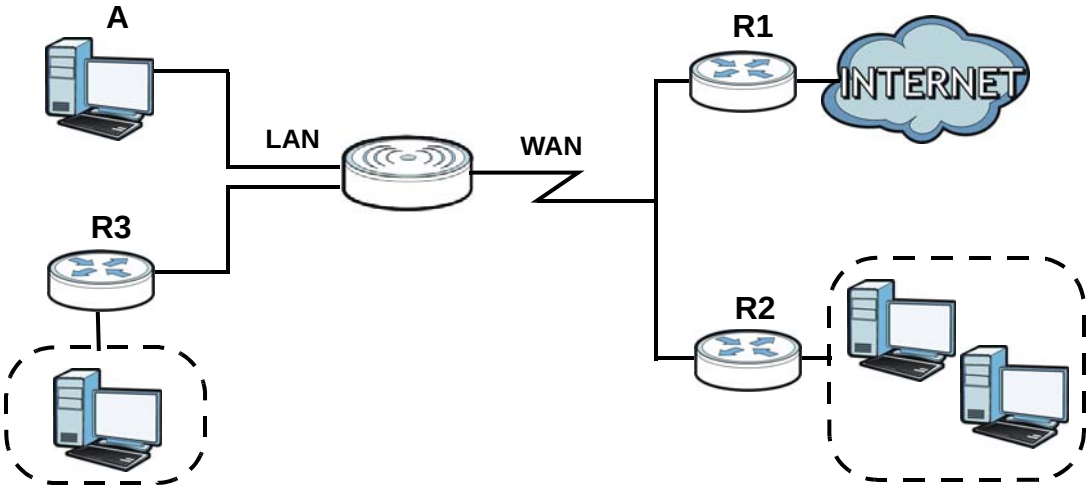
14.1 Overview

This chapter shows you how to configure static routes for your EMG2926-Q10A.

The EMG2926-Q10A usually uses the default gateway to route outbound traffic from computers on the LAN to the Internet. To have the EMG2926-Q10A send data to devices not reachable through the default gateway, use static routes.

For example, the following figure shows a computer (**A**) connected to the EMG2926-Q10A's LAN interface. The EMG2926-Q10A routes most traffic from **A** to the Internet through the EMG2926-Q10A's default gateway (**R1**). You create one static route to connect to services offered by your ISP behind router **R2**. You create another static route to communicate with a separate network behind router **R3** connected to the LAN.

Figure 73 Example of Static Routing Topology



14.2 IP Static Route Screen

Click **Network > Static Route** to open the **Static Route** screen.

Figure 74 Network > Static Route

The following table describes the labels on this screen.

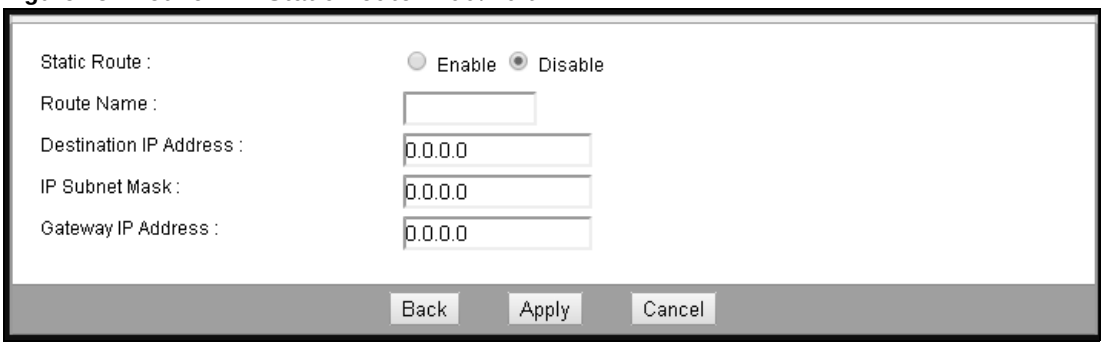
Table 51 Network > Static Route

LABEL	DESCRIPTION
Add Static Route	Click this to create a new rule.
#	This is the number of an individual static route.
Status	This field indicates whether the rule is active (yellow bulb) or not (gray bulb).
Name	This field displays a name to identify this rule.
Destination	This parameter specifies the IP network address of the final destination. Routing is always based on network number.
Gateway	This is the IP address of the gateway. The gateway is a router or switch on the same network segment as the device's LAN or WAN port. The gateway helps forward packets to their destinations.
Subnet Mask	This parameter specifies the IP network subnet mask of the final destination.
Modify	Click the **Edit** icon to open a screen where you can modify an existing rule. Click the **Delete** icon to remove a rule from the EMG2926-Q10A.

14.2.1 Add/Edit Static Route

Click the **Add Static Route** button or a rule's **Edit** icon in the **Static Route** screen. Use this screen to configure the required information for a static route.

Figure 75 Network > Static Route: Add/Edit



The following table describes the labels on this screen.

Table 52 Network > Static Route: Add/Edit

LABEL	DESCRIPTION
Static Route	Select to enable or disable this rule.
Route Name	Type a name to identify this rule. You can use up to 31 printable English keyboard characters, including spaces.

Table 52 Network > Static Route: Add/Edit

LABEL	DESCRIPTION
Destination IP Address	This parameter specifies the IP network address of the final destination. Routing is always based on network number. If you need to specify a route to a single host, use a subnet mask of 255.255.255.255 in the subnet mask field to force the network number to be identical to the host ID.
IP Subnet Mask	Enter the IP subnet mask here.
Gateway IP Address	Enter the IP address of the next-hop gateway. The gateway is a router or switch on the same segment as your EMG2926-Q10A's interface(s). The gateway helps forward packets to their destinations.
Back	Click **Back** to return to the previous screen without saving.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to set every field in this screen to its last-saved value.

15

Firewall

15.1 Overview

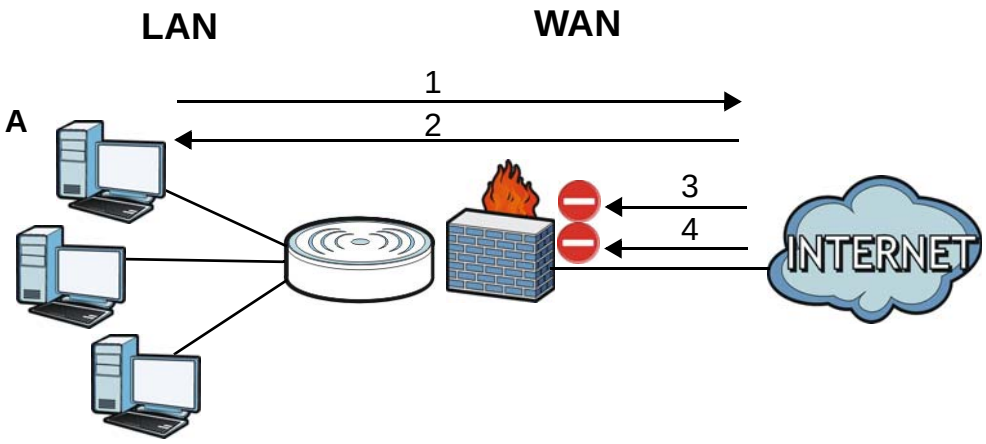
Use these screens to enable and configure the firewall that protects your EMG2926-Q10A and your LAN from unwanted or malicious traffic.

Enable the firewall to protect your LAN computers from attacks by hackers on the Internet and control access between the LAN and WAN. By default the firewall:

- allows traffic that originates from your LAN computers to go to all of the networks.
- blocks traffic that originates on the other networks from going to the LAN.

The following figure illustrates the default firewall action. User **A** can initiate an IM (Instant Messaging) session from the LAN to the WAN (1). Return traffic for this session is also allowed (2). However other traffic initiated from the WAN is blocked (3 and 4).

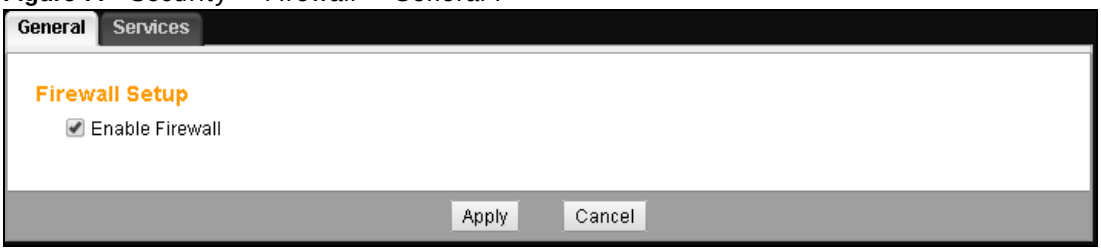
Figure 76 Default Firewall Action



15.2 General Screen

Use this screen to enable or disable the EMG2926-Q10A's firewall, and set up firewall logs. Click **Security** > **Firewall** to open the **General** screen.

Figure 77 Security > Firewall > General I



The following table describes the labels on this screen.

Table 53 Security > Firewall > General

LABEL	DESCRIPTION
Enable Firewall	Select this check box to activate the firewall. The EMG2926-Q10A performs access control and protects against Denial of Service (DoS) attacks when the firewall is activated.
Apply	Click **Apply** to save the settings.
Cancel	Click **Cancel** to start configuring this screen again.

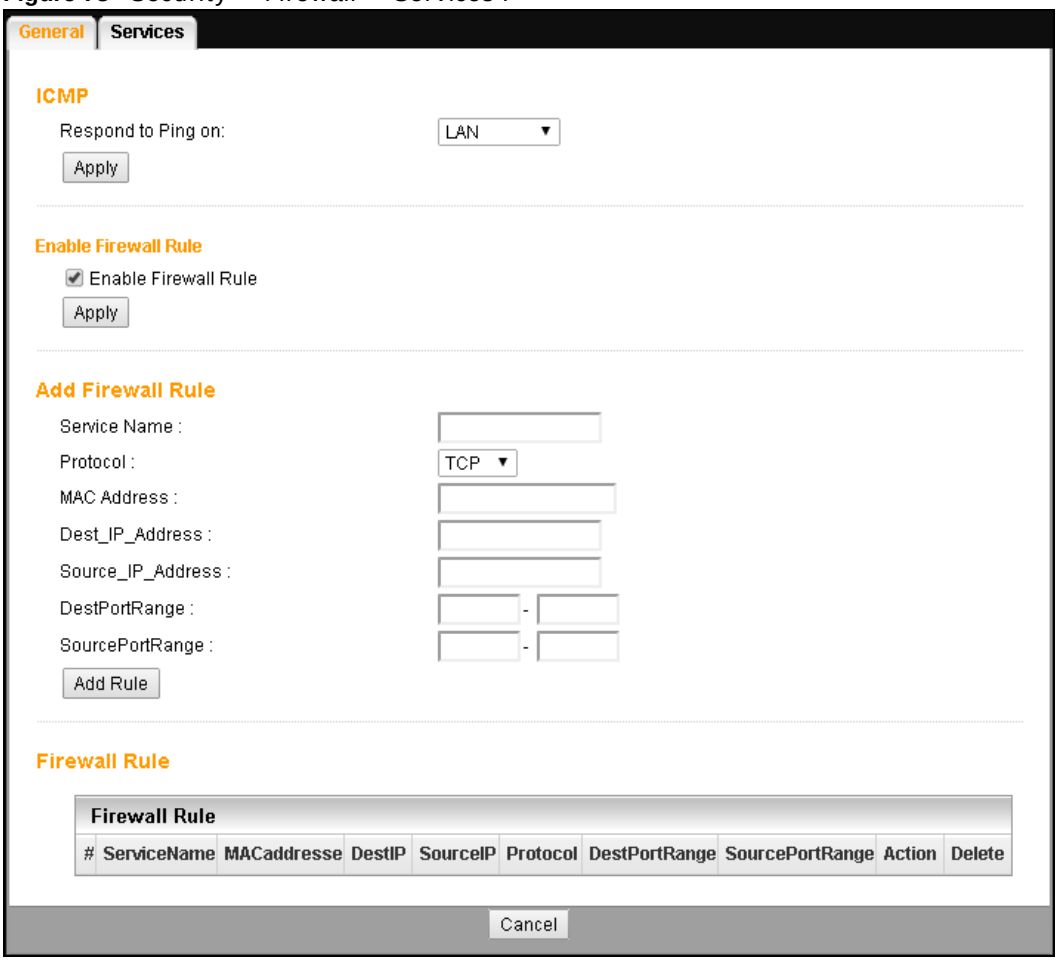
15.3 Services Screen

If an outside user attempts to probe an unsupported port on your EMG2926-Q10A, an ICMP response packet is automatically returned. This allows the outside user to know the EMG2926-Q10A exists. Use this screen to prevent the ICMP response packet from being sent. This keeps outsiders from discovering your EMG2926-Q10A when unsupported ports are probed.

You can also use this screen to enable/add/delete/modify an IPv4 firewall rule.

Click **Security** > **Firewall** > **Services**. The screen appears as shown on the following page.

Figure 78 Security > Firewall > Services I



The following table describes the labels on this screen.

Table 54 Security > Firewall > Services

LABEL	DESCRIPTION
ICMP	Internet Control Message Protocol is a message control and error-reporting protocol between a host server and a gateway to the Internet. ICMP uses Internet Protocol (IP) datagrams, but the messages are processed by the TCP/IP software and directly apparent to the application user.
Respond to Ping on	The EMG2926-Q10A will not respond to any incoming Ping requests when **Disable** is selected. Select **LAN** to reply to incoming LAN Ping requests. Select **WAN** to reply to incoming WAN Ping requests. Otherwise select **LAN&WAN** to reply to all incoming LAN and WAN Ping requests.
Apply	Click **Apply** to save the settings.
Enable Firewall Rule	
Enable Firewall Rule	Select this check box to activate the firewall rules that you define (see **Add Firewall Rule** below).
Apply	Click **Apply** to save the settings.
Add Firewall Rule	
Service Name	Enter a name that identifies or describes the firewall rule.
Protocol	Select the protocol (**TCP**, **UDP** or **ICMP**) used to transport the packets for which you want to apply the firewall rule.

Table 54 Security > Firewall > Services (continued)

LABEL	DESCRIPTION
MAC Address	Enter the MAC address of the computer for which the firewall rule applies.
Dest IP Address	Enter the IP address of the computer to which traffic for the application or service is entering. The EMG2926-Q10A applies the firewall rule to traffic initiating from this computer.
Source IP Address	Enter the IP address of the computer that initializes traffic for the application or service. The EMG2926-Q10A applies the firewall rule to traffic initiating from this computer.
Dest Port Range	Enter the port number/range of the destination that defines the traffic type, for example TCP port 80 defines web traffic.
Source Port Range	Enter the port number/range of the source that defines the traffic type, for example TCP port 80 defines web traffic.
Add Rule	Click **Add** to save the firewall rule.
Firewall Rule	
#	This is your firewall rule number. The ordering of your rules is important as rules are applied in turn.
Service Name	This is a name that identifies or describes the firewall rule.
MAC address	This is the MAC address of the computer for which the firewall rule applies.
Dest IP	This is the IP address of the computer to which traffic for the application or service is entering.
Source IP	This is the IP address of the computer from which traffic for the application or service is initialized.
Protocol	This is the protocol (**TCP**, **UDP** or **ICMP**) used to transport the packets for which you want to apply the firewall rule.
Dest Port Range	This is the port number/range of the destination that defines the traffic type, for example TCP port 80 defines web traffic.
Source Port Range	This is the port number/range of the source that defines the traffic type, for example TCP port 80 defines web traffic.
Action	**DROP** - Traffic matching the conditions of the firewall rule are stopped.
Delete	Click **Delete** to remove the firewall rule.
Cancel	Click **Cancel** to start configuring this screen again.

16

Content Filtering

16.1 Overview

This chapter shows you how to configure content filtering.

16.2 Content Filter Screen

Use this screen to restrict web features and designate a trusted computer. Click **Security** > **Content Filter** to open the **Content Filter** screen.

Figure 79 Security > Content Filter

The following table describes the labels in this screen.

Table 55 Security > Content Filter

LABEL	DESCRIPTION
Trusted IP Setup	To enable this feature, type an IP address of any one of the computers in your network that you want to have as a trusted computer. This allows the trusted computer to have full access to all features that are configured to be blocked by content filtering. Leave this field blank to have no trusted computers.
Restrict Web Features	Select the box(es) to restrict a feature. When you download a page containing a restricted feature, that part of the web page will appear blank or grayed out.
ActiveX	A tool for building dynamic and active Web pages and distributed object applications. When you visit an ActiveX Web site, ActiveX controls are downloaded to your browser, where they remain in case you visit the site again.
Java	A programming language and development environment for building downloadable Web components or Internet and intranet business applications of all kinds.
Cookies	Used by Web servers to track usage and provide service based on ID.

Table 55 Security > Content Filter (continued)

LABEL	DESCRIPTION
Web Proxy	A server that acts as an intermediary between a user and the Internet to provide security, administrative control, and caching service. When a proxy server is located on the WAN it is possible for LAN users to circumvent content filtering by pointing to this proxy server.
Apply	Click **Apply** to save your changes.
Cancel	Click **Cancel** to begin configuring this screen afresh

17

Parental Controls

17.1 Overview

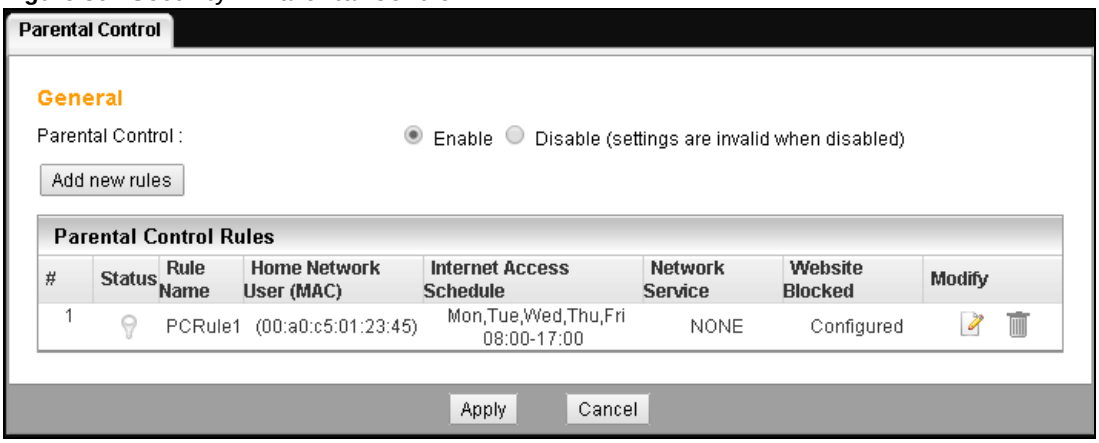
Parental controls allow you to block specific URLs. You can also define time periods and days during which the EMG2926-Q10A performs parental control on a specific user.

17.2 Parental Control Screen

Use this screen to enable parental control, view the parental control rules and schedules.

Click **Configuration > Security** > **Parental Control** to open the following screen.

Figure 80 Security > Parental Control



The following table describes the fields on this screen.

Table 56 Security > Parental Control

LABEL	DESCRIPTION
Parental Control	Select **Enable** to activate parental control.
Add new rules	Click this if you want to configure a new parental control rule.
#	This shows the index number of the rule.
Status	This indicates whether the rule is active or not. A yellow bulb signifies that this rule is active. A gray bulb signifies that this rule is not active.
Rule Name	This shows the name of the rule.
Home Network User (MAC)	This shows the MAC address of the LAN user's computer to which this rule applies.

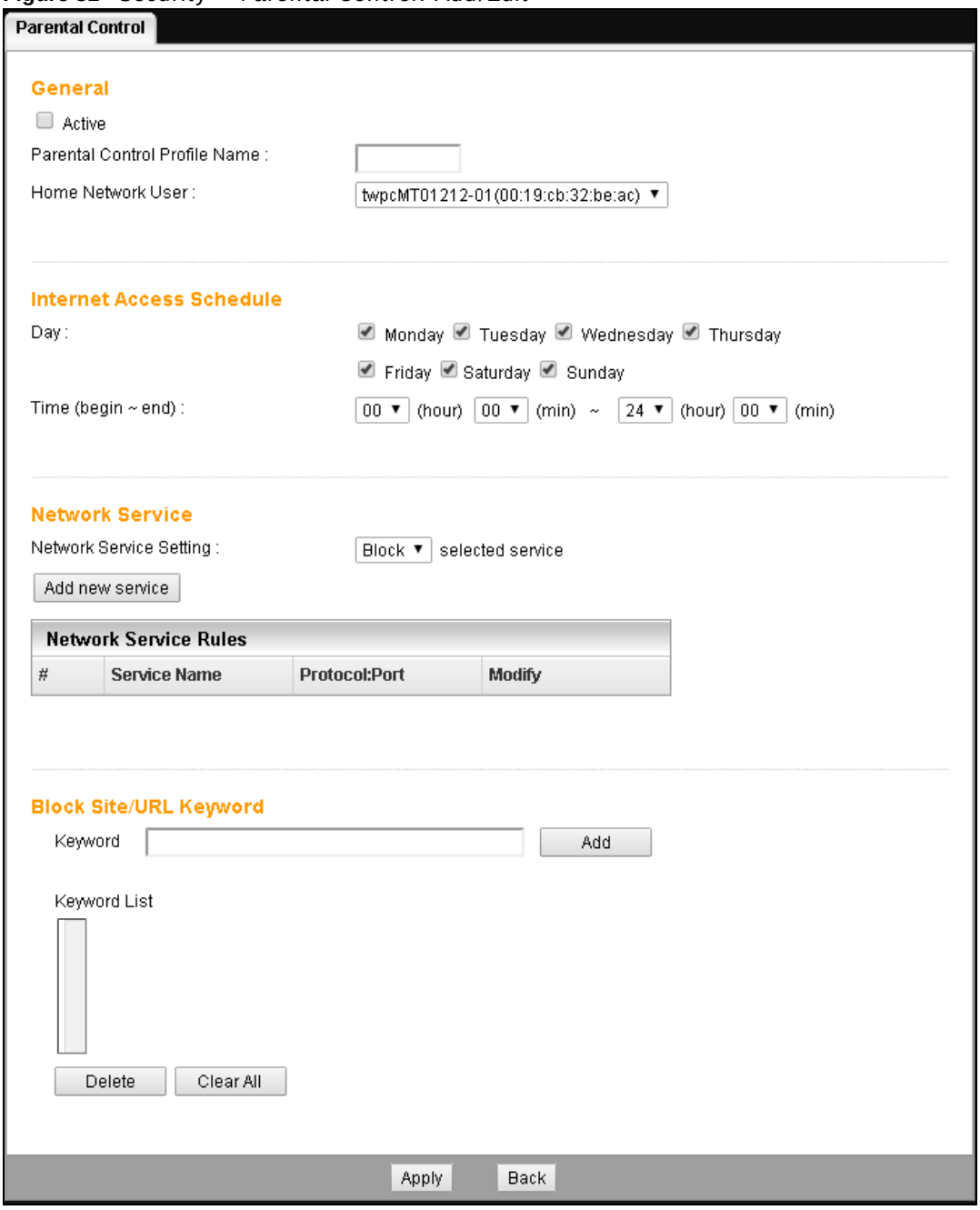
Table 56 Security > Parental Control (continued)

LABEL	DESCRIPTION
Internet Access Schedule	This shows the day(s) and time on which parental control is enabled.
Network Service	This shows whether the network service is configured. If not, **None** will be shown.
Website Block	This shows whether the website block is configured. If not, **None** will be shown.
Modify	Click the **Edit** icon to go to the screen where you can edit the rule. Click the **Delete** icon to delete an existing rule.
Apply	Click **Apply** to save your changes.
Cancel	Click **Cancel** to restore your previously saved settings.

17.2.1 Add/Edit a Parental Control Rule

Click **Add new rules** in the **Parental Control** screen to add a new rule or click the **Edit** icon next to an existing rule to edit it. Use this screen to configure a restricted access schedule and/or URL filtering settings to block the users on your network from accessing certain web sites.

Figure 81 Security > Parental Control: Add/Edit



The following table describes the fields on this screen.

Table 57 Security > Parental Control: Add/Edit

LABEL	DESCRIPTION
General	
Active	Select the checkbox to activate this parental control rule.
Parental Control Profile Name	Enter a descriptive name for the rule.

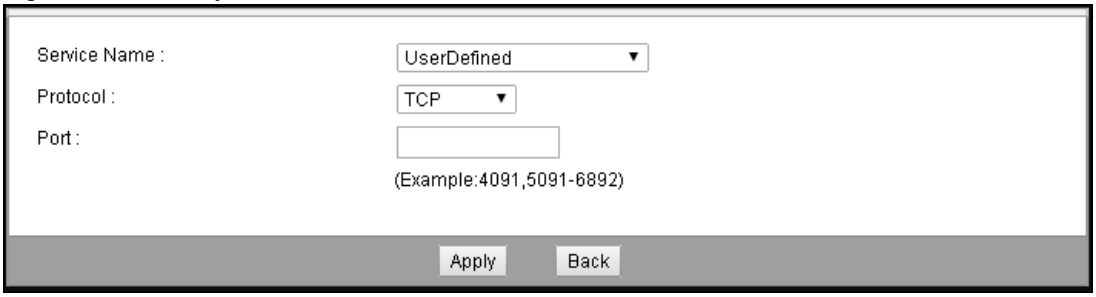
Table 57 Security > Parental Control: Add/Edit (continued)

LABEL	DESCRIPTION
Home Network User	Select the LAN user that you want to apply this rule to from the drop-down list box. If you select **Custom**, enter the LAN user's MAC address. If you select **All**, the rule applies to all LAN users.
Internet Access Schedule	
Day	Select check boxes for the days that you want the EMG2926-Q10A to perform parental control.
Time	Drag the time bar to define the time that the LAN user is allowed access.
Network Service	
Network Service Setting	If you select **Block**, the EMG2926-Q10A prohibits the users from using the services listed below. If you select **Allow**, the EMG2926-Q10A blocks all services except ones listed below.
Add new service	Click this to show a screen in which you can add a new service rule. You can configure the **Service Name**, **Protocol**, and **Port** of the new rule.
#	This shows the index number of the rule. Select the checkbox next to the rule to activate it.
Service Name	This shows the name of the service.
Protocol:Port	This shows the protocol and the port of the service.
Modify	Click the **Edit** icon to go to the screen where you can edit the rule. Click the **Delete** icon to delete an existing rule.
Blocked Site/ URL Keyword	Click **Add** to show a screen to enter the website URL or URL keyword to which the EMG2926-Q10A blocks access. Click **Delete** to remove it.
Apply	Click **Apply** to save your settings back to the EMG2926-Q10A.
Back	Click **Back** to return to the previous screen.

17.2.2 Add/Edit a Service

Click **Add new service** in the **Parental Control > Add new rules/Edit** screen to add a new entry or click the **Edit** icon next to an existing entry to edit it. Use this screen to configure a service rule.

Figure 82 Security > Parental Control > Add new rules/Edit > Add new service/Edit



The following table describes the fields on this screen.

Table 58 Security > Parental Control > Add new rules/Edit > Add new service/Edit

LABEL	DESCRIPTION
Service Name	Select the name of the service. Otherwise, select **UserDefined** and manually specify the protocol and the port of the service.
Protocol	Select the transport layer protocol used for the service. Choices are **TCP**, **UDP**, or **TCP / UDP**. If you have chosen a pre-defined service in the **Service Name** field, this field will not be configurable.
Port	Enter the port of the service. If you have chosen a pre-defined service in the **Service Name** field, this field will not be configurable.
Apply	Click **Apply** to save your settings with the EMG2926-Q10A.
Back	Click **Back** to return to the previous screen.

18

IPv6 Firewall

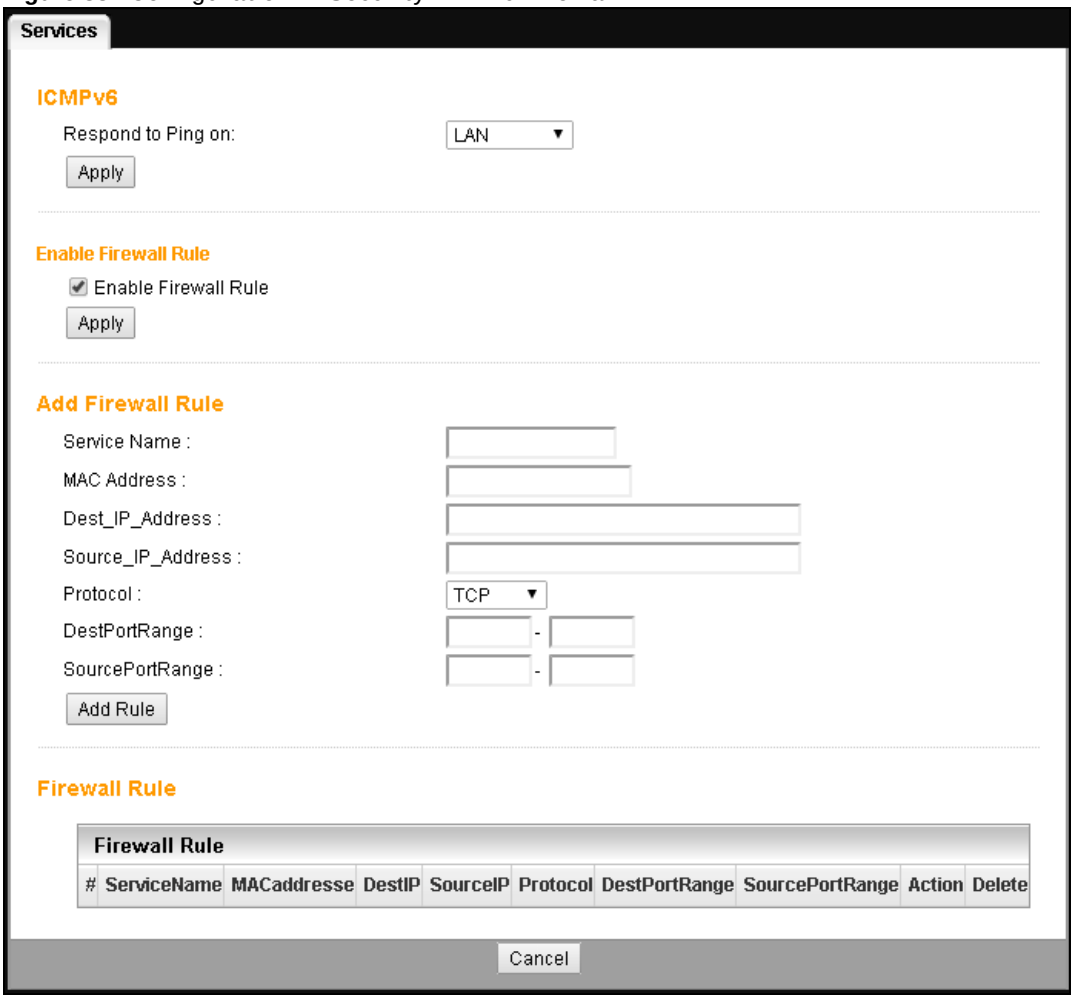
18.1 Overview

This chapter shows you how to enable and create IPv6 firewall rules to block unwanted IPv6 traffic.

18.2 IPv6 Firewall Screen

Click **Configuration** > **Security** > **IPv6 Firewall**. The **Service** screen appears as shown.

Figure 83 Configuration > Security > IPv6 Firewall



The following table describes the labels on this screen.

Table 59 Configuration > Security > IPv6 Firewall

LABEL	DESCRIPTION
ICMPv6	Internet Control Message Protocol for IPv6 (ICMPv6 or ICMP for IPv6) is defined in RFC 4443. ICMPv6 has a preceding Next Header value of 58, which is different from the value used to identify ICMP for IPv4. ICMPv6 is an integral part of IPv6. IPv6 nodes use ICMPv6 to report errors encountered in packet processing and perform other diagnostic functions, such as "ping".
Respond to Ping on	The EMG2926-Q10A will not respond to any incoming Ping requests when **Disable** is selected. Select **LAN** to reply to incoming LAN Ping requests. Select **WAN** to reply to incoming WAN Ping requests. Otherwise select **LAN&WAN** to reply to all incoming LAN and WAN Ping requests.
Apply	Click **Apply** to save the settings.
Enable Firewall Rule	
Enable Firewall Rule	Select this check box to activate the firewall rules that you define (see **Add Firewall Rule** below).
Apply	Click **Apply** to save the settings.
Add Firewall Rule	
Service Name	Enter a name that identifies or describes the firewall rule.
MAC Address	Enter the MAC address of the computer for which the firewall rule applies.
Dest_IP_Address	Enter the IPv6 address of the computer to which traffic for the application or service is entering. The EMG2926-Q10A applies the firewall rule to traffic destined for this computer.
Source_IP_Address	Enter the IPv6 address of the computer that initializes traffic for the application or service. The EMG2926-Q10A applies the firewall rule to traffic initiating from this computer.
Protocol	Select the protocol (**TCP**, **UDP** or **ICMP**) used to transport the packets for which you want to apply the firewall rule.
Dest Port Range	Enter the port number/range of the destination that defines the traffic type, for example TCP port 80 defines web traffic.
Source Port Range	Enter the port number/range of the source that defines the traffic type, for example TCP port 80 defines web traffic.
Add Rule	Click **Add Rule** to save the firewall rule.
Firewall Rule	
#	This is your firewall rule number. The ordering of your rules is important as rules are applied in turn.
ServiceName	This is a name that identifies or describes the firewall rule.
MACaddress	This is the MAC address of the computer for which the firewall rule applies.
DestIP	This is the IP address of the computer to which traffic for the application or service is entering.
SourceIP	This is the IP address of the computer to which traffic for the application or service is initialized.
Protocol	This is the protocol (**TCP**, **UDP** or **ICMP**) used to transport the packets for which you want to apply the firewall rule.
DestPortRange	This is the port number/range of the destination that defines the traffic type, for example TCP port 80 defines web traffic.
SourcePortRange	This is the port number/range of the source that defines the traffic type, for example TCP port 80 defines web traffic.
Action	**DROP** - Traffic matching the conditions of the firewall rule is stopped.

Table 59 Configuration > Security > IPv6 Firewall (continued)

LABEL	DESCRIPTION
Delete	Click **Delete** to remove the firewall rule.
Cancel	Click **Cancel** to restore your previously saved settings.

19

StreamBoost Management

19.1 Overview

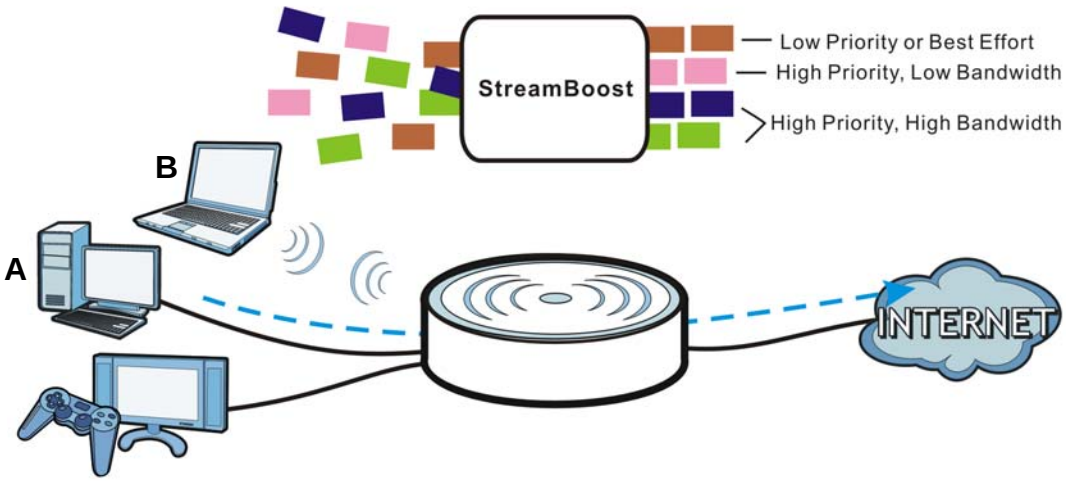
The EMG2926-Q10A supports the new StreamBoost technology, introduced by Qualcomm, to redistribute traffic over the EMG2926-Q10A for the best possible performance in a home network.

Streamboost is smart Quality of Service (QoS). Streamboost detects traffic flow and applies traffic shaping policies automatically. It gives each device and each application priority and provides the exact amount of bandwidth they need at a given time. This helps free up bandwidth for other applications or connected devices. If there is not enough bandwidth for optimal performance, Streamboost makes sure the application or device has the minimum acceptable bandwidth which is determined according to StreamBoost's cloud-based database.

Real-time application traffic (such as on-line games or communications) and video/audio streaming are given the highest priority. Downloads or torrent files are classified as best effort and placed lower than general network traffic (general browsing).

In the figure below, the StreamBoost-enabled EMG2926-Q10A differentiates incoming traffic flow going from the LAN device (**A**) or wireless device (**B**) to the Internet. It shapes traffic and gives priority and allocates bandwidth according to traffic types.

Figure 84 StreamBoost Management Example

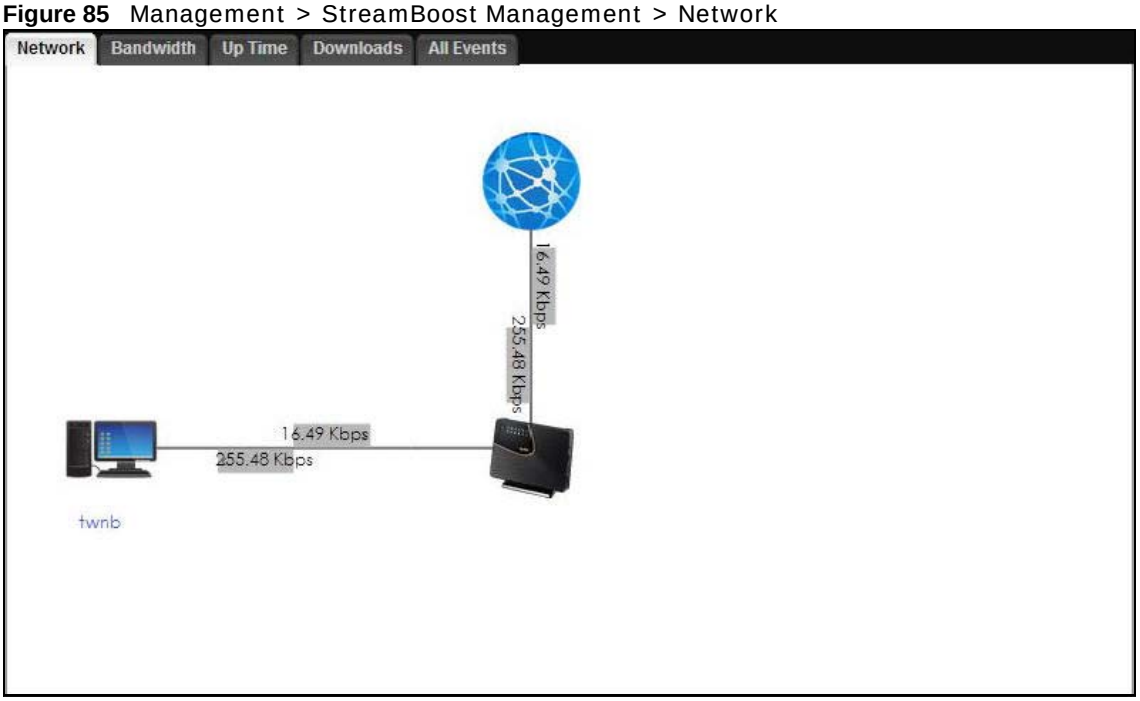


19.2 Network Screen

Use this screen to view the current upstream and downstream transmission speeds between the EMG2926-Q10A and the Internet and/or between the EMG2926-Q10A and the connected device(s) (represented by icons indicating the kind of network device), including those connecting wirelessly.

Click **Management > StreamBoost MGMT > Network** to open the **Network** screen.

Figure 85 Management > StreamBoost Management > Network



19.3 Bandwidth Screen

Use this screen to configure the maximum allowable bandwidth on the EMG2926-Q10A.

Click **Management > StreamBoost MGMT > Bandwidth** to open the **Bandwidth** screen.

Figure 86 Management > StreamBoost Management > Bandwidth

The following table describes the labels on this screen.

Table 60 Management > StreamBoost Management > Bandwidth

LABEL	DESCRIPTION
Manual Configuration	Select this option to control the maximum or minimum amounts of bandwidth that can be used by traffic.
Up Limit	Set the total amount of bandwidth that you want to dedicate to uplink (or outgoing) traffic. This is traffic from LAN/WLAN to WAN.
Down Limit	Set the total amount of bandwidth that you want to dedicate to downlink (or incoming) traffic. This is traffic from WAN to LAN/WLAN.
Apply	Click **Apply** to save your customized settings.
Cancel	Click **Cancel** to begin configuring this screen afresh.

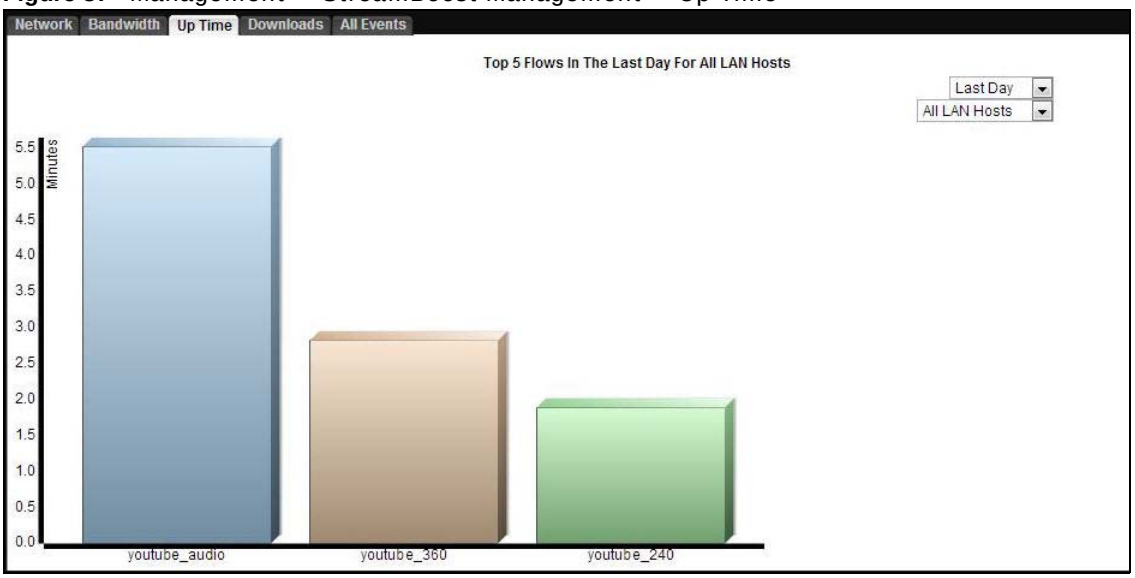
19.4 Up Time Screen

Use this screen to view the top five traffic flows transmitting from/to the selected LAN device(s) in the past day, week or month.

Click **Management > StreamBoost MGMT > Up Time** to open the **Up Time** screen.

The y-axis shows the time period over which the traffic flow occurred. The x-axis shows the type of the traffic flow.

Figure 87 Management > StreamBoost Management > Up Time

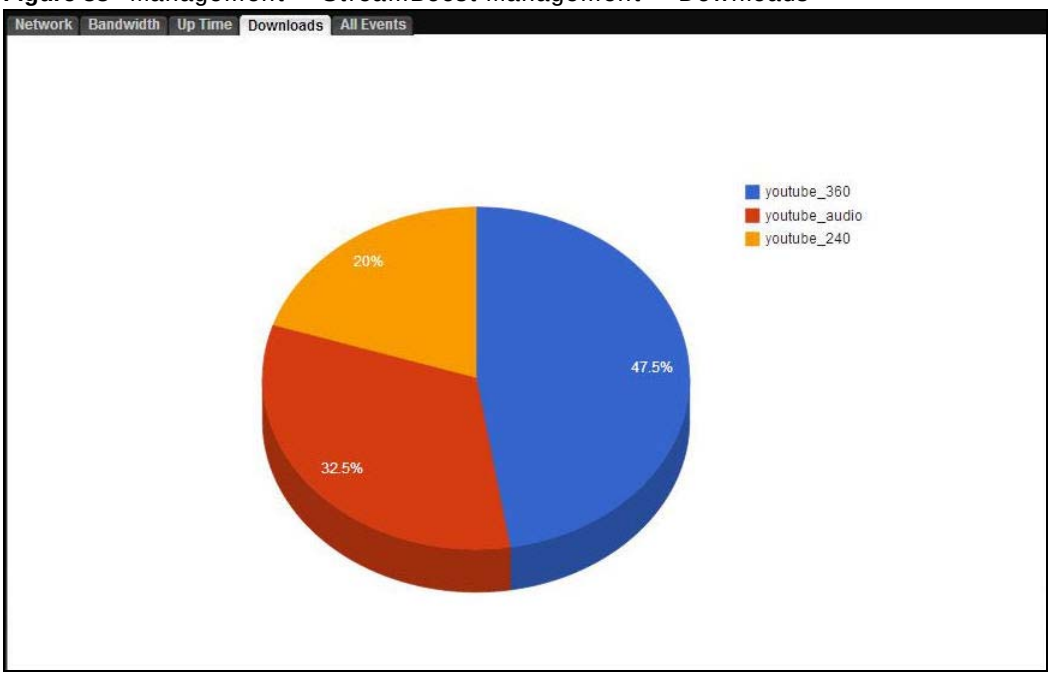


19.5 Downloads Screen

Use this screen to view the type and percentage of most download traffic on the EMG2926-Q10A.

Click **Management > StreamBoost MGMT > Downloads** to open the **Downloads** screen.

Figure 88 Management > StreamBoost Management > Downloads



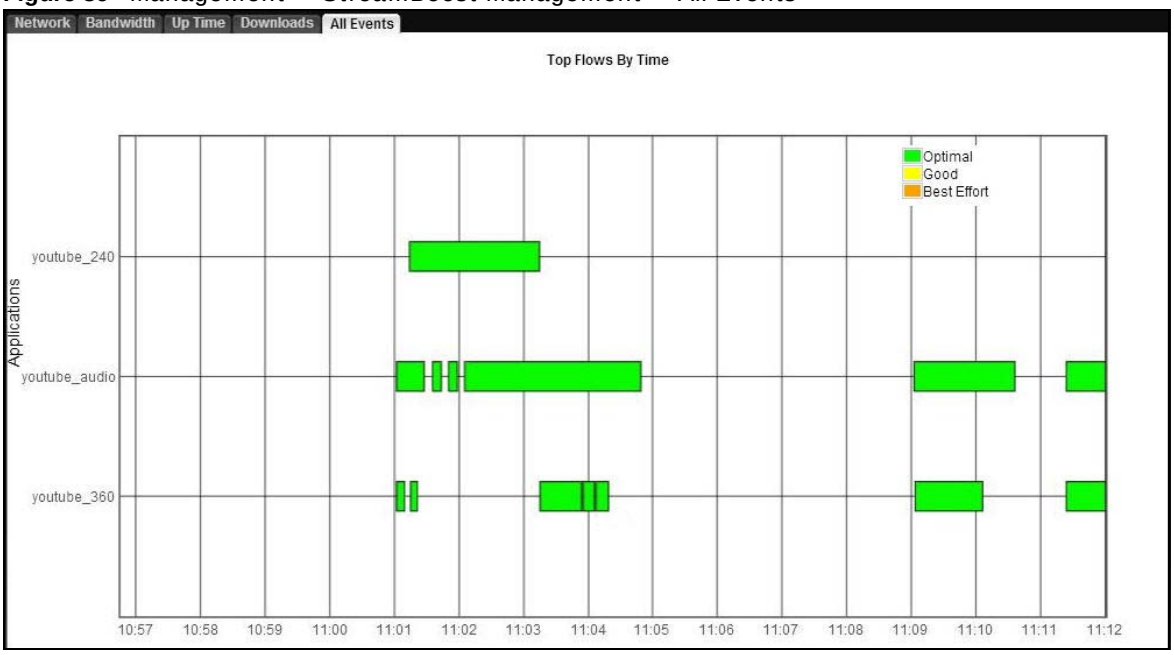
19.6 All Events Screen

Use this screen to view the time at which a traffic flow is given enough bandwidth for optimal, good or best-effort performance.

Click **Management > StreamBoost MGMT > All Events** to open the **All Events** screen.

The y-axis shows the type of the traffic flow. The x-axis shows the time period over which the traffic flow got the required bandwidth.

Figure 89 Management > StreamBoost Management > All Events



20

Remote Management

20.1 Overview

This chapter provides information on the Remote Management screens.

Remote Management allows you to manage your EMG2926-Q10A from a remote location through the following interfaces:

- LAN and WAN
- LAN only
- WAN only

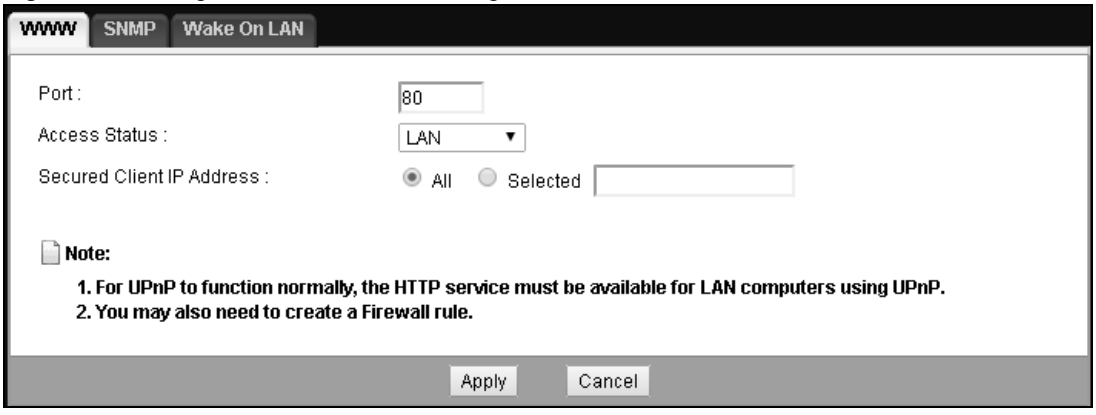
System Timeout

There is a default system management idle timeout of five minutes (three hundred seconds). The EMG2926-Q10A automatically logs you out if the management session remains idle for longer than this timeout period. The management session does not time out when a statistics screen is polling. You can change the timeout period in the **Maintenance > General** screen

20.2 WWW Screen

To change your EMG2926-Q10A's remote management settings, click **Management > Remote MGMT > WWW**.

Figure 90 Management > Remote Management > WWW



The following table describes the labels on this screen.

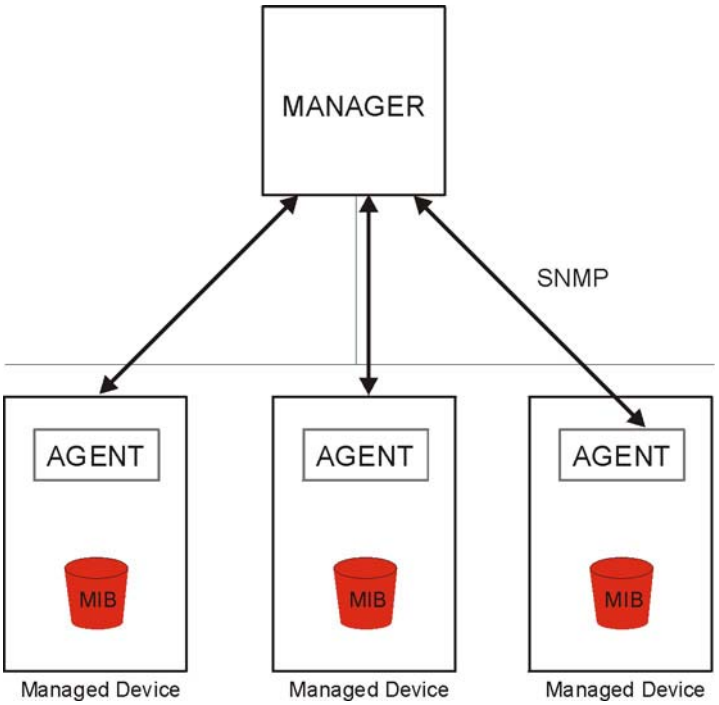
Table 61 Management > Remote Management > WWW

LABEL	DESCRIPTION
Port	You may change the server port number for a service if needed, however you must use the same port number in order to use that service for remote management.
Access Status	Select the interface(s) through which a computer may access the EMG2926-Q10A using this service.
Secured Client IP Address	Select **All** to allow all computes to access the EMG2926-Q10A. Otherwise, check **Selected** and specify the IP address of the computer that can access the EMG2926-Q10A.
Apply	Click **Apply** to save your customized settings.
Cancel	Click **Cancel** to begin configuring this screen afresh.

20.3 SNMP

Simple Network Management Protocol is a protocol used for exchanging management information between network devices. Your EMG2926-Q10A supports SNMP agent functionality, which allows a manager station to manage and monitor the EMG2926-Q10A through the network. The EMG2926-Q10A supports SNMP version one (SNMPv1) and version two (SNMPv2c). The next figure illustrates an SNMP management operation:

Figure 91 SNMP Management Model



An SNMP managed network consists of two main types of component: agents and a manager.

An agent is a management software module that resides in a managed device (the EMG2926-Q10A). An agent translates the local management information from the managed device into a

form compatible with SNMP. The manager is the console through which network administrators perform network management functions. It executes applications that control and monitor managed devices.

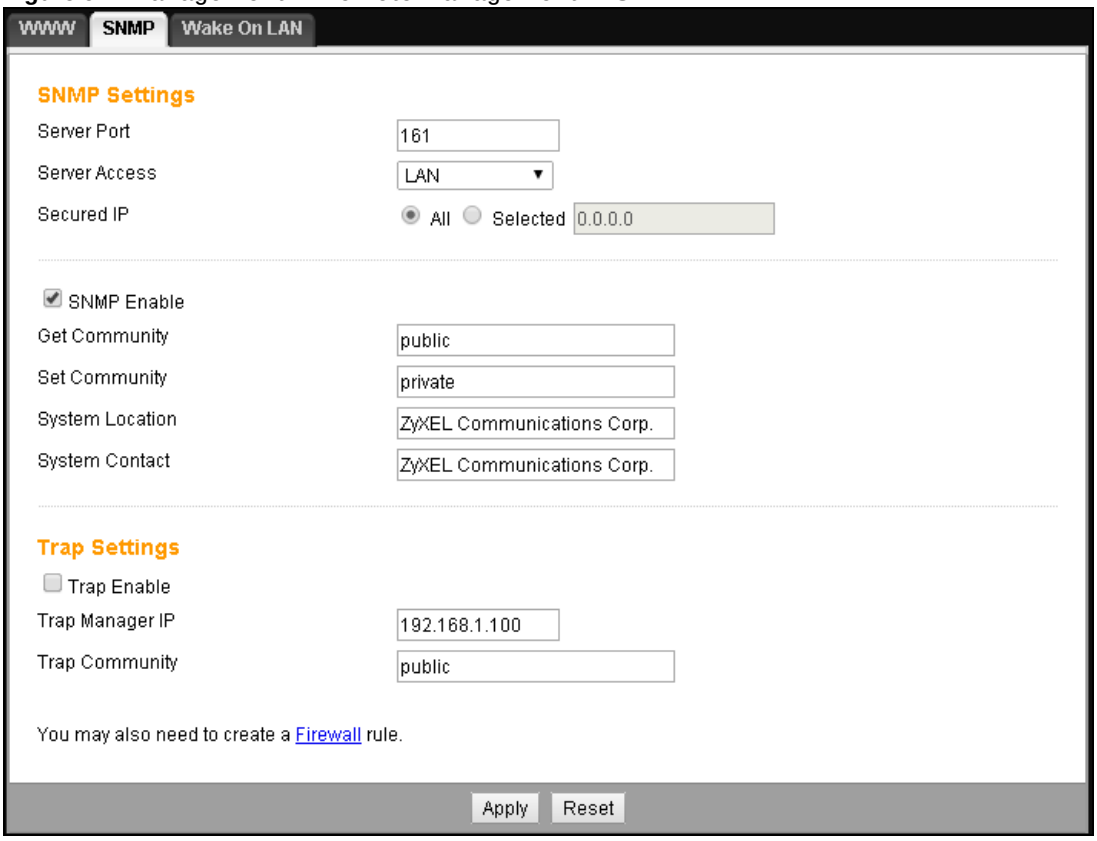
The managed devices contain object variables/managed objects that define each piece of information to be collected about a device. Examples of variables include number of packets received, node port status etc. A Management Information Base (MIB) is a collection of managed objects. SNMP allows a manager and agents to communicate for the purpose of accessing these objects.

SNMP itself is a simple request/response protocol based on the manager/agent model. The manager issues a request and the agent returns responses using the following protocol operations:

- Get - Allows the manager to retrieve an object variable from the agent.
- GetNext - Allows the manager to retrieve the next object variable from a table or list within an agent. In SNMPv1, when a manager wants to retrieve all elements of a table from an agent, it initiates a Get operation, followed by a series of GetNext operations.
- Set - Allows the manager to set values for object variables within an agent.
- Trap - Used by the agent to inform the manager of some events.

To change your EMG2926-Q10A's SNMP settings, click **Management > Remote MGMT > SNMP**.

Figure 92 Management > Remote Management > SNMP



The following table describes the labels on this screen.

Table 62 Management > Remote Management > SNMP

LABEL	DESCRIPTION
SNMP Settings	
Server Port	You may change the server port number for a service if needed, however you must use the same port number in order to use that service for remote management.
Server Access	Select the interface(s) through which a computer may access the EMG2926-Q10A using this service.
Secured IP	Select **All** to allow all computers to access the EMG2926-Q10A. Otherwise, check **Selected** and specify the IP address of the computer that can access the EMG2926-Q10A.
SNMP Enable	Select this to allow a manager station to manage and monitor the EMG2926-Q10A through the network via SNMP.
Get Community	Enter the password for the incoming Get and GetNext requests from the management station. The default is public and allows all requests.
Set Community	Enter the password for incoming Set requests from the management station. The default is public and allows all requests.
System Location	Specify the geographic location of the EMG2926-Q10A.
System Contact	Enter the name of the person in charge of the EMG2926-Q10A.
Trap Settings	
Trap Enable	Select this to have the EMG2926-Q10A send an SNMP trap to the specified IP address when it receives the event. Clear this to disable it.
Trap Manager IP	Type the IP address of the SNMP manager to which your SNMP traps are sent.
Trap Community	Type the password sent with each trap to the SNMP manager. The default is public and allows all requests.
Apply	Click **Apply** to save your customized settings.
Cancel	Click **Cancel** to begin configuring this screen afresh.

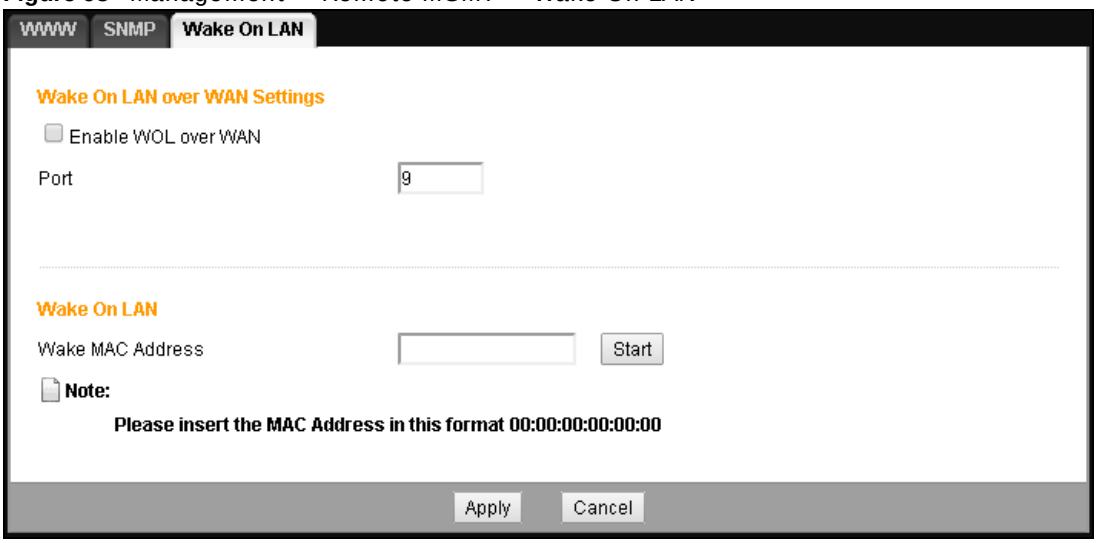
20.4 Wake On LAN Screen

Wake On LAN (WoL) allows you to remotely turn on a device on the network, such as a computer, storage device or media server. To use this feature the remote hardware (for example the network adapter on a computer) must support Wake On LAN using the “Magic Packet” method.

You need to know the MAC address of the remote device. It may be on a label on the device.

Use this screen to remotely turn on a device on the network. Click the **Management > Remote MGMT > Wake On LAN** to open the following screen.

Figure 93 Management > Remote MGMT > Wake On LAN



The following table describes the labels on this screen.

Table 63 Management > Remote MGMT > Wake On LAN

LABEL	DESCRIPTION
Wake On LAN over WAN Settings	
Enable WOL over WAN	Select this option to have the EMG2926-Q10A forward a WoL “Magic Packet” to all devices on the LAN if the packet comes from the WAN or remote network and uses the port number specified in the **Port** field. A LAN device whose hardware supports Wake on LAN then will be powered on if it is turned off previously.
Port	Type a port number from which a WoL packet is forwarded to the LAN.
Wake On LAN	
Wake MAC Address	Enter the MAC Address of the device on the network that will be turned on. A MAC address consists of six hexadecimal character pairs.
Start	Click this to have the EMG2926-Q10A generate a WoL packet and forward it to turn the specified device on. A screen pops up displaying MAC address error if you input the MAC address incorrectly.
Apply	Click **Apply** to save the setting to the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

21

Universal Plug-and-Play (UPnP)

21.1 Overview

This chapter introduces the UPnP feature in the web configurator.

Universal Plug and Play (UPnP) is a distributed, open networking standard that uses TCP/IP for simple peer-to-peer network connectivity between devices. A UPnP device can dynamically join a network, obtain an IP address, convey its capabilities and learn about other devices on the network. In turn, a device can leave a network smoothly and automatically when it is no longer in use.

UPnP hardware is identified as an icon in the Network Connections folder (Windows XP). Each UPnP compatible device installed on your network will appear as a separate icon. Selecting the icon of a UPnP device will allow you to access the information and properties of that device.

Cautions with UPnP

The automated nature of NAT traversal applications in establishing their own services and opening firewall ports may present network security issues. Network information and configuration may also be obtained and modified by users in some network environments.

When a UPnP device joins a network, it announces its presence with a multicast message. For security reasons, the EMG2926-Q10A allows multicast messages on the LAN only.

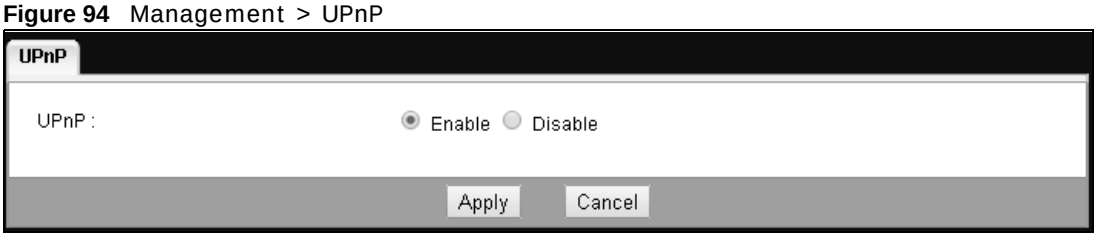
All UPnP-enabled devices may communicate freely with each other without additional configuration. Disable UPnP if this is not your intention.

21.2 UPnP Screen

Use this screen to enable UPnP on your EMG2926-Q10A.

Click **Management > UPnP** to display the following screen:

Figure 94 Management > UPnP



The following table describes the fields on this screen.

Table 64 Management > UPnP

LABEL	DESCRIPTION
UPnP	Select **Enable** to activate UPnP. Be aware that anyone could use a UPnP application to open the web configurator's login screen without entering the EMG2926-Q10A's IP address (although you must still enter the password to access the web configurator).
Apply	Click **Apply** to save the setting with the EMG2926-Q10A.
Cancel	Click **Cancel** to return to the previously saved settings.

22

USB Media Sharing

22.1 Overview

This chapter describes how to configure the media sharing settings on the EMG2926-Q10A.

Note: The read and write performance may be affected by amount of file-sharing traffic on your network, type of connected USB device and your USB version (1.1 or 2.0).

Media Server

You can set up your EMG2926-Q10A to act as a media server to provide media (like video) to DLNA-compliant players, such as Windows Media Player, ZyXEL DMAs (Digital Media Adapters), Xboxes or PS3s. The media server and clients must have IP addresses in the same subnet.

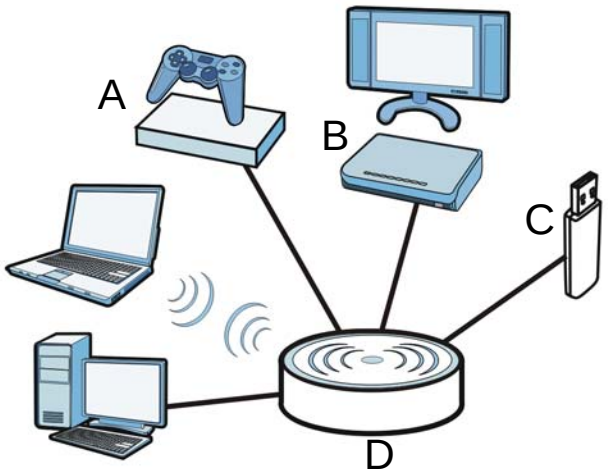
The EMG2926-Q10A media server enables you to:

- Publish all folders for everyone to play media files in the USB storage device connected to the EMG2926-Q10A.
- Use hardware-based media clients like the DMA-2500 to play the files.

Note: Anyone on your network can play the media files in the published folders. No user name and password nor other form of security is required.

The following figure is an overview of the EMG2926-Q10A's media server feature. DLNA devices **A** and **B** can access and play files on a USB device (**C**) which is connected to the EMG2926-Q10A (**D**).

Figure 95 Media Server Overview

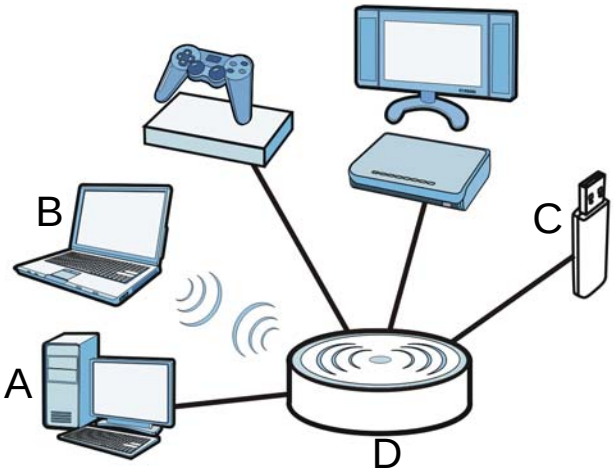


File-Sharing Server

You can also share files on a USB memory stick or hard drive connected to your EMG2926-Q10A with users on your network.

The following figure is an overview of the EMG2926-Q10A's file-sharing server feature. Computers **A** and **B** can access files on a USB device (**C**) which is connected to the EMG2926-Q10A (**D**).

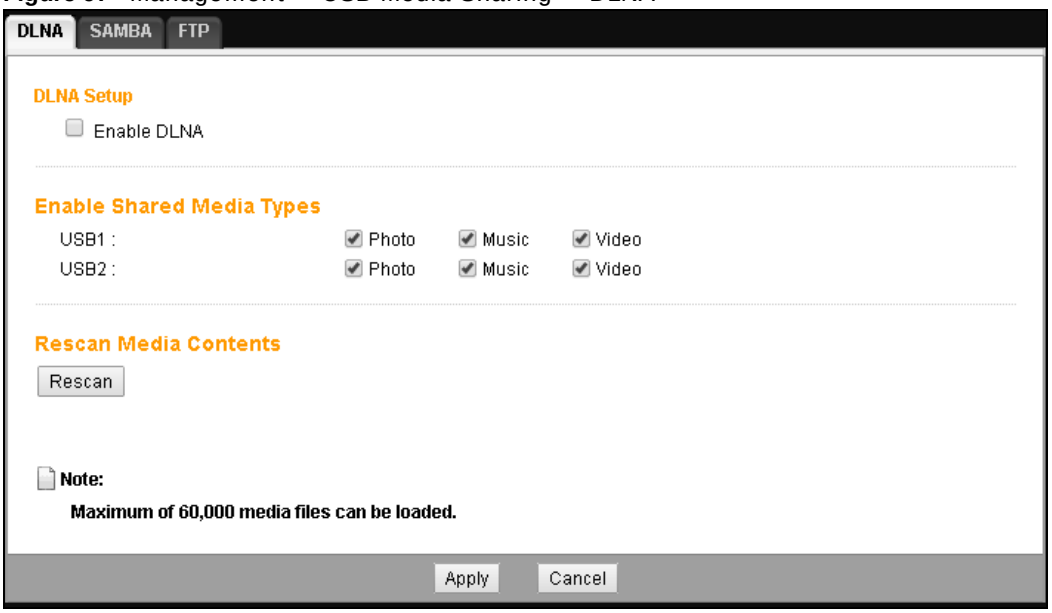
Figure 96 File Sharing Overview



22.2 DLNA Screen

Use this screen to have the EMG2926-Q10A act as a DLNA-compliant media server that lets DLNA-compliant media clients on your network play video, music, and photos from the EMG2926-Q10A (without having to copy them to another computer). Click **Management > USB Media Sharing > DLNA**.

Figure 97 Management > USB Media Sharing > DLNA



The following table describes the labels on this screen.

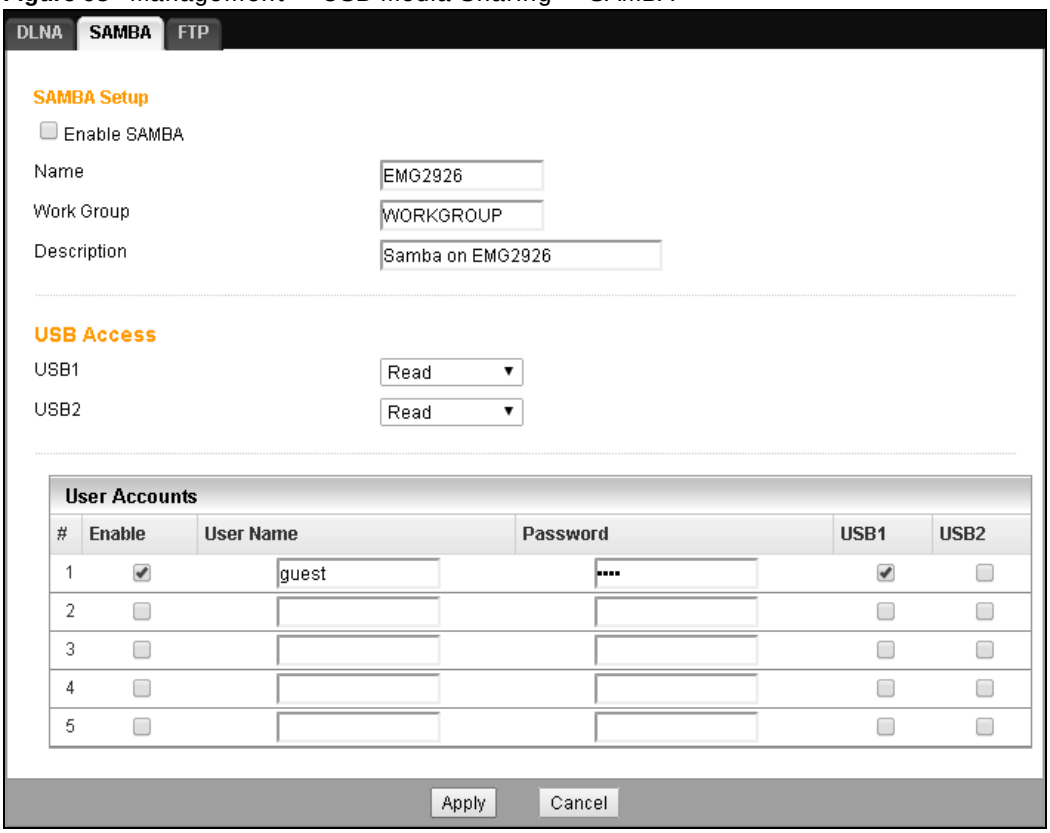
Table 65 Management > USB Media Sharing > DLNA

LABEL	DESCRIPTION
Enable DLNA	Select this to have the EMG2926-Q10A function as a DLNA-compliant media server.
USB1/2	Select the media type that you want to share on the USB device connected to the EMG2926-Q10A's USB port.
Rescan	Click this button to have the EMG2926-Q10A scan the media files on the connected USB device and do indexing of the file list again so that DLNA clients can find the new files if any.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

22.3 SAMBA Screen

Use this screen to set up file-sharing via the EMG2926-Q10A using Windows Explorer or the workgroup name. You can also configure the workgroup name and create file-sharing user accounts. Click **Management > USB Media Sharing > SAMBA**.

Figure 98 Management > USB Media Sharing > SAMBA



The following table describes the labels on this screen.

Table 66 Management > USB Media Sharing > SAMBA

LABEL	DESCRIPTION
Enable SAMBA	Select this to enable file sharing through the EMG2926-Q10A using Windows Explorer or by browsing to your work group.
Name	Specify the name to identify the EMG2926-Q10A in a work group.
Work Group	You can add the EMG2926-Q10A to an existing or a new workgroup on your network. Enter the name of the workgroup which your EMG2926-Q10A automatically joins. You can set the EMG2926-Q10A's workgroup name to be exactly the same as the workgroup name to which your computer belongs. Note: The EMG2926-Q10A will not be able to join the workgroup if your local area network has restrictions set up that do not allow devices to join a workgroup. In this case, contact your network administrator.
Description	Enter the description of the EMG2926-Q10A in a work group.
USB1/2	Specify the user's access rights to the USB storage device which is connected to the EMG2926-Q10A's USB port. **Read & Write** - The user has read and write rights, meaning that the user can create and edit the files on the connected USB device. **Read** - The user has read rights only and can not create or edit the files on the connected USB device.
User Accounts	Before you can share files you need a user account. Configure the following fields to set up a file-sharing account.
#	This is the index number of the user account.

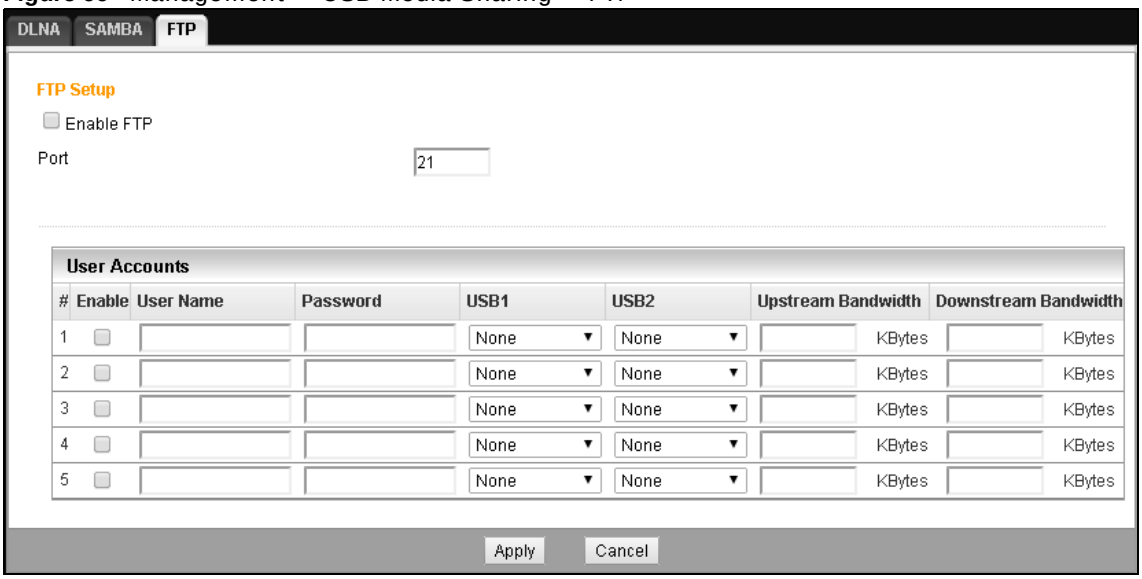
Table 66 Management > USB Media Sharing > SAMBA (continued)

LABEL	DESCRIPTION
Enable	This field displays whether a user account is activated or not. Select the check box to enable the account. Clear the check box to disable the account.
User Name	Enter a user name that will be allowed to access the shared files. You can enter up to 20 characters. Only letters and numbers allowed.
Password	Enter the password used to access the shared files. You can enter up to 20 characters. Only letters and numbers are allowed. The password is case sensitive.
USB1/2	Select the USB port(s) of the EMG2926-Q10A. The configured user can access the files on the USB device(s) connected to the selected USB port(s) only.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

22.4 FTP Screen

Use this screen to set up file sharing via the EMG2926-Q10A using FTP and create user accounts. Click **Management > USB Media Sharing > FTP**.

Figure 99 Management > USB Media Sharing > FTP



The following table describes the labels on this screen.

Table 67 Management > USB Media Sharing > FTP

LABEL	DESCRIPTION
Enable FTP	Select this to enable the FTP server on the EMG2926-Q10A for file sharing using FTP.
Port	You may change the server port number for FTP if needed, however you must use the same port number in order to use that service for file sharing.
User Accounts	Before you can share files you need a user account. Configure the following fields to set up a file-sharing account.
#	This is the index number of the user account.

Table 67 Management > USB Media Sharing > FTP (continued)

LABEL	DESCRIPTION
Enable	This field displays whether a user account is activated or not. Select the check box to enable the account. Clear the check box to disable the account.
User Name	Enter a user name that will be allowed to access the shared files. You can enter up to 20 characters. Only letters and numbers allowed.
Password	Enter the password used to access the shared files. You can enter up to 20 characters. Only letters and numbers are allowed. The password is case sensitive.
USB1/2	Specify the user's access rights to the USB storage device which is connected to the EMG2926-Q10A's USB port. **Read & Write** - The user has read and write rights, meaning that the user can create and edit the files on the connected USB device. **Read** - The user has read rights only and can not create or edit the files on the connected USB device. **None** - The user cannot access the files on the USB device(s) connected to the USB port.
Upstream Bandwidth	Enter the maximum bandwidth (in Kbps) allowed for incoming FTP traffic.
Downstream Bandwidth	Enter the maximum bandwidth (in Kbps) allowed for outgoing FTP traffic.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

22.5 Example of Accessing Your Shared Files From a Computer

You can use Windows Explorer or FTP to access the USB storage devices connected to the EMG2926-Q10A.

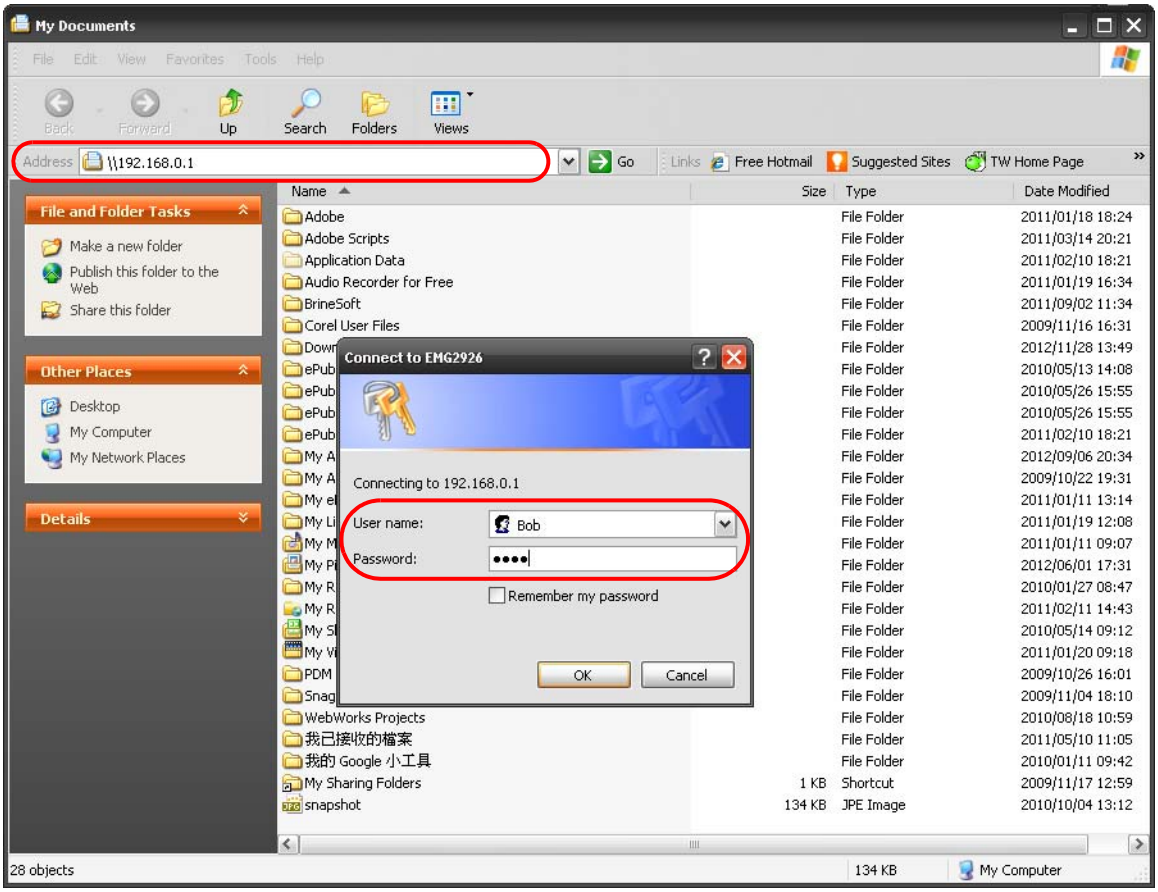
This example shows you how to use Microsoft's Windows XP to browse your shared files. Refer to your operating system's documentation for how to browse your file structure.

22.5.1 Use Windows Explorer to Share Files

You should have enabled file sharing and created a user account (Bob/1234 for example) with read and write access to USB 1 in the **USB Media Sharing > SAMBA** screen.

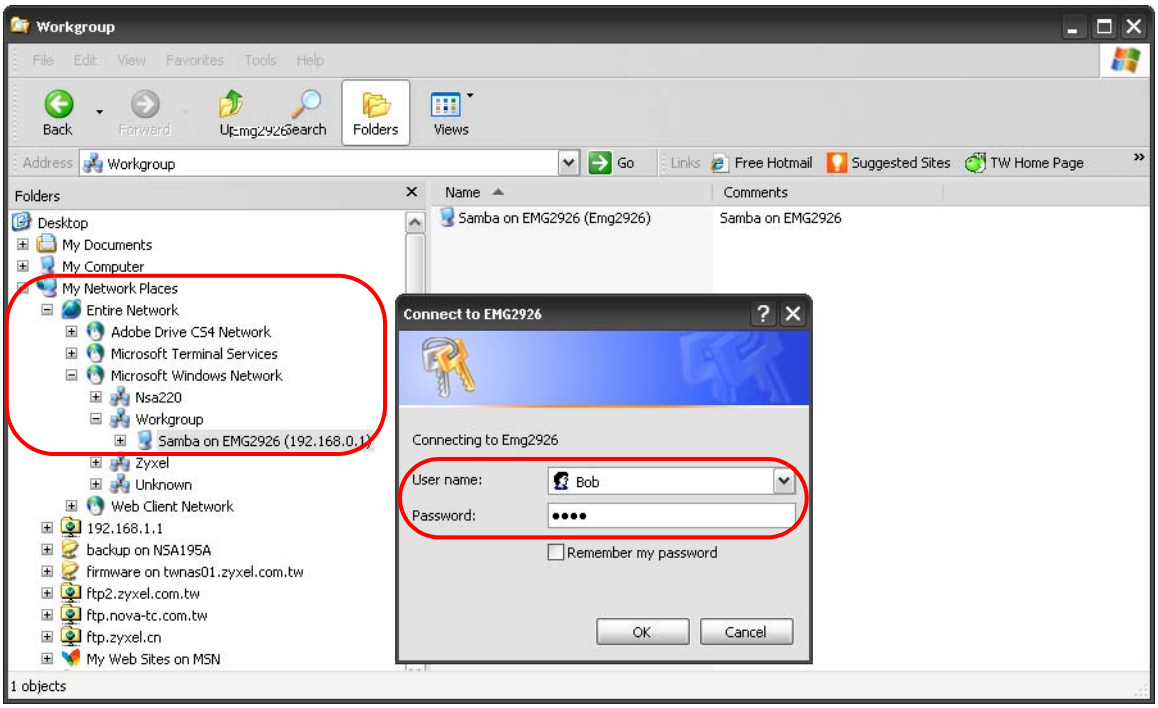
Open Windows Explorer to access the connected USB device using either Windows Explorer browser or by browsing to your workgroup.

1 In Windows Explorer's Address bar type a double backslash "\\" followed by the IP address of the EMG2926-Q10A (the default IP address of the EMG2926-Q10A in router mode is 192.168.0.1) and press [ENTER]. A screen asking for password authentication appears. Type the user name and password (Bob and 1234 in this example) and click **OK**.



Note: Once you log into the shared folder via your EMG2926-Q10A, you do not have to relogin unless you restart your computer.

2 You can also use the workgroup name to access files by browsing the workgroup folder using the folder tree on the left side of the screen. It is located under **My Network Places**. In this example the workgroup name is the default “Workgroup”.



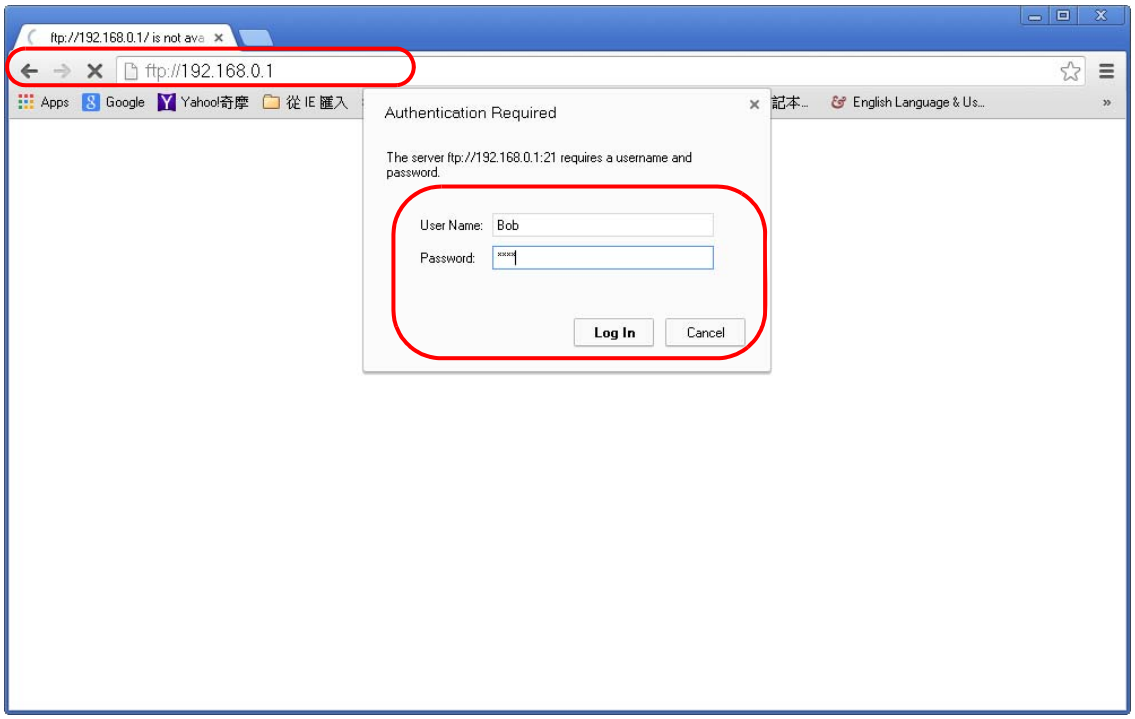
22.5.2 Use FTP to Share Files

You can use FTP to access the USB storage devices connected to the EMG2926-Q10A. In this example, we use the web browser to share files via FTP from the LAN. The way or screen you log into the FTP server (on the EMG2926-Q10A) varies depending on your FTP client. See your FTP client documentation for more information.

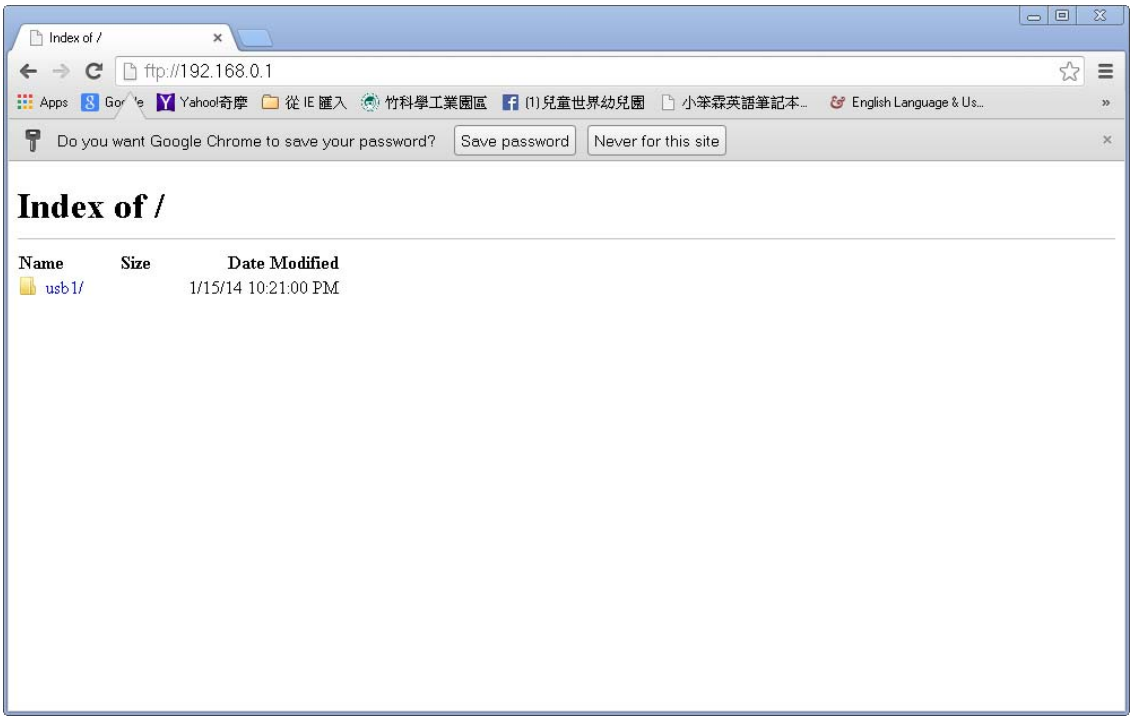
You should have enabled file sharing and created a user account (Bob/1234 for example) with read and write access to USB 1 in the **USB Media Sharing > FTP** screen.

1 In your web browser’s address or URL bar type “ftp://” followed by the IP address of the EMG2926-Q10A (the default LAN IP address of the EMG2926-Q10A in router mode is 192.168.0.1) and click **Go** or press [ENTER].

2 A screen asking for password authentication appears. Enter the user name and password you configured on the **USB Media Sharing > FTP** screen and click **Log In**.



3 The screen changes and shows you the folder for the USB storage device connected to your EMG2926-Q10A. Double-click the folder to display its contents.



23

Port Configuration

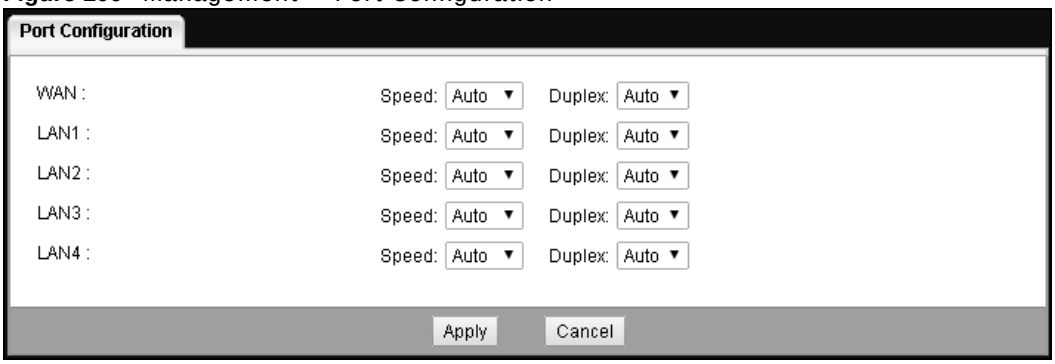
23.1 Overview

The EMG2926-Q10A has 1000Base-T auto-negotiating Ethernet ports. In 10/100/1000 Mbps Gigabit Ethernet, the speed can be 10 Mbps, 100 Mbps or 1000 Mbps. The duplex mode can be both half or full duplex. An auto-negotiating port can detect and adjust to the optimum Ethernet speed (10/100/1000 Mbps) and duplex mode (full duplex or half duplex) of the connected device.

23.2 Port Configuration Screen

Use this screen to configure the EMG2926-Q10A port speed and duplex settings. Click **Configuration** > **Management > Port Configuration**.

Figure 100 Management > Port Configuration



The following table describes the labels on this screen.

Table 68 Management > Port Configuration

LABEL	DESCRIPTION
WAN/LAN1~4	This field displays the Ethernet port of the EMG2926-Q10A.
Speed	Select the speed of the Ethernet connection on this port. The choices are **Auto**, **1000**, **100** and **10**. Selecting **Auto** (auto-negotiation) allows one port to negotiate with a peer port automatically to obtain the connection speed that both ends support. If the peer port does not support auto-negotiation or turns off this feature, the EMG2926-Q10A determines the connection speed by detecting the signal on the cable and using half duplex mode.

Table 68 Management > Port Configuration (continued)

LABEL	DESCRIPTION
Duplex	Select the duplex mode of the Ethernet connection on this port. The choices are **Auto**, **Full** and **Half**. Selecting **Auto** (auto-negotiation) allows one port to negotiate with a peer port automatically to obtain the duplex mode that both ends support. If the peer port does not support auto-negotiation or turns off this feature, the EMG2926-Q10A determines the connection speed by detecting the signal on the cable and using half duplex mode.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

24

Maintenance

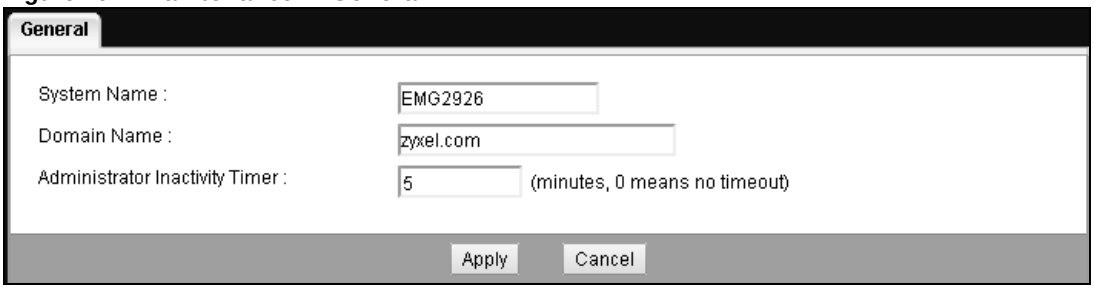
24.1 Overview

This chapter provides information on the **Maintenance** screens.

24.2 General Screen

Use this screen to set the management session timeout period. Click **Maintenance** > **General**. The following screen displays.

Figure 101 Maintenance > General



The following table describes the labels on this screen.

Table 69 Maintenance > General

LABEL	DESCRIPTION
System Name	System Name is a unique name to identify the EMG2926-Q10A in an Ethernet network.
Domain Name	Enter the domain name you want to give to the EMG2926-Q10A.
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 with the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

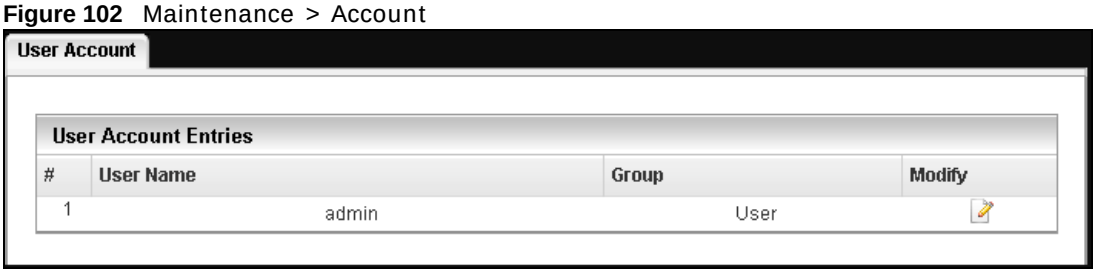
24.3 Account Screen

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 24.6 on page 152 for details.

Click **Maintenance** > **Account**. The screen appears as shown.

Figure 102 Maintenance > Account



The following table describes the labels on this screen.

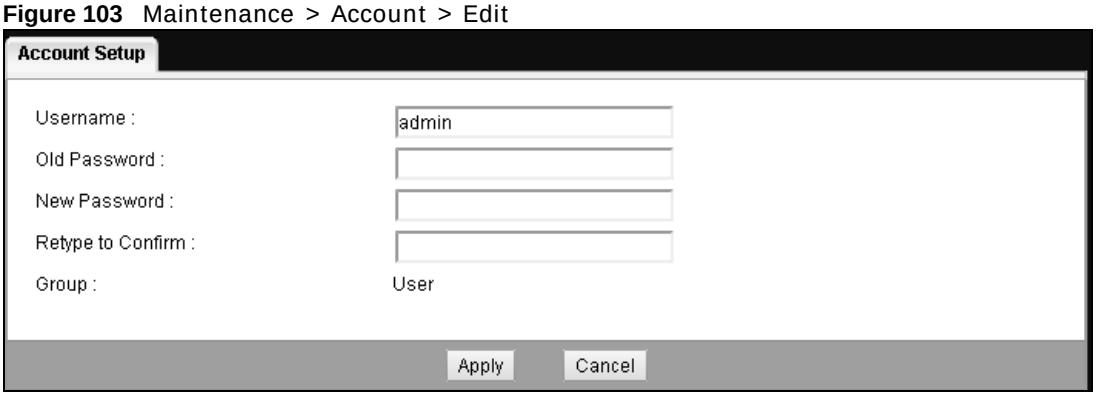
Table 70 Maintenance > Account

LABEL	DESCRIPTION
#	This the index number of the entry.
User Name	This field displays the name of the user.
Group	This field displays the login account type of the user. Different login account types have different privilege levels. The web configurator screens and privileges vary depending on which account type you use to log in.
Modify	Click the **Edit** icon to go to the screen where you can edit the account.

24.3.1 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 103 Maintenance > Account > Edit



The following table describes the labels in this screen.

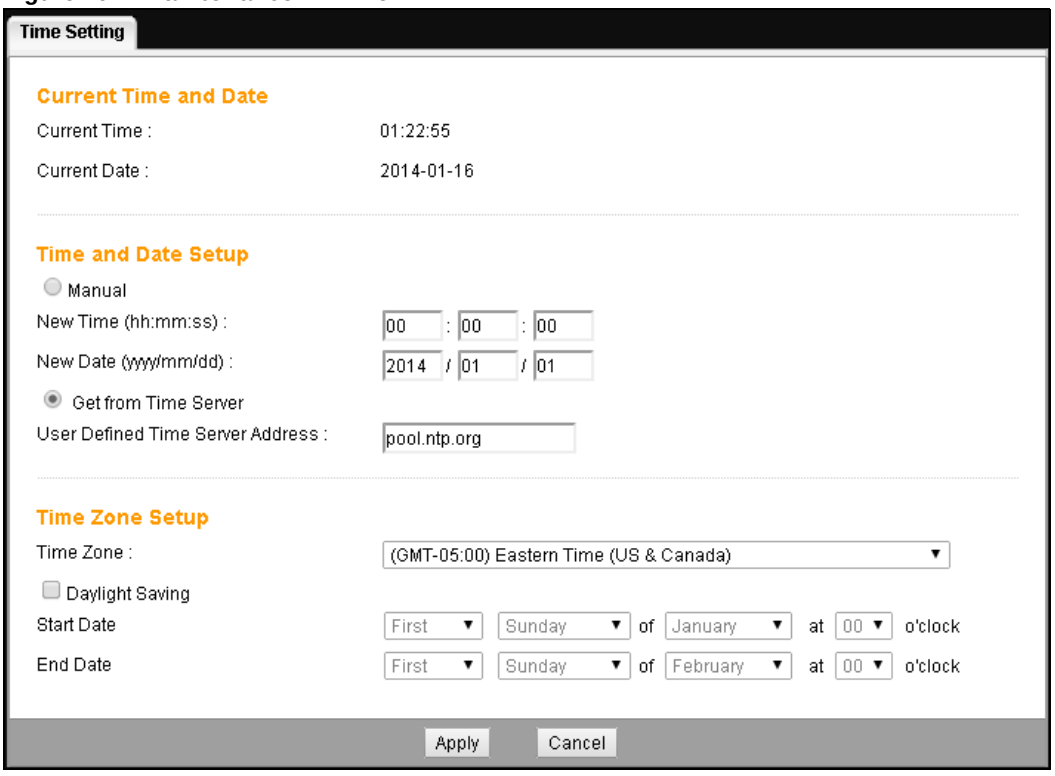
Table 71 Maintenance > Account > Edit

LABEL	DESCRIPTION
Username	Enter a descriptive name for the user account. The user name can be up to 15 alphanumeric characters (0-9, A-Z, a-z, -, _ with no spaces). With advanced account security enabled, the user names must be a minimum length of six characters and include both letters and numbers.
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 account type of the user. The web configurator screens and privileges vary depending on which account type you use to log in. **Administrator** accounts can configure the EMG2926-Q10A and upgrade firmware while **User** accounts cannot do firmware upgrading.
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

24.4 Time Setting Screen

Use this screen to configure the EMG2926-Q10A's time based on your local time zone. To change your EMG2926-Q10A's time and date, click **Maintenance** > **Time**. The screen appears as shown.

Figure 104 Maintenance > Time



The following table describes the labels in this screen.

Table 72 Maintenance > Time

LABEL	DESCRIPTION
Current Time and Date	
Current Time	This field displays the time of your EMG2926-Q10A. Each time you reload this page, the EMG2926-Q10A synchronizes the time with the time server.
Current Date	This field displays the date of your EMG2926-Q10A. Each time you reload this page, the EMG2926-Q10A synchronizes the date with the time server.
Current Time and Date	
Manual	Select this radio button to enter the time and date manually. If you configure a new time and date, Time Zone and Daylight Saving at the same time, the new time and date you entered will have priority and the Time Zone and Daylight Saving settings will not affect it.
New Time (hh:mm:ss)	This field displays the last updated time from the time server or the last time configured manually. When you select **Manual**, enter the new time in this field and then click **Apply**.
New Date (yyyy/mm/dd)	This field displays the last updated date from the time server or the last date configured manually. When you select **Manual**, enter the new date in this field and then click **Apply**.
Get from Time Server	Select this radio button to have the EMG2926-Q10A get the time and date from the time server you specified below.
User Defined Time Server Address	Select **User Defined Time Server Address** and enter the IP address or URL (up to 20 extended ASCII characters in length) of your time server. Check with your ISP/network administrator if you are unsure of this information.
Time Zone Setup	
Time Zone	Choose the time zone of your location. This will set the time difference between your time zone and Greenwich Mean Time (GMT).
Daylight Saving	Daylight saving is a period from late spring to early fall when many countries set their clocks ahead of normal local time by one hour to give more daytime light in the evening. Select this option if you use Daylight Saving Time.
Start Date	Configure the day and time when Daylight Saving Time starts if you selected **Daylight Saving**. The **at** field uses the 24 hour format. Here are a couple of examples: Daylight Saving Time starts in most parts of the United States on the second Sunday of March. Each time zone in the United States starts using Daylight Saving Time at 2 A.M. local time. So in the United States you would select **Second**, **Sunday**, **March** and select **2** in the **at** field. Daylight Saving Time starts in the European Union on the last Sunday of March. All of the time zones in the European Union start using Daylight Saving Time at the same moment (1 A.M. GMT or UTC). So in the European Union you would select **Last**, **Sunday**, **March**. The time you select in the **at** field depends on your time zone. In Germany for instance, you would select 2 because Germany's time zone is one hour ahead of GMT or UTC (GMT+1).

Table 72 Maintenance > Time (continued)

LABEL	DESCRIPTION
End Date	Configure the day and time when Daylight Saving Time ends if you selected **Daylight Saving**. The **at** field uses the 24 hour format. Here are a couple of examples: Daylight Saving Time ends in the United States on the first Sunday of November. Each time zone in the United States stops using Daylight Saving Time at 2 A.M. local time. So in the United States you would select **First**, **Sunday**, **November** and select 2 in the **at** field. Daylight Saving Time ends in the European Union on the last Sunday of October. All of the time zones in the European Union stop using Daylight Saving Time at the same moment (1 A.M. GMT or UTC). So in the European Union you would select **Last**, **Sunday**, **October**. The time you select in the **at** field depends on your time zone. In Germany for instance, you would select 2 because Germany's time zone is one hour ahead of GMT or UTC (GMT+1).
Apply	Click **Apply** to save your changes with the EMG2926-Q10A.
Cancel	Click **Cancel** to begin configuring this screen afresh.

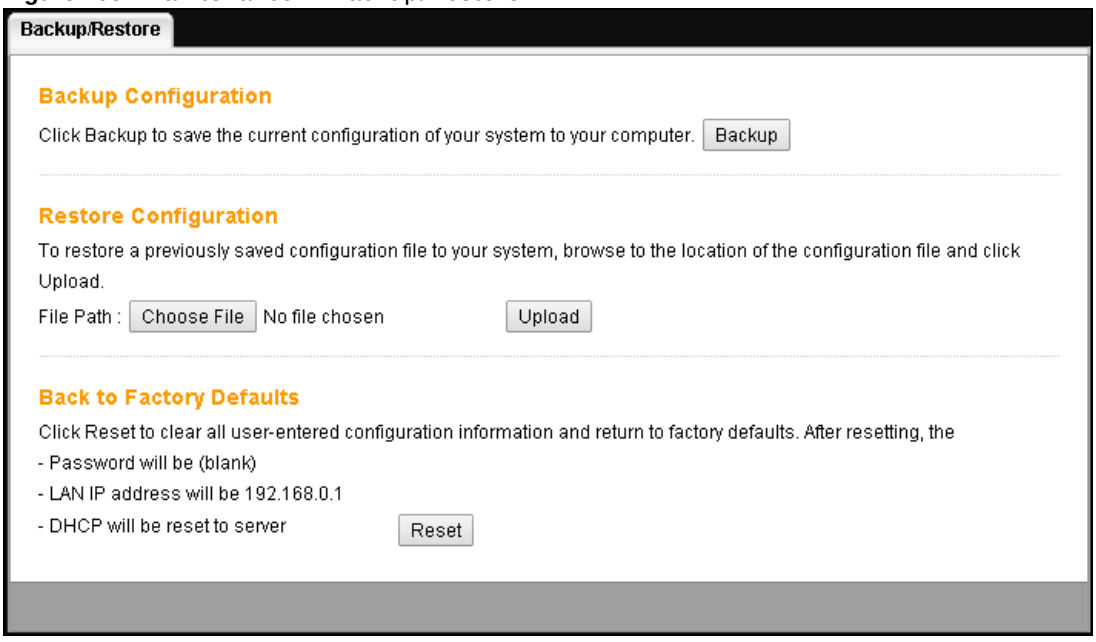
24.5 Configuration Backup/Restore Screen

Backup configuration allows you to back up (save) the EMG2926-Q10A's current configuration to a file on your computer. Once your EMG2926-Q10A 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 EMG2926-Q10A.

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

Figure 105 Maintenance > Backup/Restore



The following table describes the labels on this screen.

Table 73 Maintenance > Backup/Restore

LABEL	DESCRIPTION
Backup	Click **Backup** to save the EMG2926-Q10A'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.
Choose File	Click **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 EMG2926-Q10A while configuration file upload is in progress. After you see a "configuration upload successful" screen, you must then wait one minute before logging into the EMG2926-Q10A again. The EMG2926-Q10A automatically restarts at this time causing a temporary network disconnect. If you see an error screen, click Back to return to the Backup/Restore screen.
Reset	Pressing the **Reset** button in this section clears all user-entered configuration information and returns the EMG2926-Q10A to its factory defaults. You can also press the **RESET** button on the rear panel to reset the factory defaults of your EMG2926-Q10A. Refer to the chapter about introducing the Web Configurator for more information on the **RESET** button.

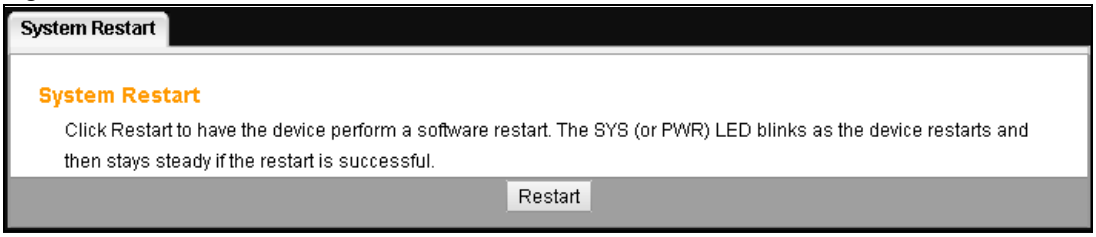
Note: If you uploaded the default configuration file you may need to change the IP address of your computer to be in the same subnet as that of the default EMG2926-Q10A IP address (192.168.0.1).

24.6 Restart Screen

System restart allows you to reboot the EMG2926-Q10A without turning the power off.

Click **Maintenance > Restart** to open the following screen.

Figure 106 Maintenance > Restart



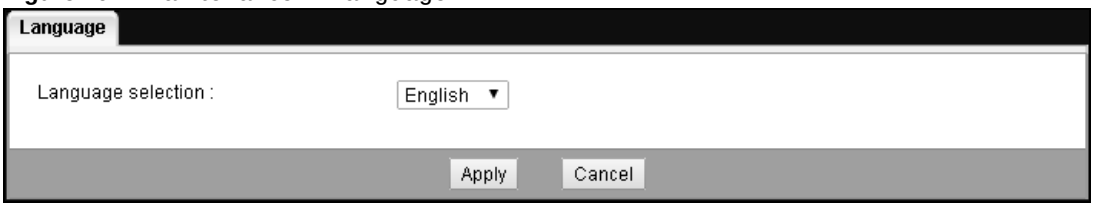
Click **Restart** to have the EMG2926-Q10A reboot. This does not affect the EMG2926-Q10A's configuration.

24.7 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 EMG2926-Q10A. At the time of writing, you can only select **English** or **Francais**.

Figure 107 Maintenance > Language



24.8 System Operation Mode Overview

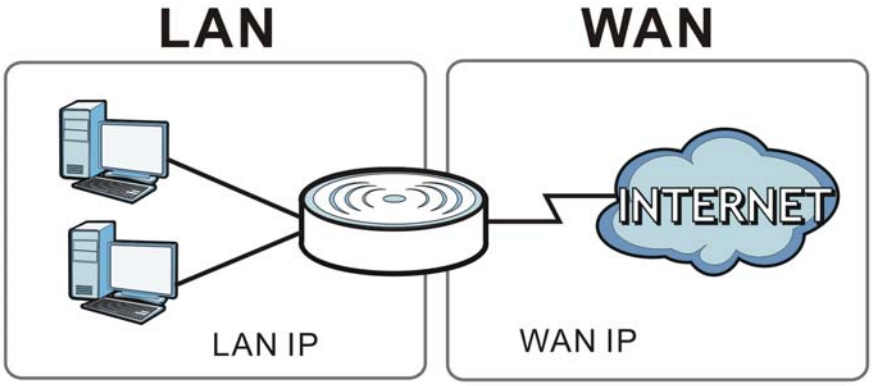
The **Sys OP Mode** (System Operation Mode) function lets you configure your EMG2926-Q10A as a router or access point. You can choose between **Router Mode**, and **Access Point Mode** depending on your network topology and the features you require from your device.

The following describes the device modes available in your EMG2926-Q10A.

Router

A router connects your local network with another network, such as the Internet. The router has two IP addresses, the LAN IP address and the WAN IP address.

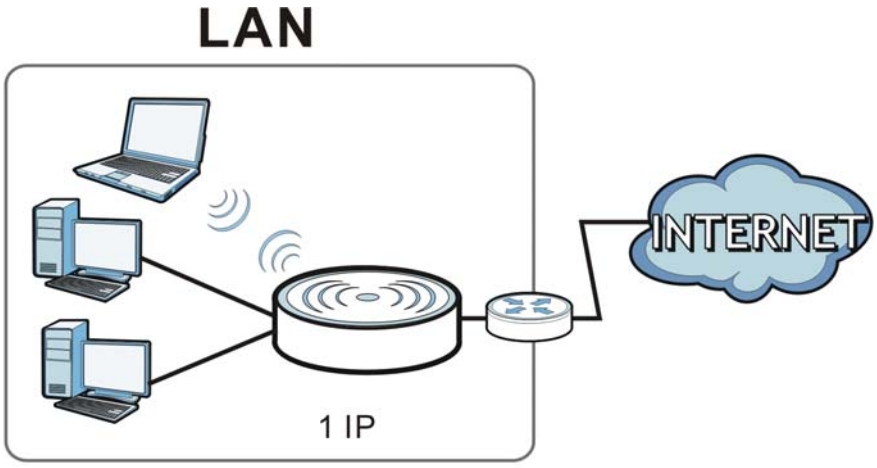
Figure 108 LAN and WAN IP Addresses in Router Mode



Access Point

An access point enables all ethernet ports to be bridged together and be in the same subnet. To connect to the Internet, another device, such as a router, is required.

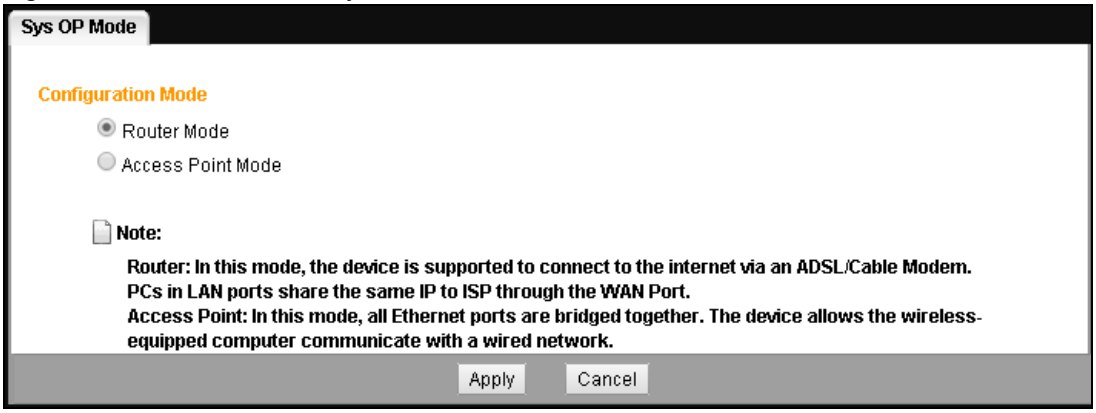
Figure 109 Access Point Mode



24.9 Sys OP Mode Screen

Use this screen to select how you want to use your EMG2926-Q10A.

Figure 110 Maintenance > Sys OP Mode



The following table describes the labels on the **General** screen.

Table 74 Maintenance > Sys OP Mode

LABEL	DESCRIPTION
Configuration Mode	
Router Mode	Select **Router Mode** if your device routes traffic between a local network and another network such as the Internet. This mode offers services such as a firewall or bandwidth management. You can configure the IP address settings on your WAN port. Contact your ISP or system administrator for more information on appropriate settings.

Table 74 Maintenance > Sys OP Mode (continued)

LABEL	DESCRIPTION
Access Point Mode	Select **Access Point Mode** if your device bridges traffic between clients on the same network. • In **Access Point Mode**, all Ethernet ports have the same IP address. • All ports on the rear panel of the device are LAN ports, including the port labeled WAN. There is no WAN port. • The DHCP server on your device is disabled. • Router functions (such as NAT, bandwidth management, remote management, firewall and so on) are not available when the EMG2926-Q10A is in **Access Point Mode**. • The IP address of the device on the local network is set to 192.168.0.2.
Apply	Click **Apply** to save your settings.
Cancel	Click **Cancel** to return your settings to the default (**Router**).

Note: If you select the incorrect system operation Mode you may not be able to connect to the Internet.

25

Troubleshooting

25.1 Overview

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
- EMG2926-Q10A Access and Login
- Internet Access
- Resetting the EMG2926-Q10A to Its Factory Defaults
- Wireless Connections
- USB Device Problems

25.2 Power, Hardware Connections, and LEDs

The EMG2926-Q10A does not turn on. None of the LEDs turn on.

1. Make sure you are using the power adaptor or cord included with the EMG2926-Q10A.
2. Make sure the power adaptor or cord is connected to the EMG2926-Q10A and plugged in to an appropriate power source. Make sure the power source is turned on.
3. Disconnect and re-connect the power adaptor or cord to the EMG2926-Q10A.
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 1.7 on page 14.
2. Check the hardware connections. See the Quick Start Guide.
3. Inspect your cables for damage. Contact the vendor to replace any damaged cables.
4. Disconnect and re-connect the power adaptor to the EMG2926-Q10A.

5 If the problem continues, contact the vendor.

25.3 EMG2926-Q10A Access and Login

I don't know the IP address of my EMG2926-Q10A.

1 The default IP address of the EMG2926-Q10A in **Router Mode** is **192.168.0.1**. The default IP address of the EMG2926-Q10A in **Access Point Mode** is **192.168.0.2**.

2 If you changed the IP address and have forgotten it, you might get the IP address of the EMG2926-Q10A in **Router Mode** by looking up the IP address of the default gateway for your computer. To do this in most Windows computers, click **Start > Run**, enter **cmd**, and then enter **ipconfig**. The IP address of the **Default Gateway** might be the IP address of the EMG2926-Q10A (it depends on the network), so enter this IP address in your Internet browser.

3 If your EMG2926-Q10A in **Access Point Mode** is a DHCP client, you can find your IP address from the DHCP server. This information is only available from the DHCP server which allocates IP addresses on your network. Find this information directly from the DHCP server or contact your system administrator for more information.

4 Reset your EMG2926-Q10A to change all settings back to their default. This means your current settings will be lost. See Section 25.5 on page 160 in **Troubleshooting** for information on resetting your EMG2926-Q10A.

I forgot the password.

1 The default password is an empty string.

2 If this does not work, you have to reset the device to its factory defaults. See Section 25.5 on page 160.

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

1 Make sure you are using the correct IP address.

- The default IP address of the EMG2926-Q10A in **Router Mode** is **192.168.0.1**. The default IP address of the EMG2926-Q10A in **Access Point Mode** is **192.168.0.2**.
- If you changed the IP address (Section 10.2 on page 92), use the new IP address.
- If you changed the IP address and have forgotten it, see the troubleshooting suggestions for I don't know the IP address of my EMG2926-Q10A.

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 Make sure your computer is in the same subnet as the EMG2926-Q10A. (If you know that there are routers between your computer and the EMG2926-Q10A, skip this step.)

- If there is a DHCP server on your network, make sure your computer is using a dynamic IP address. See Section 10.2 on page 92.
- If there is no DHCP server on your network, make sure your computer's IP address is in the same subnet as the EMG2926-Q10A. See Section 10.2 on page 92.

5 Reset the device to its factory defaults, and try to access the EMG2926-Q10A with the default IP address. See Section 1.5 on page 13.

6 If the problem continues, contact the network administrator or vendor, or try one of the advanced suggestions.

Advanced Suggestions

- Try to access the EMG2926-Q10A using another service, such as Telnet. If you can access the EMG2926-Q10A, check the remote management settings and firewall rules to find out why the EMG2926-Q10A does not respond to HTTP.
- If your computer is connected to the **WAN** port or 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 EMG2926-Q10A.

1 Make sure you have left the password field blank. The default password is an empty string.

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 power adaptor or cord to the EMG2926-Q10A.

4 If this does not work, you have to reset the device to its factory defaults. See Section 25.5 on page 160.

25.4 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 Go to **Maintenance > Sys OP Mode**. Check your System Operation Mode setting.

- If the EMG2926-Q10A is in **Router Mode**, make sure the WAN port is connected to a broadband modem or router with Internet access. Your computer and the EMG2926-Q10A should be in the same subnet.
- If the EMG2926-Q10A is in **Access Point Mode**, make sure the WAN port is connected to a broadband modem or router with Internet access and your computer is set to obtain a dynamic IP address.

3 If the EMG2926-Q10A is in **Router Mode**, make sure you entered your ISP account information correctly in the wizard or the WAN screen. These fields are case-sensitive, so make sure [Caps Lock] is not on.

4 If you are trying to access the Internet wirelessly, make sure the wireless settings in the wireless client are the same as the settings in the AP.

5 Disconnect all the cables from your device, and follow the directions in the Quick Start Guide again.

6 If the problem continues, contact your ISP.

I cannot access the Internet anymore. I had access to the Internet (with the EMG2926-Q10A), 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 1.7 on page 14.

2 Reboot the EMG2926-Q10A.

3 If the problem continues, contact your ISP.

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 1.7 on page 14. If the EMG2926-Q10A 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 EMG2926-Q10A 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 EMG2926-Q10A.

4 If the problem continues, contact the network administrator or vendor, or try one of the advanced suggestions.

Advanced Suggestion

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

25.5 Resetting the EMG2926-Q10A to Its Factory Defaults

If you reset the EMG2926-Q10A, you lose all of the changes you have made. The EMG2926-Q10A re-loads its default settings, and uses a blank password. You will have to make all of your changes again.

You will lose all of your changes when you push the **RESET** button.

To reset the EMG2926-Q10A:

1. Make sure the power LED is on.
2. Press the **RESET** button for one to four seconds to restart/reboot the EMG2926-Q10A.
3. Press the **RESET** button for longer than five seconds to set the EMG2926-Q10A back to its factory-default configurations.

   If the EMG2926-Q10A restarts automatically, wait for the EMG2926-Q10A to finish restarting, and log in to the Web Configurator. The default password is an empty string.

   If the EMG2926-Q10A does not restart automatically, disconnect and reconnect the EMG2926-Q10A's power. Then, follow the directions above again.

25.6 Wireless Connections

I cannot access the EMG2926-Q10A or ping any computer from the WLAN.

1. Make sure the wireless LAN is enabled on the EMG2926-Q10A.
2. Make sure the wireless adapter on your computer 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 EMG2926-Q10A.
4. Make sure your computer (with a wireless adapter installed) is within the transmission range of the EMG2926-Q10A.
5. Check that both the EMG2926-Q10A and the wireless adapter on your computer are using the same wireless and wireless security settings.
6. Make sure traffic between the WLAN and the LAN is not blocked by the firewall on the EMG2926-Q10A.
7. Make sure you allow the EMG2926-Q10A to be remotely accessed through the WLAN interface. Check your remote management settings.

- See the chapter on Wireless LAN in the User's Guide for more information.

I set up URL keyword blocking, but I can still access a website that should be blocked.

Make sure that you enable parental control in the **Parental Control** screen, set up rules and turn on the rules. Make sure that the keywords that you type are listed in the rule's **Keyword List**.

I cannot access the Web Configurator after I switched to AP mode.

When you change from router mode to AP mode, your computer must have an IP address in the range between "192.168.0.3" and "192.168.0.254".

What factors may cause an intermittent or unstable wireless connection? How can I solve this problem?

The following factors may cause interference:

- Obstacles: walls, ceilings, furniture, and so on.
- Building Materials: metal doors, aluminum studs.
- Electrical devices: microwaves, monitors, electric motors, cordless phones, and other wireless devices.

To optimize the speed and quality of your wireless connection, you can:

- Move your wireless device closer to the AP if the signal strength is low.
- Reduce wireless interference that may be caused by other wireless networks or surrounding wireless electronics such as cordless phones.
- Place the AP where there are minimum obstacles (such as walls and ceilings) between the AP and the wireless client.
- Reduce the number of wireless clients connecting to the same AP simultaneously, or add additional APs if necessary.
- Try closing some programs that use the Internet, especially peer-to-peer applications. If the wireless client is sending or receiving a lot of information, it may have too many programs open that use the Internet.
- Position the antennas for best reception. If the AP is placed on a table or floor, point the antennas upwards. If the AP is placed at a high position, point the antennas downwards. Try pointing the antennas in different directions and check which provides the strongest signal to the wireless clients.

25.7 USB Device Problems

I cannot access or see a USB device that is connected to the EMG2926-Q10A.

1. Disconnect the problematic USB device, then reconnect it to the EMG2926-Q10A.
2. Ensure that the USB device has power.
3. Check your cable connections.
4. Restart the EMG2926-Q10A by disconnecting the power and then reconnecting it.
5. If the USB device requires a special driver, install the driver from the installation disc that came with the device. After driver installation, reconnect the USB device to the EMG2926-Q10A and try to connect to it again with your computer.
6. If the problem persists, contact your vendor.

What kind of USB devices do the EMG2926-Q10A support?

1. It is strongly recommended to use version 2.0 or lower USB storage devices (such as memory sticks, USB hard drives) and/or USB devices. Other USB products are not guaranteed to function properly with the EMG2926-Q10A.

A

Legal Information

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Certifications

Federal Communications Commission (FCC) Interference Statement

The device complies with Part 15 of FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operations.

This device has been tested and found to comply with the limits 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 in accordance with 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/television reception, which can be determined 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:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and the receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

FCC Radiation Exposure Statement

- This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
- IEEE 802.11b, 802.11g or 802.11n (20MHz) operation of this product in the U.S.A. is firmware-limited to channels 1 through 11. IEEE 802.11n (40MHz) operation of this product in the U.S.A. is firmware-limited to channels 3 through 9.
- To comply with FCC RF exposure compliance requirements, a separation distance of at least 23 cm must be maintained between the antenna of this device and all persons.
- Per FCC regulation, all WiFi product marketed in US must be fixed to US operation channels only.
- Operations in the 5.15-5.25GHz band are restricted to indoor usage only.

Industry Canada 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.

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.

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

Pour les produits disponibles aux États-Unis / Canada du marché, seul le canal 1 à 11 peuvent être exploités. Sélection d'autres canaux n'est pas possible.

This device and its antennas(s) must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with IC multi-transmitter product procedures.

Cet appareil et son antenne (s) ne doit pas être co-localisés ou fonctionnement en association avec une autre antenne ou transmetteur.

Caution :

(i) 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;

(ii) high-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

Avertissement:

(i) 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;

(ii) De plus, les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5250-5350 MHz et 5650-5850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.

IC Radiation Exposure Statement

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 23cm between the radiator & your body.

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 23 cm de distance entre la source de rayonnement et votre corps.

Notices

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

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.

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 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.
- Use ONLY an appropriate power adaptor or cord for your device.
- Connect the power adaptor or cord to the right supply voltage (for example, 110V AC in North America or 230V AC in Europe).
- 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.

- Do NOT use the device if the power adaptor or cord is damaged as it might cause electrocution.
- If the power adaptor or cord is damaged, remove it from the power outlet.
- Do NOT attempt to repair the power adaptor or cord. 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.
- Do NOT obstruct the device ventilation slots, as insufficient airflow may harm your device.
- Antenna Warning! This device meets ETSI and FCC certification requirements when using the included antenna(s). Only use the included antenna(s).
- If you wall mount your device, make sure that no electrical lines, gas or water pipes will be damaged.

Your product is marked with this symbol, which is known as the WEEE mark. WEEE stands for Waste Electronics and Electrical Equipment. It means that used electrical and electronic products should not be mixed with general waste. Used electrical and electronic equipment should be treated separately.