P-2812HNU-51c

Quick Start Guide

Dual WAN VDSL2 IAD with 802.11n Wireless

Firmware V1.02
Edition 1, 06/2010
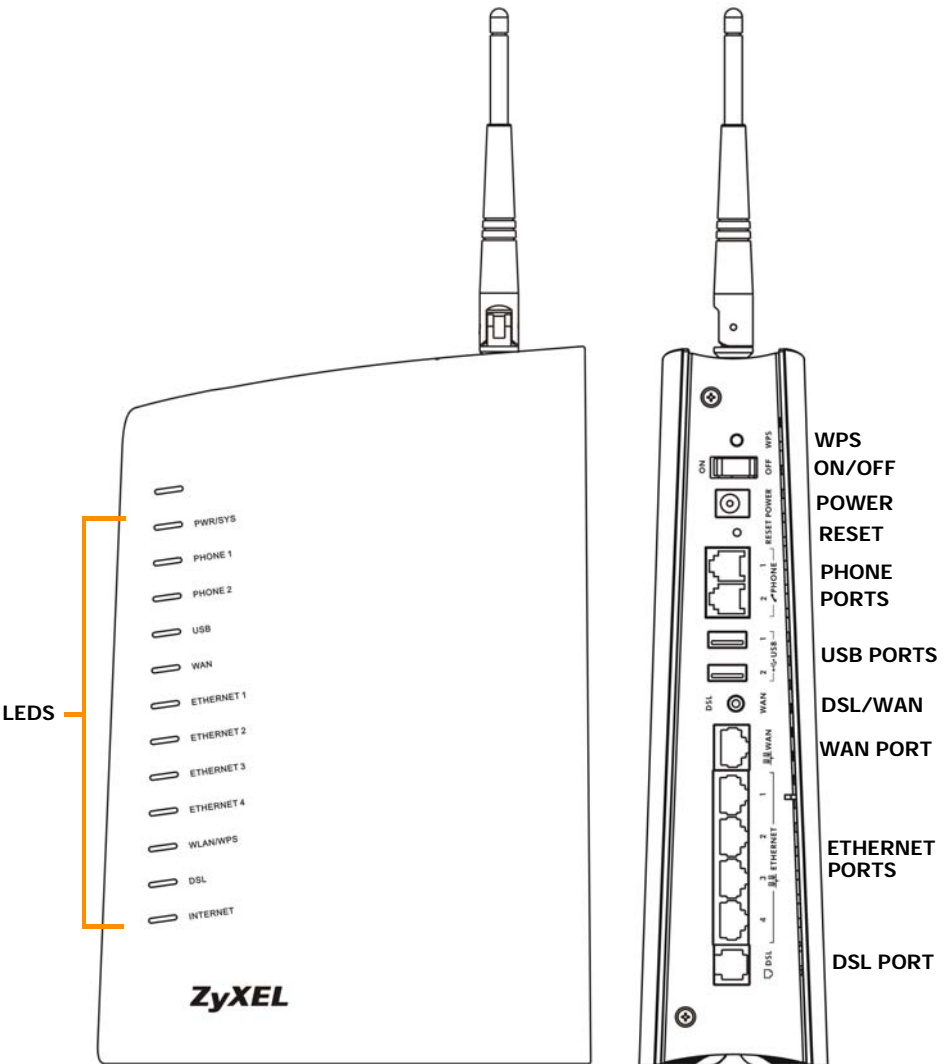
DEFAULT LOGIN DETAILS

IP Address:	192.168.1.1
Username:	Admin account: admin User account: user
Password:	Admin account: 1234 User account: user

ZyXEL

Device Panels

LEDS

WPS
ON/OFF
POWER
RESET
PHONE
PORTS
USB PORTS
DSL/WAN
WAN PORT
ETHERNET
PORTS
DSL PORT

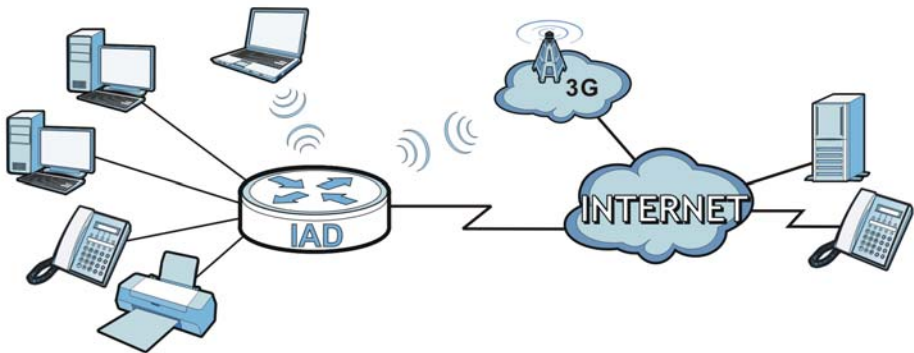# *Overview*

The P-2812HNU-51c is a router which combines high-speed VDSL/ADSL Internet access, a built-in switch, a firewall and high-speed wireless networking capability. The P-2812HNU-51c comes with two phone ports for making calls over the Internet (Voice over IP or VoIP). It also has two USB 2.0 ports for a 3G WAN connection via a 3G wireless card and/or sharing files via a USB compatible storage device. The P-2812HNU-51c can also function as a print server.
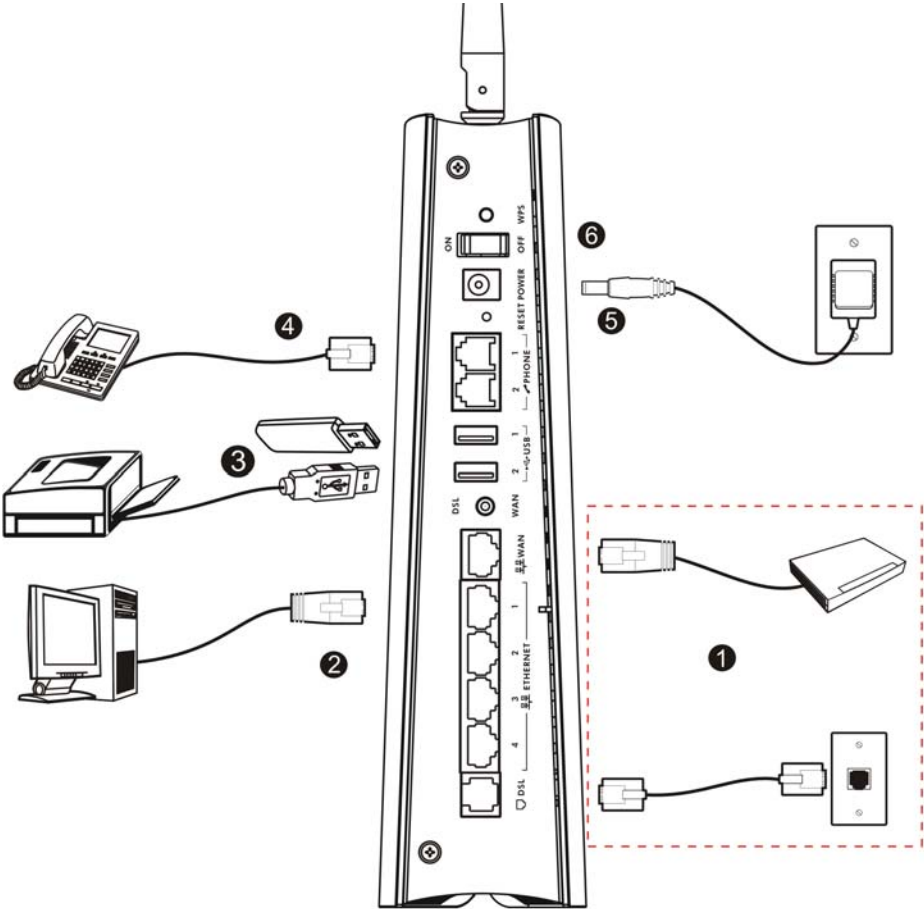

Requirements

Make sure you have the following things before you start.

- Internet access - account information provided by your ISP, such as user name, password, and so on.

- VoIP account - You need the account information provided by your VoIP service provider (the company that lets you make phone calls over the Internet).

- 3G account - if you want to access the Internet through a 3G network. The P-2812HNU-51c uses this 3G connection as a backup when the DSL or Ethernet WAN connection fails.

- Internet Explorer 6.0 and later versions, with JavaScript enabled, or Mozilla Firefox 3 and later versions or Safari 2.0 and later versions.

Hardware Connections

Remove the P-2812HNU-51c's plastic cover before using it.

1. Do one of the following for your Internet connection:

    a. DSL: Use a telephone wire to connect this port to a telephone jack (or the **DSL** or **MODEM** jack on a splitter, if you have one). Make sure the **DSL/WAN** switch is set to the **DSL** side.

    b. WAN: If you have a DSL router or modem already in your network or you want to use a cable modem or optical network terminal/unit (ONT/ONU), push the **DSL/WAN** switch to the **WAN** side and use an Ethernet cable to connect this port to an Ethernet jack with Internet access.

2. **ETHERNET:** Use an Ethernet cable to connect a computer to one of these ports for initial configuration and/or Internet access.

3. **USB 2.0:** Connect a USB (version 2.0 or lower) memory stick or a USB hard drive for file sharing, or connect a 3G wireless card for accessing the Internet through a 3G network. You can also use a USB cable (not provided) to connect a USB printer (version 2.0 or lower) to this port. The P-2812HNU-51c automatically detects the USB device. Use a USB extension cable if the stick is too big to fit.

4. **PHONE**: Use a telephone cable (and any telephone adaptor provided with your P-2812HNU-51c) to connect a telephone to the **PHONE 1** or **PHONE 2** port. If you only have one telephone, you should use port 1.

5. Use the power adaptor provided with your P-2812HNU-51c to connect an appropriate power source to this socket.

6. Push the power button to the on position.
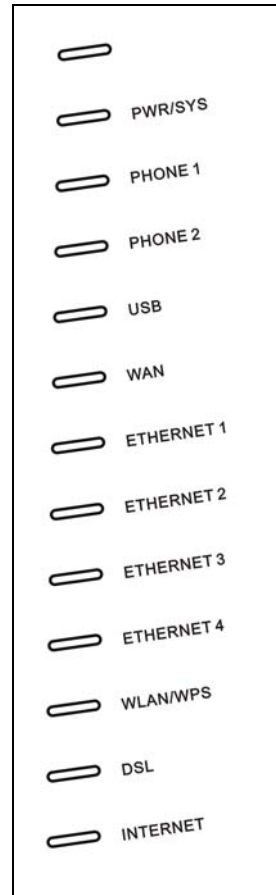
Check the LEDs

Look at the LEDs (lights) on the rear panel of the P-2812HNU-51c.

- The **PWR/SYS** light blinks during start-up and is green once the P-2812HNU-51c is ready.

- An **ETHERNET** light turns on if the corresponding **ETHERNET** port is properly connected. An Ethernet port's light blinks when the P-2812HNU-51c is sending or receiving data through it.

- The **WLAN/WPS** light stays green when the wireless LAN is ready. It blinks when the P-2812HNU-51c is sending/receiving data through the wireless LAN.

- The **DSL** light stays on if a physical DSL connection exists and blinks when transmitting data.

  The **WAN** light stays on if this port is properly connected and blinks when transmitting data.

  The **INTERNET** light is green when Internet access is available.

- The **PHONE** lights stay on when your SIP account is registered and they blink if the receiver is off the hook.

- The **USB** light turns on when there is a USB device connected to the P-2812HNU-51c and blinks when transmitting data.

PWR/SYS
PHONE 1
PHONE 2
USB
WAN
ETHERNET 1
ETHERNET 2
ETHERNET 3
ETHERNET 4
WLAN/WPS
DSL
INTERNET

> ✖ If no lights are on, check your connections. Make sure that you have the power adaptor connected to the P-2812HNU-51c and plugged in to an appropriate power source. Make sure the power source is turned on. Turn the P-2812HNU-51c off, wait for a few seconds and turn it back on. If the LEDs are still off, contact your local vendor.

Set Up a Wireless Network

To set up a wireless network you need at least one wireless network card/adapter.

- If you have a desktop computer, use either a wireless USB adapter or a wireless PCI adapter.

- If you have a laptop, use either a wireless USB adapter or a wireless CardBus card. These are built into many laptops.

There is no wireless security enabled on the P-2812HNU-51c by default. If you do not set wireless security, anyone within transmission range could use your P-2812HNU-51c to access your network and the Internet. See the User's Guide for how to configure wireless security settings.

Setting Up a Secure Wireless Network with WPS

If your wireless devices display the WPS logo, you can use Wi-Fi Protected Setup (WPS) to add wireless devices to your wireless network. If your wireless devices do not display the WPS logo, go to Connecting Wirelessly to your P-2812HNU-51c on page 9 to have your wireless devices join the P-2812HNU-51c's wireless network using the Windows wireless configuration tool.

The P-2812HNU-51c supports two WPS methods for creating a secure connection.

- **Push Button Configuration** - create a secure wireless network simply by pressing the P-2812HNU-51c's physical WPS button. See Push Button Configuration on page 8.
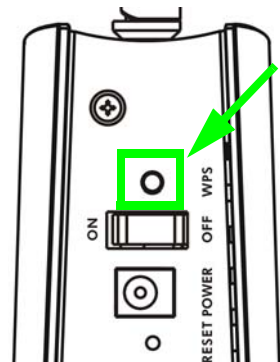
- **PIN Configuration** - create a secure wireless network by entering your wireless device's PIN (Personal Identification Number) into the configuration screen of the P-2812HNU-51c. See your User's Guide for more information.

You must use the same method on the P-2812HNU-51c and the wireless client.

If no wireless security is enabled on the P-2812HNU-51c, the P-2812HNU-51c automatically changes to use WPA-PSK/WPA2-PSK mixed mode and generates a pre-shared key when you use WPS.
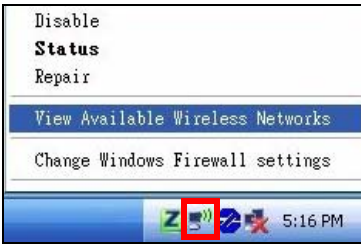
Push Button Configuration

1. Place a WPS-enabled device that is installed in your system and supports the WPS Push Button method within range of the P-2812HNU-51c.

2. Press the **WPS** button on the P-2812HNU-51c's rear panel for five seconds.

3. Use the WPS-enabled device's WPS button. It can be either a button in the utility or a physical button. See the device's documentation if you cannot locate the WPS button. It doesn't matter which button is pressed first. You must press the second button within two minutes of pressing the first one.

4. The P-2812HNU-51c and the wireless device establish a secure connection. This can take up to two minutes.

5. Congratulations! Your computer is now ready to connect to the Internet wirelessly through your P-2812HNU-51c.
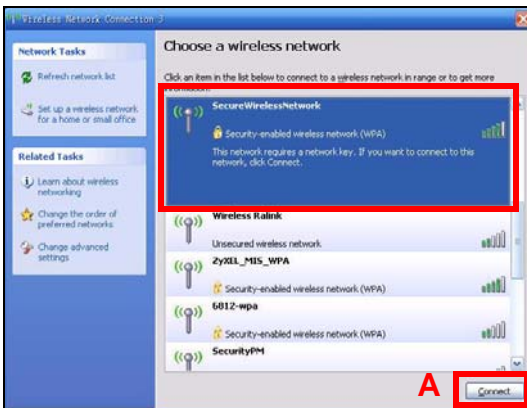
Connecting Wirelessly to your P-2812HNU-51c

Manually configure wireless devices to join the P-2812HNU-51c's wireless network. If you didn't configure the P-2812HNU-51c's wireless settings, use the wireless SSID (network name) on the P-2812HNU-51c's rear panel. If you have used WPS to set up a secure wireless network, check the SSID and security key in the **Network > Wireless LAN > General** screen after logging into the web configurator. The connection procedure is shown here using Windows XP as an example.
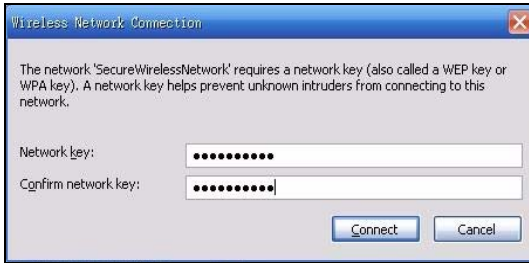
1. Right-click the wireless adapter icon which appears in the bottom right of your computer monitor. Click **View Available Wireless Networks**.

2. Select the P-2812HNU-51c's **SSID** name and click **Connect** (**A**). The SSID "SecureWirelessNetwork" is given here as an example.

3. You are prompted to enter a password. Enter it and click **Connect**.

4. You may have to wait several minutes while your computer connects to the wireless network.

5. You should now be securely connected wirelessly to the P-2812HNU-51c.

Congratulations! Your computer is now ready to connect to the Internet wirelessly through your P-2812HNU-51c.

> ✕ If you cannot connect wirelessly to the P-2812HNU-51c, check you have selected the correct **SSID** and entered the correct security key. If that does not work, ensure your wireless network adapter is enabled by clicking on the wireless adapter icon and clicking **Enable**. See the User's Guide for more suggestions.

Using Your Phones

Follow these directions to make calls over the Internet.

- To dial a SIP number that only uses numbers (for example, "12345"), dial the number on your phone's keypad. You can also set up a speed-dial entry, if you want. See the User's Guide for instructions.

- To dial a SIP number that uses letters, set up a speed-dial entry first. See the User's Guide for instructions. Then, dial the speed-dial number to make the call.

- To call regular telephone numbers, use your VoIP service provider's dialing plan.

- To receive a call through the P-2812HNU-51c, the other party must have your SIP number and a SIP account of their own.

The Flash Key

You can invoke the supplementary services by using the flash key.

After pressing the flash key, if you do not issue the sub-command before the default sub-command timeout (2 seconds) expires or issue an invalid sub-command, the current operation will be aborted.

USA Flash Key Commands

Command	Sub-command	Description
Flash		Put a current call on hold to place a second call. After the second call is successful, press the flash key again to have a three-way conference call. Put a current call on hold to answer an incoming call.
Flash	*98#	Transfer the call to another phone.

European Flash Key Commands

Command	Sub-command	Description
Flash		Put a current call on hold to place a second call. Switch back to the call (if there is no second call).
Flash	0	Drop the call presently on hold or reject an incoming call which is waiting for answer.
Flash	1	Disconnect the current phone connection and answer the incoming call or resume with caller presently on hold.
Flash	2	1. Switch back and forth between two calls. 2. Put a current call on hold to answer an incoming call. 3. Separate the current three-way conference call into two individual calls (one is on-line, the other is on hold).
Flash	3	Create three-way conference connection.
Flash	*98#	Transfer a call to another phone.

Phone Functions Summary

Keys	Function	Description
*98#	Call transfer	Transfer a call to another phone.
*66#	Call return	Place a call to the last person who called you.
####	Internal Call	Call the phone(s) connected to the P-2812HNU-51c.
*95#	Enable Do Not Disturb	Use these to set your phone not to ring when someone calls you.
#95#	Disable Do Not Disturb	Turn the Do Not Disturb function off.

Keys	Function	Description
*41#	Enable Call Waiting	Use these to allow you to put a call on hold when you are answering another.
#41#	Disable Call Waiting	Turn the call waiting function off.

USB File Sharing

In order to start file sharing you need to:
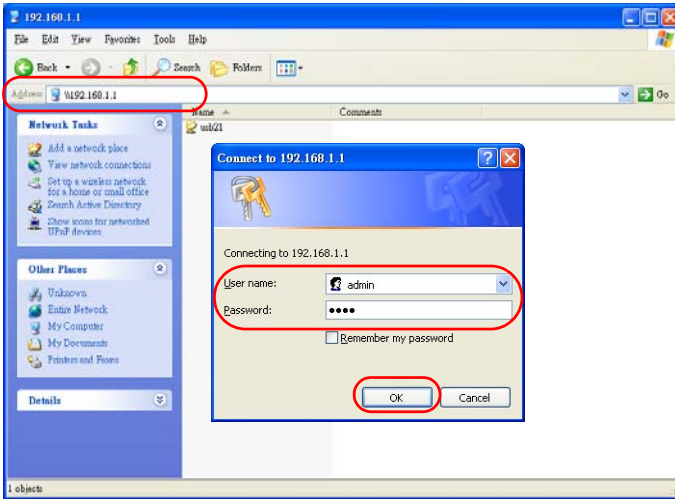
- Connect your USB 2.0 file sharing device. See Hardware Connections.

- Browse to your files using the IP address of the P-2812HNU-51c.

The P-2812HNU-51c automatically recognizes the USB device which is connected to the USB port and makes it available for sharing.

Browse to the USB File Share

1. In Windows Explorer's **Address** bar type a double backslash "\\" followed by the IP address of the P-2812HNU-51c (192.168.1.1 is the default) and hit [ENTER].
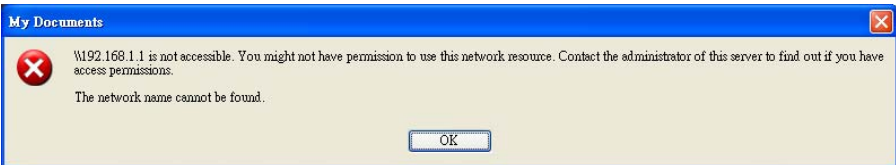
2. Enter the default system user name and password in the window prompt that appears and hit **OK**.

3. The files on the USB file sharing device connected to the P-2812HNU-51c are now part of your file structure and you can manage those files just like any other files on your computer.

> ⚒ If the password authentication screen does not display or you see the following error message, make sure the file sharing feature is enabled on the P-2812HNU-51c by logging to the web configurator and clicking **USB Services > File Sharing**.

Refer to the User's Guide for a complete description of this feature.

Log into the Web Configurator

You only need to use this section if you want to configure the WAN, WLAN, VoIP or other advanced settings.

1. Open your browser and enter **https://192.168.1.1** or **http://192.168.1.1** (the P-2812HNU-51c's default IP address) as the address.

2. For administrator login, enter username **admin** and password **1234** (default). Only administrators can configure the SIP account settings. For user login, enter **user** as the username and **user** as the password. Click **Login**.

If the login screen does not open, make sure you allow web browser pop-up windows, JavaScripts and Java permissions. Your computer should be also set to get an IP address automatically from a DHCP server. See the appendices in your User's Guide for more information.

See your User's Guide for how to use the **VoIP > SIP** screen to set up your VoIP account if the **INTERNET** light is green but the **PHONE** light is off.

If the **PHONE** light is on, skip to to see how to make calls through the Internet.

See your User's Guide for how to use the **Network > WAN** screens to set up the WAN connection:

- If the **DSL/WAN** switch is set to **DSL** and the **DSL** light is on but the **INTERNET** light is off.

- If the **DSL/WAN** switch set to **WAN** and the **WAN** light is on but the **INTERNET** light is off.

- If you want to have the P-2812HNU-51c use 3G as your WAN or as a backup when the DSL or Ethernet WAN connection fails.

How to View a Product's Certification(s)

1. Go to www.zyxel.com.

2. Select your product from the drop-down list box on the ZyXEL home page to go to that product's page.

3. Select the certification you wish to view from this page.