

DrayTek

Vigor3100 Series G.SHDSL Security Router



Quick Start Guide

V2.01

Vigor 3100 Series G.SHDSL Security Router Quick Start Guide

Version: 2.01

Date: 23/12/2009

Please visit www.draytek.com to get the newly updated manual at any time.

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Safety Instructions and Approval

Safety Instructions

- Read the installation guide thoroughly before you set up the router.
- The router is a complicated electronic unit that may be repaired only by authorized and qualified personnel. Do not try to open or repair the router yourself.
- Do not place the router in a damp or humid place, e.g. a bathroom.
- The router should be used in a sheltered area, within a temperature range of +5 to +40 Celsius.
- Do not expose the router to direct sunlight or other heat sources. The housing and electronic components may be damaged by direct sunlight or heat sources.
- Do not deploy the cable for LAN connection outdoor to prevent electronic shock hazards.
- Keep the package out of reach of children.
- When you want to dispose of the router, please follow local regulations on conservation of the environment.

Warranty

We warrant to the original end user (purchaser) that the router will be free from any defects in workmanship or materials for a period of two (2) years from the date of purchase from the dealer. Please keep your purchase receipt in a safe place as it serves as proof of date of purchase. During the warranty period, and upon proof of purchase, should the product have indications of failure due to faulty workmanship and/or materials, we will, at our discretion, repair or replace the defective products or components, without charge for either parts or labor, to whatever extent we deem necessary to restore the product to proper operating condition. Any replacement will consist of a new or re-manufactured functionally equivalent product of equal value, and will be offered solely at our discretion. This warranty will not apply if the product is modified, misused, tampered with, damaged by an act of God, or subjected to abnormal working conditions. The warranty does not cover the bundled or licensed software of other vendors. Defects which do not significantly affect the usability of the product will not be covered by the warranty. We reserve the right to revise the manual and online documentation and to make changes from time to time in the contents hereof without obligation to notify any person of such revision or changes.

Be a Registered Owner

Web registration is preferred. You can register your Vigor router via <http://www.draytek.com>.

Firmware & Tools Updates

Due to the continuous evolution of DrayTek Corporation, all routers will be regularly upgraded. Please consult the DrayTek web site for more information on newest firmware, tools and documents.

<http://www.draytek.com>

European Community Declarations

Manufacturer: DrayTek Corp.
Address: No. 26, Fu Shing Road, HuKou Township, HsinChu Industrial Park, Hsin-Chu, Taiwan
303
Product: Vigor3100 Series G.SHDSL Routers

DrayTek Corp. declares that Vigor3100 series of routers are in compliance with the following essential requirements and other relevant provisions of R&TTE Directive 1999/5/EEC.

The product conforms to the requirements of Electro-Magnetic Compatibility (EMC) Directive 2004/108/EC by complying with the requirements set forth in EN55022/Class B and EN55024/Class B.

The product conforms to the requirements of Low Voltage (LVD) Directive 73/23/EEC by complying with the requirements set forth in EN60950-1.

The **Vigor3100G** is designed for the WLAN 2.4GHz network throughout EC region, Switzerland, and the restrictions of France.

Regulatory Information

Federal Communication Commission Interference Statement

This equipment 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 equipment 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 equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

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

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

- (1) This device may not cause harmful interference, and
- (2) This device may accept any interference received, including interference that may cause undesired operation.

Please visit <http://www.draytek.com/user/AboutRegulatory.php>



This product is designed for POTS and 2.4GHz WLAN network throughout the EC region and Switzerland with restrictions in France. Please see the user manual for the applicable networks on your product.

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1. Introduction

Targeting requirement for residential, SOHO (Small Office and Home Office) and business users, the Vigor3100 series are G.SHDSL enabled integrated access device. G.SHDSL is going to be a prevailing standard for business and residential SDSL (Symmetrical DSL) in the rapidly growing worldwide marketplace. Vigor3100/G provides data up to 2.3Mbps through one single pair; Vigor3120 offers data upto 4.6Mbps through two pairs.

Embedded with sophistic VPN firewall security features, the Vigor3100 series provide 32 dedicated virtual private data networks tunneling through public Internet. Powered by hardware-based DES/3DES engine, all the information transmitted is well encrypted. Hence Vigor3100 series can against any snooping without performance degraded when VPN is enabled.

The Vigor3100 G model is embedded 802.11g compliant wireless module which provides wireless LAN access with line rate as much as 108Mbps with Super G™. The Vigor3100 G models feature WPA2 (802.11i), wireless LAN isolation, and WDS (Wireless Distribution System).

The Vigor3100i model supports one ISDN port. It provides Internet access, remote dial-in and ISDN backup features.

Characteristics

- Easy Internet-sharing of your broadband connection
- Robust firewall to help protect your network from external attacks
- Comprehensive VPN facilities provide deployment of linked branch offices and teleworkers

1.1 Panel Description

1.1.1 Vigor3100

Front Panel





LED	Status	Explanation	
ACT (Activity)	Blinking	The router is powered on and running properly.	
VPN	On	The VPN tunnel is launched.	
QoS	On	The QoS function is active.	
PRN	On	The USB interface printer is ready.	
DSL	On	The G.SHDSL line is connected	
LAN (1, 2, 3, 4)	LNK	Blinking	It means that Ethernet packets are transmitting.
		100	On
		Off	It means that a normal 10Mbps connection is through its corresponding port.
	FDX	On	It means a full duplex connection.
		Off	It means a half duplex connection.
		Blinking	It means that a packet collision happens.

Interface	Description
RST (Factory Reset)	Restore the default settings. Usage: Turn on the router (ACT LED is blinking). Press the hole and keep for more than 5 seconds. When you see the ACT LED begins to blink rapidly than usual, release the button. Then the router will restart with the factory default configuration.
DSL	Connect the G.SHDSL line to access the Internet.
LAN (1,2,3,4)	Connect to the local networked devices.
PRN	Connect to the USB printer.

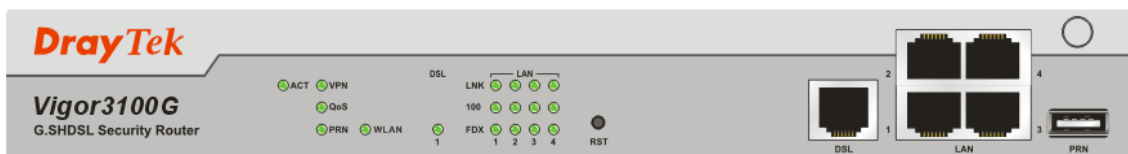
Rear Panel



Interface	Description
	Connector for a power cord with 100-240 VAC (inlet).
	Power Switch. "1" is ON; "0" is OFF.

1.1.2 Vigor3100G

Front Panel





LED	Status	Explanation	
ACT (Activity)	Blinking	The router is powered on and running properly.	
VPN	On	The VPN tunnel is launched.	
QoS	On	The QoS function is active.	
PRN	On	The USB interface printer is ready.	
WLAN	On	The wireless LAN function is enabled.	
	Blinking	Wireless traffic goes through.	
DSL	On	The G.SHDSL line is connected.	
LAN (1, 2, 3, 4)	LNK	Blinking	It means that Ethernet packets are transmitting.
	100	On	It means that a normal 100Mbps connection is through its corresponding port.
		Off	It means that a normal 10Mbps connection is through its corresponding port.
	FDX	On	It means a full duplex connection.
		Off	It means a half duplex connection.
		Blinking	It means that a packet collision happens.

Interface	Description
RST (Factory Reset)	Restore the default settings. Usage: Turn on the router (ACT LED is blinking). Press the hole and keep for more than 5 seconds. When you see the ACT LED begins to blink rapidly than usual, release the button. Then the router will restart with the factory default configuration.
DSL	Connect the G.SHDSL line to access the Internet.
LAN (1,2,3,4)	Connect to the local networked devices.
PRN	Connect to the USB printer.

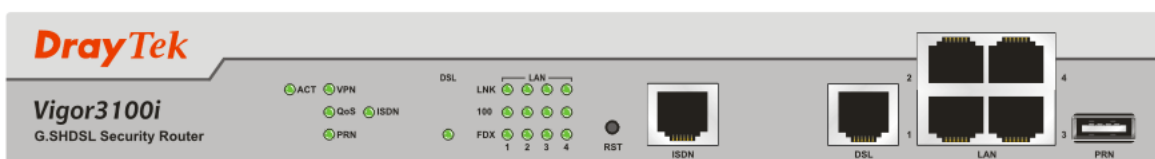
Rear Panel



Interface	Description
	Connector for a power cord with 100-240 VAC (inlet).
	Power Switch. "1" is ON; "0" is OFF.

1.1.3 Vigor3100i

Front Panel





LED	Status	Explanation	
ACT (Activity)	Blinking	The router is powered on and running properly.	
VPN	On	The VPN tunnel is launched.	
QoS	On	The QoS function is active.	
PRN	On	The USB interface printer is ready.	
ISDN	On	The ISDN service function is active.	
	Blinking	It means that data is transmitting.	
DSL	On	The G.SHDSL line is connected	
LAN (1, 2, 3, 4)	LNK	Blinking	It means that Ethernet packets are transmitting.
	100	On	It means that a normal 100Mbps connection is through its corresponding port.
		Off	It means that a normal 10Mbps connection is through its corresponding port.
	FDX	On	It means a full duplex connection.
		Off	It means a half duplex connection.
		Blinking	It means that a packet collision happens.

Interface	Description
RST (Factory Reset)	Restore the default settings. Usage: Turn on the router (ACT LED is blinking). Press the hole and keep for more than 5 seconds. When you see the ACT LED begins to blink rapidly than usual, release the button. Then the router will restart with the factory default configuration.
ISDN	Connect the ISDN cable.
DSL	Connect the G.SHDSL line to access the Internet.
LAN (1,2,3,4)	Connect to the local networked devices.
PRN	Connect to the USB printer.

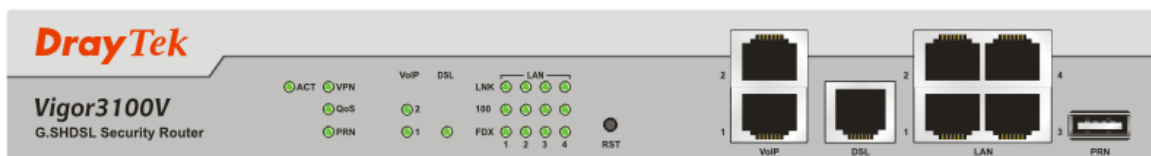
Rear Panel



Interface	Description
	Connector for a power cord with 100-240 VAC (inlet).
	Power Switch. "1" is ON; "0" is OFF.

1.1.4 Vigor3100V

Front Panel





LED	Status	Explanation	
ACT (Activity)	Blinking	The router is powered on and running properly.	
VPN	On	The VPN tunnel is launched.	
QoS	On	The QoS function is active.	
PRN	On	The USB interface printer is ready.	
VoIP (2,1)	On	The phone is off hook (the handset of phone is hanging).	
	Blinking	A phone call is incoming or on-line.	
DSL	On	The G.SHDSL line is connected	
LAN (1, 2, 3, 4)	LNK	Blinking	It means that Ethernet packets are transmitting.
		100	On
	Off		It means that a normal 10Mbps connection is through its corresponding port.
	FDX	On	It means a full duplex connection.
		Off	It means a half duplex connection.
		Blinking	It means that a packet collision happens.

Interface	Description
RST (Factory Reset)	Restore the default settings. Usage: Turn on the router (ACT LED is blinking). Press the hole and keep for more than 5 seconds. When you see the ACT LED begins to blink rapidly than usual, release the button. Then the router will restart with the factory default configuration.
VoIP	Connectors for telephone set and analog phone with VoIP communication.
DSL	Connect the G.SHDSL line to access the Internet.
LAN (1,2,3,4)	Connect to the local networked devices.
PRN	Connect to the USB printer.

Rear Panel



Interface	Description
	Connector for a power cord with 100-240 VAC (inlet).
	Power Switch. "1" is ON; "0" is OFF.

1.1.5 Vigor3120

Front Panel





LED	Status	Explanation	
ACT (Activity)	Blinking	The router is powered on and running properly.	
VPN	On	The VPN tunnel is launched.	
QoS	On	The QoS function is active.	
PRN	On	The USB interface printer is ready.	
DSL	On	The G.SHDSL line is connected.	
LAN (1, 2, 3, 4)	LNK	Blinking	It means that Ethernet packets are transmitting.
	100	On	It means that a normal 100Mbps connection is through its corresponding port.
		Off	It means that a normal 10Mbps connection is through its corresponding port.
	FDX	On	It means a full duplex connection.
		Off	It means a half duplex connection.
		Blinking	It means that a packet collision happens.

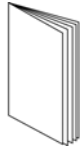
Interface	Description
RST (Factory Reset)	Restore the default settings. Usage: Turn on the router (ACT LED is blinking). Press the hole and keep for more than 5 seconds. When you see the ACT LED begins to blink rapidly than usual, release the button. Then the router will restart with the factory default configuration.
DSL	Connect the G.SHDSL line to access the Internet.
LAN (1-4)	Connector for local networked devices.
PRN	USB interface for printer.

Rear Panel

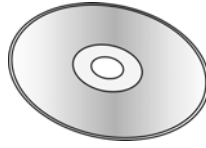


Interface	Description
	Connector for a power cord with 100-240 VAC (inlet).
	Power Switch. "1" is ON; "0" is OFF.

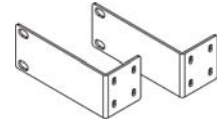
1.2 Package Content



1 Quick Start Guide



2 CD



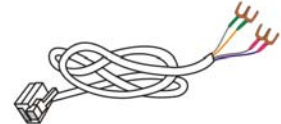
3 Rack mount kit (brackets)



4 Antenna for Vigor3100G



5 RJ-45 Cable (Ethernet) (8P8C)



6 Flat Module Cable, RJ-45 (4x4) (for Vigor3120)



7 Surface Jack (for Vigor3120)



8 RJ-45 to RJ-45 Cable for *i* model (8P4C)

9 The type of the cable depends on the country that the router will be installed:



RJ-11 to RJ-45 Cable (Annex B) (for Vigor3100/3100G)

Or



RJ-45 to RJ-45 (for Vigor3100/3100G)

10 The type of the power cord depends on the country that the router will be installed:



UK-type power cord



EU-type power cord



USA/Taiwan-type power cord



AU/NZ-type power cord

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2. Install Your Vigor Router

This section will guide you to install the router through hardware connection and configure the router's settings through web browser.

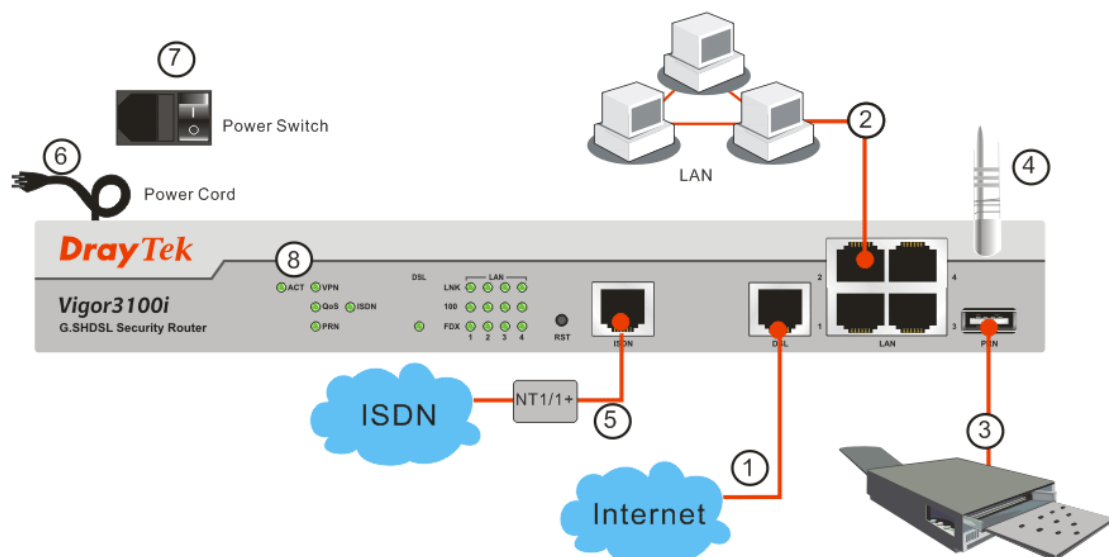
2.1 Hardware Installation

2.1.1 For Vigor3100/Vigor3100G/Vigor3100V/Vigor3100i

Before starting to configure the router, you have to connect your devices correctly.

1. Connect the DSL port of the router to the wall outlet with a RJ-11 to RJ-45 (or RJ-45 to RJ-45) cable. For Vigor3120, please refer to 2.1.2.
2. Connect one port of 4-port switch to your computer with a RJ-45 cable.
3. Connect the printer/3G USB Modem to the router with the USB cable and connect the power cord. If you do not have a printer/3G USB Modem for using, skip this step.
4. Connect detachable antennas to the router for Vigor3100G.
5. Connect ISDN cable for Vigor3100i.
6. Connect one end of the power cord to the power port of the router. Connect the other end to the wall outlet of electricity.
7. Power on the router.
8. Check the **ACT** and **DSL**, **LAN** LEDs to assure network connections.

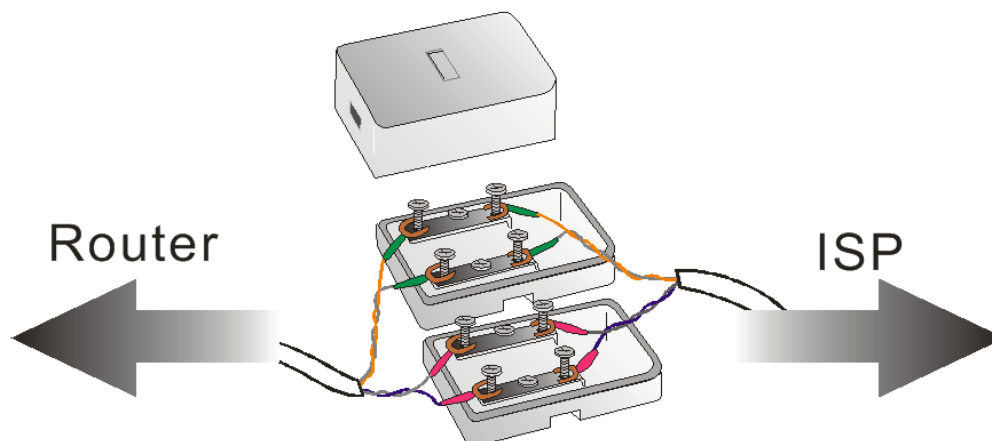
(For the detailed information of LED status, please refer to section 1.1.)



2.1.2 Hardware Installation for Vigor3120

Vigor3120 provides Flat Module Cable (RJ-45, 4x4) for bonding bandwidth for data transmission. Please apply two-pair of circuit from your ISP first for hardware connection.

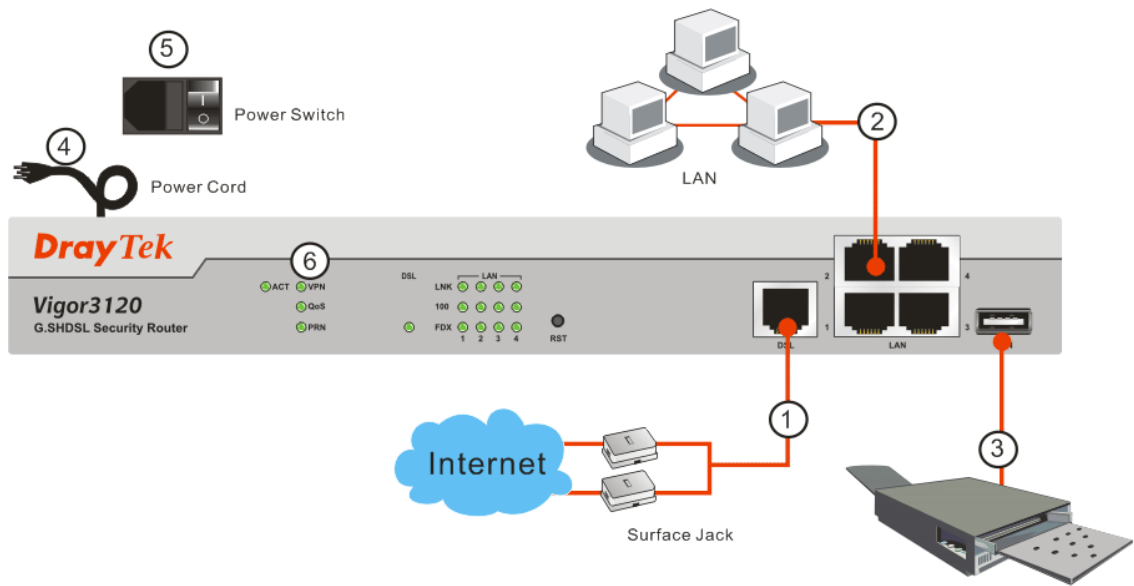
Then, open the cover of surface jack and use a screw driver to loosen the screws inside the surface jack. Notice that lines wrapped with same color tape mean one pair. Please connect them to one surface jack (that will be used to connect to DSL connector of the router). Use the same way to connect another pair of lines to another surface jack (that will be used to connect to ISP).



And before starting to configure the router, you have to connect your devices correctly.

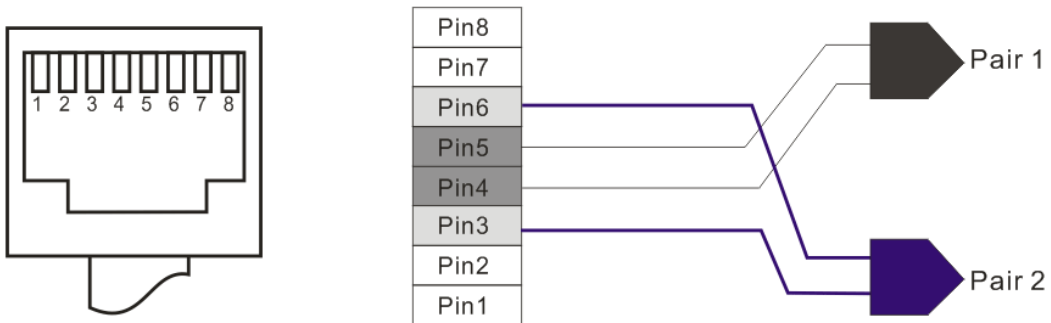
1. Connect the DSL port of the router to the wall outlet with a Flat Module Cable (RJ-45, 4x4).
2. Connect one port of 4-port switch to your computer with a RJ-45 cable.
3. Connect the printer/3G USB Modem to the router with the USB cable and connect the power cord. If you do not have a printer/3G USB Modem for using, skip this step.
4. Connect one end of the power cord to the power port of the router. Connect the other end to the wall outlet of electricity.
5. Power on the router.
6. Check the **ACT** and **DSL, LAN** LEDs to assure network connections.

(For the detailed information of LED status, please refer to section 1.1.)



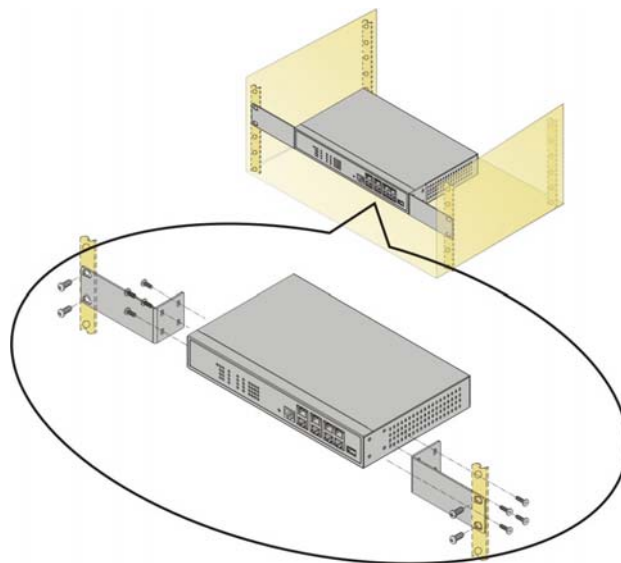
2.1.3 Pin Definition for Flat Module Cable

Below shows the pin definition of flat module cable. One pair is composed by Pin4 and Pin5. The other pair is composed by Pin3 and Pin6.



2.2 Rack Mount Instruction

Use brackets to set the Vigor router on the rack as shown below.



2.3 Web Configuration

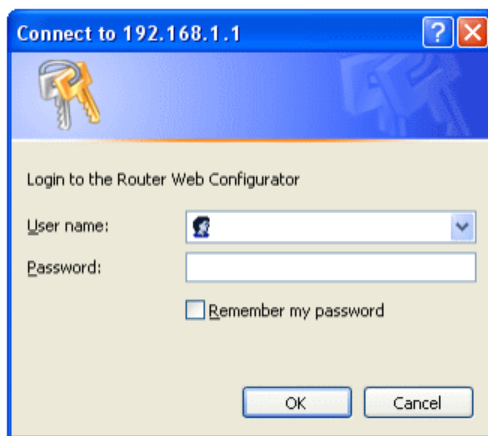
The **Quick Start Wizard** is designed for you to easily set up your router for Internet access. You can directly access the **Quick Start Wizard** via Web Configurator.

1. Make sure your PC connects to the router correctly.



Notice: You may either simply set up your computer to get IP dynamically from the router or set up the IP address of the computer to be the same subnet as **the default IP address of Vigor router 192.168.1.1**. For the detailed information, please refer to the later section - Trouble Shooting of the guide.

2. Open a web browser on your PC and type **http://192.168.1.1**. A pop-up window will open to ask for username and password. Do not type any word on the window and click **OK** for next screen.



3. Now, the **Main Screen** will pop up. Click **Quick Start Wizard**.

Vigor3100 Series
G. SHDSL Router

DrayTek
www.draytek.com

Quick Start Wizard

System Status

Model Name	: Vigor3100 series
Firmware Version	: v2.8.1_RC2
Build Date/Time	: Wed Oct 24 14:40:3.50 2007
DSL Firmware Version	: R308_1 Annex A

LAN	WAN
MAC Address : 00-50-7F-89-92-10	Link Status : Disconnected
1st IP Address : 192.168.1.1	MAC Address : 00-50-7F-89-92-11
1st Subnet Mask : 255.255.255.0	Connection : PPPoE
DHCP Server : Yes	IP Address : ---
	Default Gateway : ---
	DNS : 194.109.6.66

VoIP

Port	: 1	2
SIP registrar	:	
Account ID	: change_me	change_me
Register	:	
Codec	:	
In Calls	: 0	0

All Rights Reserved.

Note: The home page will change slightly in accordance with the router you have.

- Enter the login password on the field of New Password and retype it on the field of Confirm Password. Then click **Next** to continue.

1. Enter login password

Please enter an alpha-numeric string as your **Password** (Max 23 characters).

New Password

Confirm Password

< Back Next > Finish Cancel

- On the next page as shown below, please select the appropriate Internet access type according to the information from your ISP. Or clicking “**Auto detect**” button to find out the related DSL parameters automatically.

Quick Start Wizard

2. Connect to Internet

Annex Type

VPI

VCI

Protocol / Encapsulation

- PPPoE LLC/SNAP
- PPPoE VC MUX
- PPPoA LLC/SNAP
- PPPoA VC MUX
- 1483 Bridged IP LLC**
- 1483 Routed IP LLC
- 1483 Bridged IP VC-Mux
- 1483 Routed IP VC-Mux (IPoA)
- 1483 Bridged IP (IPoE)

Fixed IP

IP Address

Subnet Mask

Default Gateway

Primary DNS

Second DNS

< Back Next > Finish Cancel

- If you select PPPoE/PPPoA as the protocol, please manually enter the Username/Password provided by your ISP. Check the **Always On** means Internet access is always on regardless of Internet usage. Then click **Next**.

3. Set PPPoE / PPPoA

ISP Name

User Name

Password

Confirm Password

Always On

Idle Timeout Seconds

< Back Next > Finish Cancel

7. Review the summary of settings. If everything is OK, click **Finish** to exit the wizard.

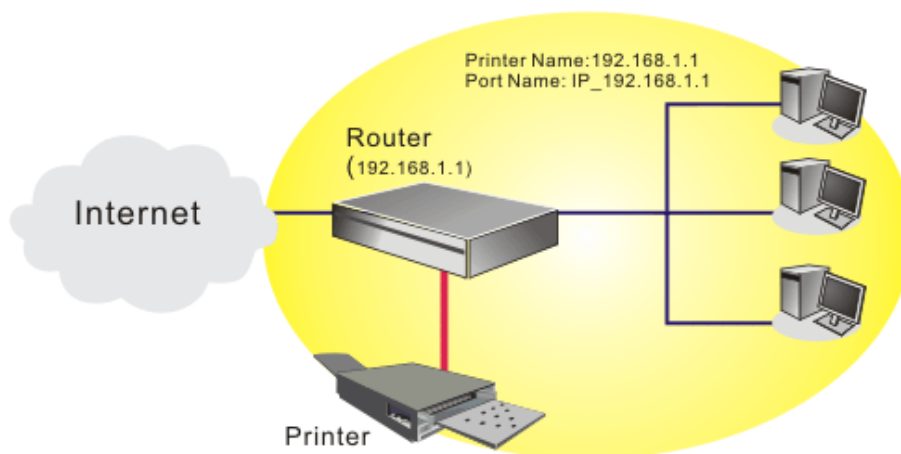
Quick Start Wizard

4. Please confirm your settings:

Annex Type	: A
VPI	: 0
VCI	: 33
Protocol / Encapsulation	: PPPoE / LLC
Fixed IP	: No
Primary DNS	:
Secondary DNS	:
Always On	: No
Idle Timeout	: 180 Seconds

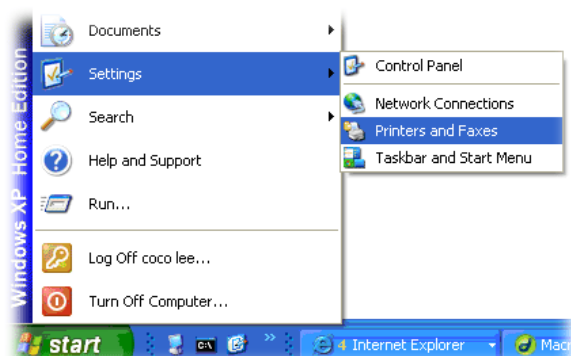
2.4 Printer Installation

You can install a printer onto the router for sharing printing. All the PCs connected this router can print documents via the router. The example provided here is made based on Windows XP/2000. For Windows 98/SE, please visit www.draytek.com.

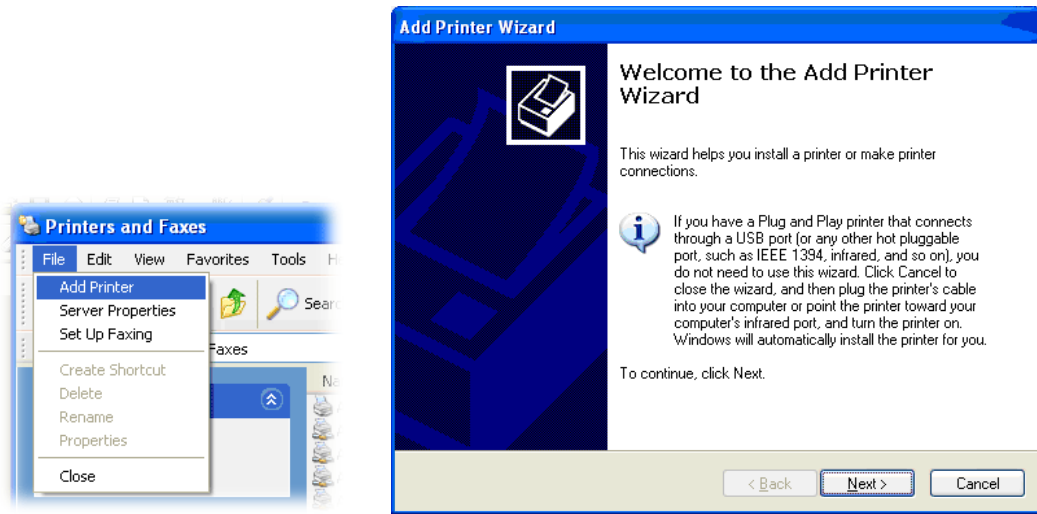


Before using it, please follow the steps below to configure settings for connected computers (or wireless clients).

1. Connect the printer with the router through USB/parallel port.
2. Open **Start->Settings-> Printer and Faxes**.



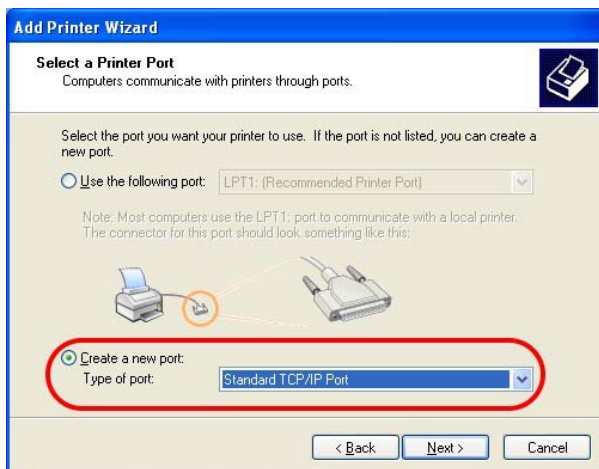
3. Open **File->Add a New Computer**. A welcome dialog will appear. Please click **Next**.



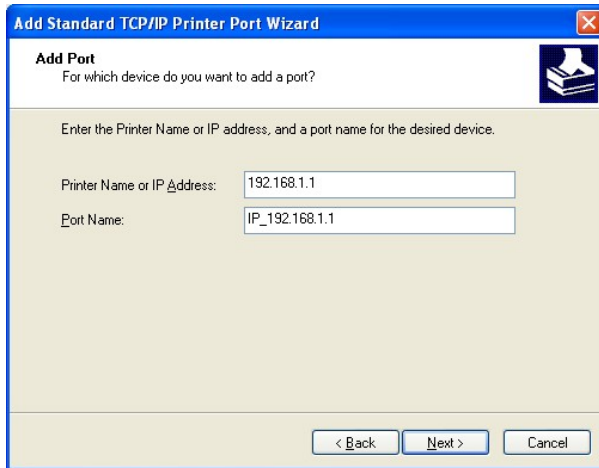
4. Click **Local printer attached to this computer** and click **Next**.



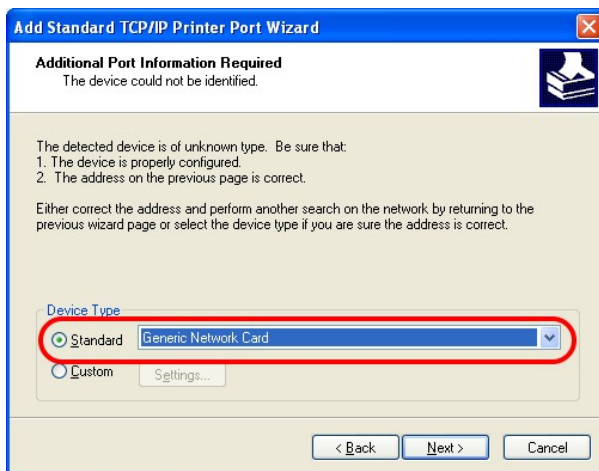
5. In this dialog, choose **Create a new port Type of port** and use the drop down list to select **Standard TCP/IP Port**. Click **Next**.



6. In the following dialog, type **192.168.1.1** (router's LAN IP) in the field of **Printer Name or IP Address** and type **IP_192.168.1.1** as the port name. Then, click **Next**.



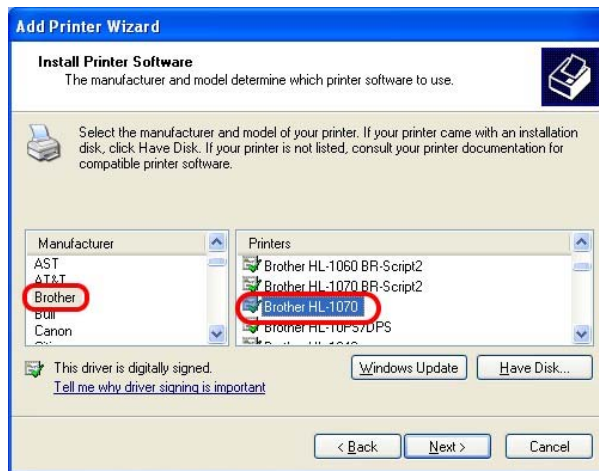
7. Click **Standard** and choose **Generic Network Card**.



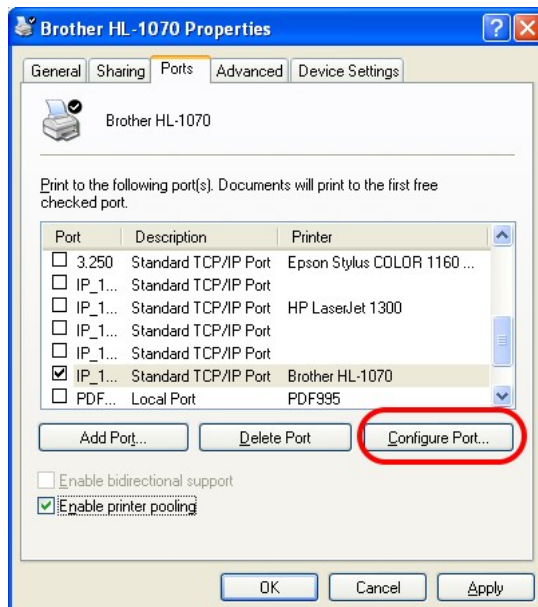
8. Then, in the following dialog, click **Finish**.



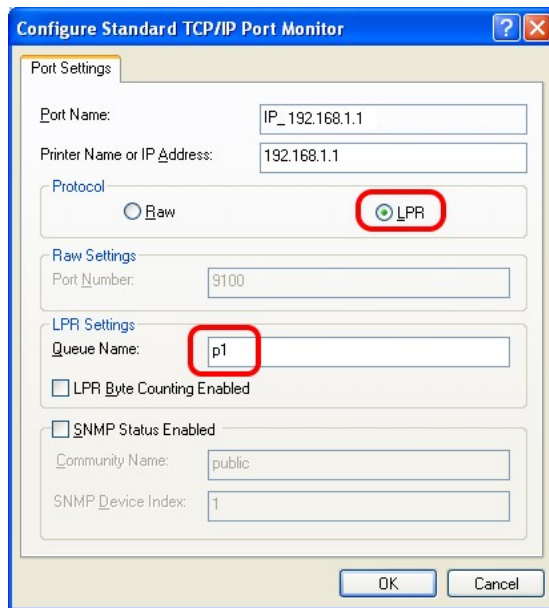
9. Now, your system will ask you to choose right name of the printer that you installed onto the router. Such step can make correct driver loaded onto your PC. When you finish the selection, click **Next**.



10. For the final stage, you need to go back to **Control Panel-> Printers** and edit the property of the new printer you have added.

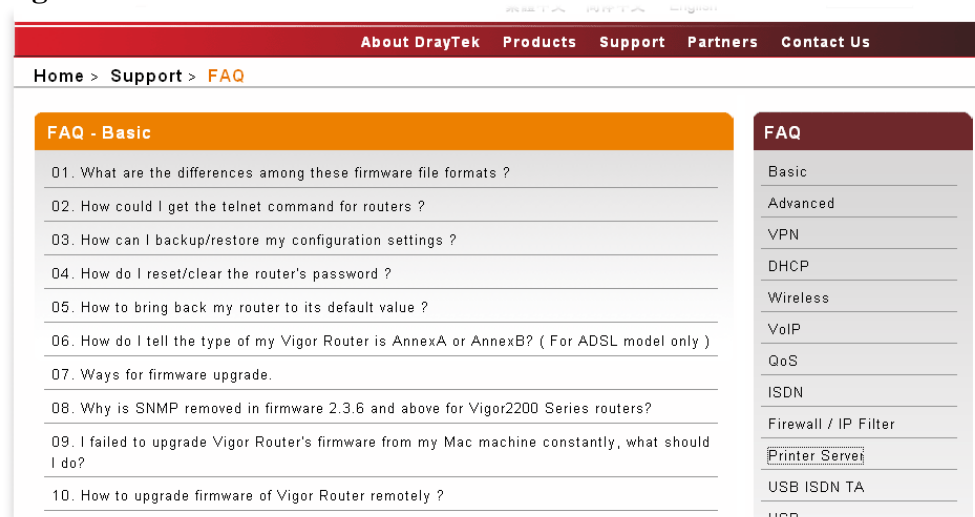


11. Select "LPR" on Protocol, type p1 (number 1) as Queue Name. Then click **OK**. Next please refer to the red rectangle for choosing the correct protocol and UPR name.



The printer can be used for printing now. Most of the printers with different manufacturers are compatible with vigor router.

Note 1: Some printers with the fax/scanning or other additional functions are not supported. If you do not know whether your printer is supported or not, please visit www.draytek.com to find out the printer list. Open **Support >FAQ**; find out the link of **Printer Server** and click it; then click the **What types of printers are compatible with Vigor router?** link.



FAQ - Printer Server

01. How do I configure LPR printing on Windows2000/XP ?
02. How do I configure LPR printing on Windows98/Me ?
03. How do I configure LPR printing on Linux boxes ?
04. Why there are some strange print-out when I try to print my documents through Vigor210 4P / 2300's print server?
05. **What types of printers are compatible with Vigor router?**
06. What are the limitations in the USB Printer Port of Vigor Router ?
07. What is the printing buffer size of Vigor Router ?
08. How do I configure LPR printing on Mac OSX ?
09. How do I configure LPR printing on My Windows Vista ?

Note 2: Vigor router supports printing request from computers via LAN ports but not WAN port.

2.5 Network Connection by 3G USB Modem

For 3G mobile communication through Access Point is getting more and more popular, Vigor3100 adds the function of 3G backup for such purpose. By connecting 3G USB Modem to the USB port of Vigor3100, it can support HSDPA/UMTS/EDGE/GPRS/GSM and the future 3G standard (HSUPA, etc). Vigor3100 with 3G USB Modem allows you to receive 3G signals at any place such as your car or certain location holding outdoor activity and share the bandwidth for using by more people. Users can use four LAN ports on the router to access Internet. Also, they can access Internet via SuperG wireless function of Vigor3100, and enjoy the powerful firewall, bandwidth management, VPN, VoIP features of Vigor3100 series.



After connecting into the router, 3G USB Modem will be regarded as Internet backup device. Therefore, when WAN1 is not available, the router will use 3G for supporting automatically. The supported 3G USB Modem will be listed on Draytek web site. Please visit www.draytek.com for more detailed information.

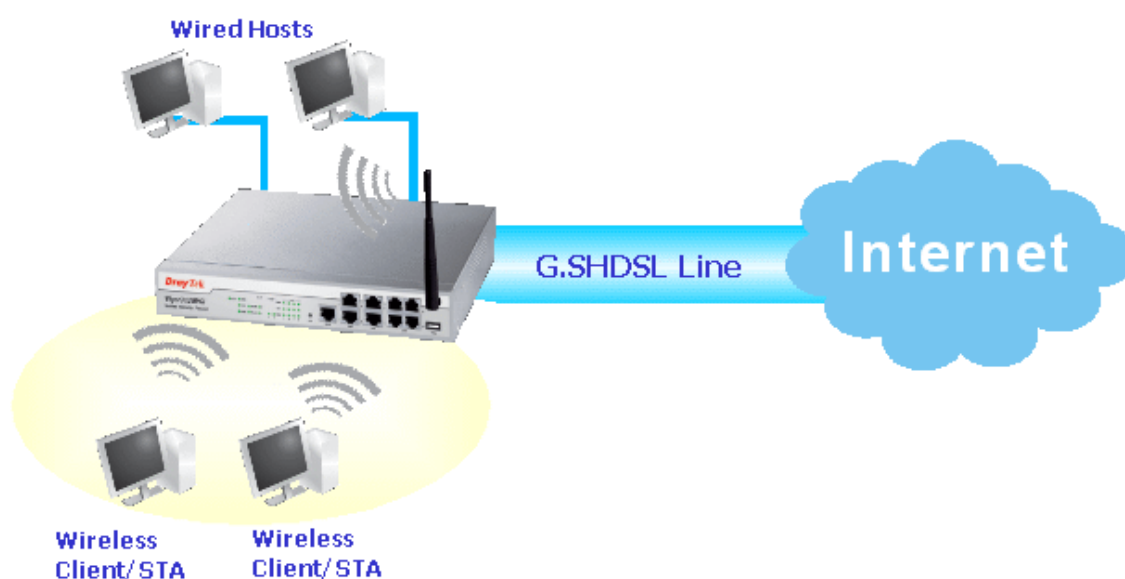
3. Wireless LAN Settings for Vigor3100G

For operating Vigor3100G well, it is necessary for you to set the wireless LAN settings for using wireless function. Please read the following section carefully for configuring the settings for this router.

(The default value of Frequency Domain was set by factory depends on the reselling region.)

3.1 Basic Wireless LAN Concept

In an Infrastructure Mode of wireless network, Vigor wireless router plays a role as an Access Point (AP) connecting to lots of wireless clients or Stations (STA). All the STAs will share the same Internet connection with other wired hosts via Vigor wireless router.



3.2 Boost Up Your Wireless Speed

The Vigor wireless routers are equipped with a wireless LAN interface compliant with the standard IEEE 802.11g protocol. To boost its performance further, the Vigor Router is also loaded with advanced wireless technology Super G™ to lift up data rate up to 108 Mbps*. Hence, you can finally smoothly enjoy stream music and video.

- * The actual data throughput will vary according to the network conditions and environmental factors, including volume of network traffic, network overhead and building materials. Only Super G STAs can achieve performance boost together with Vigor Super G™ router.

3.3 General Settings

Click **Wireless LAN >>General Settings** to configure the Service Set Identifier (SSID) and wireless channel.

Wireless LAN >> General Setup

General Setting (IEEE 802.11)

Enable Wireless LAN

Mode :

SuperG Overdrive: Off On

Note: The overdrive enhances the WLAN-to-LAN throughput; however, it may slow down other parts of the router.

Index(1-15) in **Schedule** Setup: , , ,

SSID :

Channel :

Note: If SuperG mode is enabled, channel is fixed at 6.

Hide SSID
 Long Preamble

Hide SSID : prevent SSID from being scanned.
Long Preamble : necessary for some older 802.11b devices only (lowers performance).

1. Check the box **Enable Wireless LAN** to enable wireless function.
2. Select an appropriate wireless mode.

Mixed (11b+11g+Super G) The router can connect to IEEE802.11b, IEEE802.11g and Super G stations simultaneously. If you don't know which one is suitable for your router, please choose this mode.

Mixed (11b+11g) The router can connect to IEEE802.11b and IEEE802.11g stations simultaneously.

Super G only The router can connect to Super G stations.

11g-only The router can connect to IEEE802.11g stations.

11b-only The router can connect to IEEE802.11b stations.

3. Type in the name of the SSID and Channel. The default name for SSID is "default". We suggest you change it to a particular name.

SSID (service set identifier) It is used to name the wireless LAN for this router, and it must have the same content in client PC/notebook wireless card(s). SSID can be any text numbers or various special characters.

Channel It is a wireless channel for the router. The default channel is 6. You can change it to an appropriate one if the selected channel is under serious interference.

4. Trouble Shooting

This section will guide you to solve abnormal situations if you cannot access into the Internet after installing the router and finishing the web configuration. Please follow sections below to check your basic installation stage by stage.

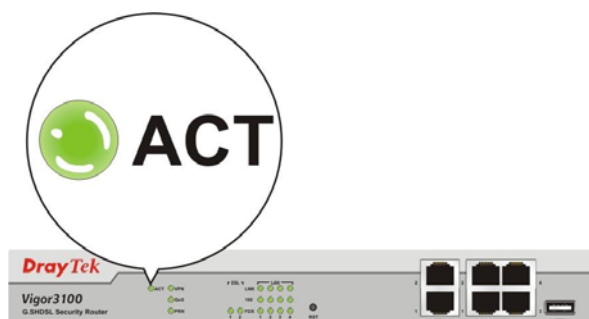
- Checking if the hardware status is OK or not.
- Checking if the network connection settings on your computer are OK or not.
- Pinging the router from your computer.
- Checking if the ISP settings are OK or not.
- Backing to factory default setting if necessary.

If all above stages are done and the router still cannot run normally, it is the time for you to contact your dealer for advanced help.

4.1 Checking If the Hardware Status Is OK or Not

Follow the steps below to verify the hardware status.

1. Check the power line and WLAN/LAN cable connections.
Refer to “**2.1 Hardware Installation**” for details.
2. Turn on the router. Make sure the **ACT LED** blink once per second and the correspondent **LAN LED** is bright.



3. If not, it means that there is something wrong with the hardware status. Simply back to “**2.1 Hardware Installation**” to execute the hardware installation again. And then, try again.

4.2 Checking If the Network Connection Settings on Your Computer Is OK or Not

Sometimes the link failure occurs due to the wrong network connection settings. After trying the above section, if the link is still failed, please do the steps listed below to make sure the network connection settings is OK.

For Windows

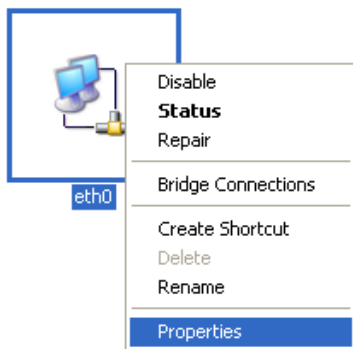


The example is based on Windows XP. As to the examples for other operation systems, please refer to the similar steps or find support notes in www.draytek.com.

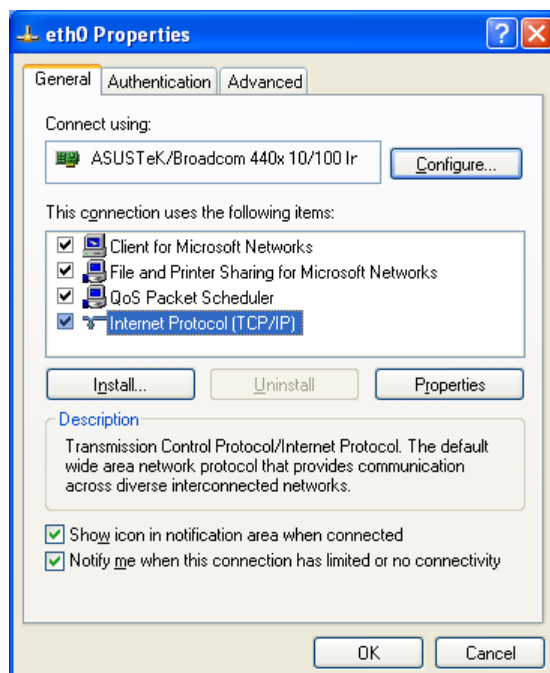
1. Go to **Control Panel** and then double-click on **Network Connections**.



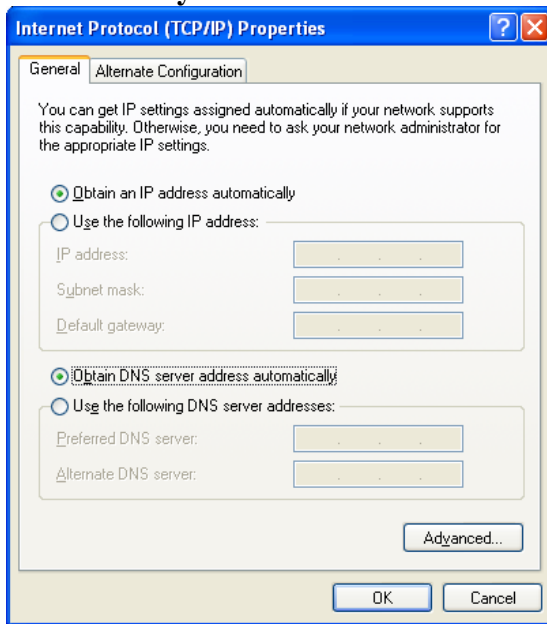
2. Right-click on **Local Area Connection** and click on **Properties**.



3. Select **Internet Protocol (TCP/IP)** and then click **Properties**.

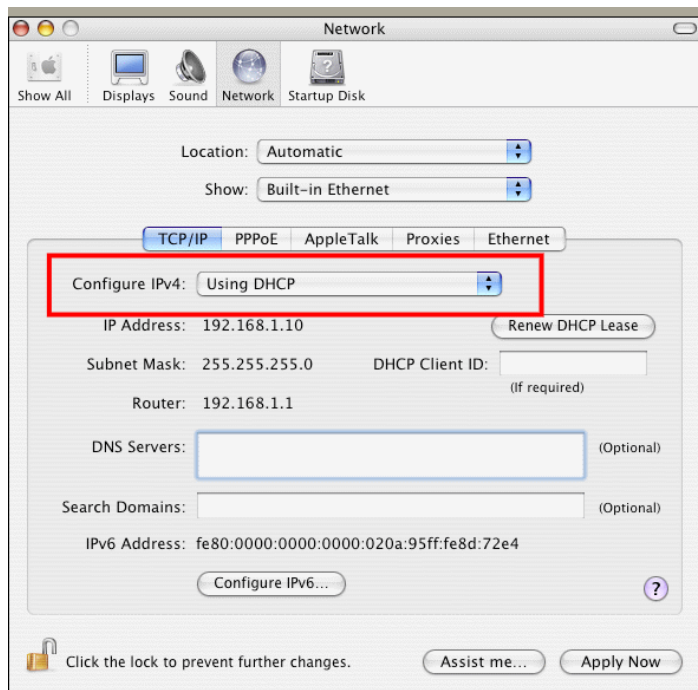


4. Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**.



For MacOs

1. Double click on the current used MacOs on the desktop.
2. Open the **Application** folder and get into **Network**.
3. On the **Network** screen, select **Using DHCP** from the drop down list of Configure IPv4.



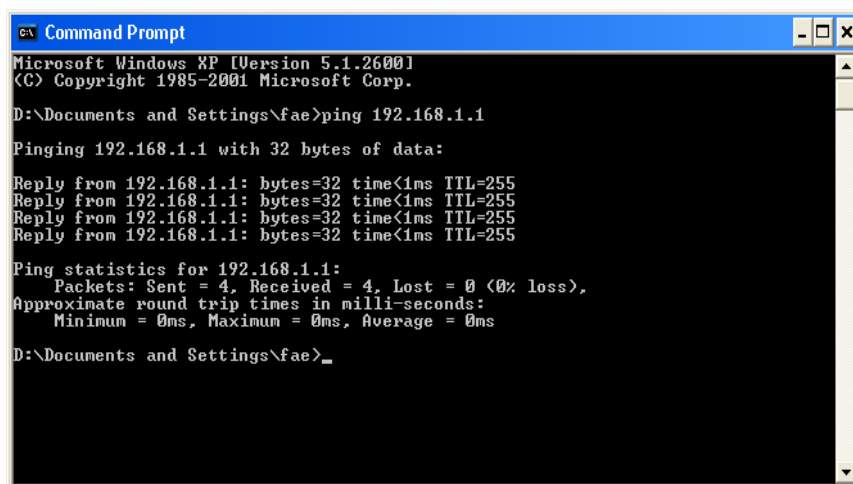
4.3 Pinging the Router from Your Computer

The default gateway IP address of the router is 192.168.1.1. For some reason, you might need to use “ping” command to check the link status of the router. **The most important thing is that the computer will receive a reply from 192.168.1.1.** If not, please check the IP address of your computer. We suggest you setting the network connection as **get IP automatically**. (Please refer to the section 4.2)

Please follow the steps below to ping the router correctly.

For Windows

1. Open the **Command Prompt** window (from **Start menu> Run**).
2. Type **command** (for Windows 95/98/ME) or **cmd** (for Windows NT/2000/XP/Vista). The DOS command dialog will appear.



```
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

D:\Documents and Settings\fae>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

D:\Documents and Settings\fae>_
```

3. Type **ping 192.168.1.1** and press [Enter]. If the link is OK, the line of “**Reply from 192.168.1.1:bytes=32 time<1ms TTL=255**” will appear.
4. If the line does not appear, please check the IP address setting of your computer.

For MacOs (Terminal)

1. Double click on the current used MacOs on the desktop.
2. Open the **Application** folder and get into **Utilities**.
3. Double click **Terminal**. The Terminal window will appear.
4. Type **ping 192.168.1.1** and press [Enter]. If the link is OK, the line of “**64 bytes from 192.168.1.1: icmp_seq=0 ttl=255 time=xxxx ms**” will appear.


```

Terminal — bash — 80x24
Last login: Sat Jan 3 02:24:18 on tttyp1
Welcome to Darwin!
Vigor10:~ draytek$ ping 192.168.1.1
PING 192.168.1.1 (192.168.1.1): 56 data bytes
64 bytes from 192.168.1.1: icmp_seq=0 ttl=255 time=0.755 ms
64 bytes from 192.168.1.1: icmp_seq=1 ttl=255 time=0.697 ms
64 bytes from 192.168.1.1: icmp_seq=2 ttl=255 time=0.716 ms
64 bytes from 192.168.1.1: icmp_seq=3 ttl=255 time=0.731 ms
64 bytes from 192.168.1.1: icmp_seq=4 ttl=255 time=0.72 ms
^C
--- 192.168.1.1 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max = 0.697/0.723/0.755 ms
Vigor10:~ draytek$ █

```

4.4 Checking If the ISP Settings are OK or Not

Click **Internet Access Setup** group and then check whether the ISP settings are set correctly.

For PPPoE/PPPoA Users

1. Check if the **Enable** option is selected.
2. Check if all parameters of **DSL Modem Settings** are entered with correct values that you got from your ISP.
3. Check if **Username** and **Password** are entered with correct values that you got from your **ISP**.

PPPoE / PPPoA Client Mode

<p>PPPoE/PPPoA Client <input checked="" type="radio"/> Enable <input type="radio"/> Disable</p> <p>DSL Modem Settings</p> <p>Multi-PVC channel: Channel 1</p> <p>VPI: 0</p> <p>VCI: 33</p> <p>Encapsulating Type: LLC/SNAP</p> <p>Protocol: PPPoE</p> <p>PPPoE Pass-through</p> <p><input type="checkbox"/> For Wired LAN</p> <p>WAN Backup Setup</p> <p>3G USB Modem</p> <p>Dial Backup Mode: Always On</p> <p>Go to 3G USB Modem Backup Setup</p> <p>ISDN</p> <p>Dial Backup Mode: None</p>	<p>ISP Access Setup</p> <p>ISP Name: <input type="text"/></p> <p>Username: <input type="text"/></p> <p>Password: <input type="text"/></p> <p>PPP Authentication: PAP or CHAP</p> <p><input type="checkbox"/> Always On</p> <p>Idle Timeout: 180 second(s)</p> <p>IP Address From ISP <input type="button" value="WAN IP Alias"/></p> <p>Fixed IP: <input type="radio"/> Yes <input checked="" type="radio"/> No (Dynamic IP)</p> <p>Fixed IP Address: <input type="text"/></p> <p>* : Required for some ISPs</p> <p><input checked="" type="radio"/> Default MAC Address</p> <p><input type="radio"/> Specify a MAC Address</p> <p>MAC Address : <input type="text" value="00"/> . <input type="text" value="50"/> . <input type="text" value="7F"/> . <input type="text" value="81"/> . <input type="text" value="83"/> . <input type="text" value="09"/></p> <p>Index(1-15) in Schedule Setup:</p> <p><input type="text"/> , <input type="text"/> , <input type="text"/> , <input type="text"/></p>
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For MPoA (RFC1483/2684) Users

1. Check if the **Enable** option is selected.
2. Check if all parameters of **DSL Modem Settings** are entered with correct values that you got from your **ISP**.
3. Check if **IP Address**, **Subnet Mask** and **Gateway** are set correctly, or use DHCP server to obtain IP automatically by clicking **Obtain an IP address automatically**.

[Internet Access >> MPoA \(RFC1483/2684\)](#)

MPoA (RFC1483/2684) Mode

MPoA (RFC1483/2684) Enable Disable

DSL Modem Settings

Multi-PVC channel

Encapsulation

VPI

VCI

WAN Backup Setup

3G USB Modem

Dial Backup Mode

Go to [3G USB Modem Backup](#) Setup

ISDN

Dial Backup Mode

RIP Protocol

Enable RIP

Bridge Mode

Enable Bridge Mode

WAN IP Network Settings

Obtain an IP address automatically

Router Name *

Domain Name *

Specify an IP address

IP Address

Subnet Mask

Gateway IP Address

* : Required for some ISPs

Default MAC Address

Specify a MAC Address

MAC Address : . . : . .

DNS Server IP Address

Primary IP Address

Secondary IP Address

4.5 Backing to Factory Default Setting If Necessary

Sometimes, a wrong connection can be improved by returning to the default settings. Try to reset the router by software or hardware.



Warning: After pressing **factory default setting**, you will lose all settings you did before. Make sure you have recorded all useful settings before you pressing. The password of factory default is null.

Software Reset

You can reset router to factory default via Web page.

Go to **System Maintenance >> Reboot System** on the web page. The following screen will appear. Choose **Using factory default configuration** and click **OK**. After few seconds, the router will return all the settings to the factory settings.

Reboot System

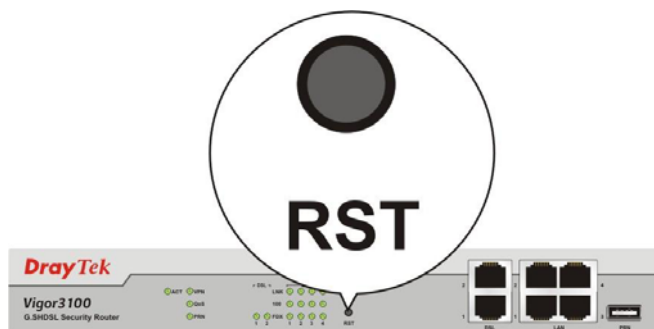
Do You want to reboot your router ?

Using current configuration

Using factory default configuration

Hardware Reset

While the router is running (ACT LED blinking), press the **RST** button and hold for more than 5 seconds. When you see the ACT LED blinks rapidly, please release the button. Then, the router will restart with the default configuration.



After restore the factory default setting, you can configure the settings for the router again to fit your personal request.

4.6 Contacting Your Dealer

If the router still cannot work correctly after trying many efforts, please contact your dealer for further help right away. For any questions, please feel free to send e-mail to support@draytek.com.