



DG-BG1000

ADSL2+ Ethernet Broadband Router User Manual

V1.1

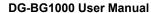
2012-12-12

As our product undergoes continuous development the specifications are subject to change without prior notice



INDEX

1	Intro	duction.		4		
	1.1	Pack	ing List	4		
	1.2	Safe	ty Precautions	4		
	1.3	B LEDs and Interfaces				
	1.4	Syste	em Requirements	8		
	1.5	Feat	ures	8		
2	Hard	lware / S	Software Installation	9		
	2.1	Hard	ware Installation:	9		
	2.2	Softv	vare Installation:	12		
3	Abou	ut the We	eb Configuration	19		
	3.1	Acce	ss the Router	19		
	3.2	Wiza	rd	20		
	3.3	Statu	IS	30		
		3.3.1	System	30		
		3.3.2	LAN	31		
		3.3.3	WAN	31		
		3.3.4	Statistics	32		
		3.3.5	ARP Table	33		
	3.4	Netw	ork	34		
		3.4.1	LAN	34		
		3.4.2	WAN	42		
	3.5	Serv	ice	48		
		3.5.1	DNS	48		
		3.5.2	Firewall	51		
		3.5.3	UPNP	59		
		3.5.4	IGMP Proxy	59		
		3.5.5	TR-069	60		
		3.5.6	ACL	61		
	3.6	Adva	ınce			
		3.6.1	Bridge Setting	65		
			2			





	3.6.2	Routing	66
	3.6.3	QoS	69
	3.6.4	SNMP	72
	3.6.5	Others	73
3.7	Admir	1	73
	3.7.1	Commit/Reboot	73
	3.7.2	Upgrade	74
	3.7.3	System Log	76
	3.7.4	Password	77
	3.7.5	Time Zone	78
3.8	Diagn	ostic	79
	3.8.1	Ping	79
	3.8.2	ATM Loopback	80
	3.8.3	ADSL	80
	3.8.4	Diagnostic Test	81



1 Introduction

Thank you for purchasing DG-BG1000 ADSL2+ Ethernet Broadand Router! The DG-BG1000 is an ADSL router that supports multiple line modes. It provides one 10/100Base-T Ethernet interface at the user end. The device provides high-speed ADSL broadband connection to the Internet or Intranet users, such as cyber café and office. The device provides high performance access to the Internet with downlink speed of up to 24 Mbps and uplink up to 1 Mbps.

1.1 Packing List

- 1 x DG-BG1000
- 1 x external pots splitter
- 1 x power adapter (5V DC, 1A)
- 2 x telephone cables (RJ11)
- 1 x Ethernet cable (RJ45)
- 1 x Installation Guide CD
- 1 x Quick Installation Guide

1.2 Safety Precautions

Follow the following instructions to prevent the device from risks and damage caused by fire or electric power:

- Use volume labels to mark the type of power.
- Use the power adapter packed within the device package.
- Pay attention to the power load of the outlet or prolonged lines. An
 overburden power outlet or damaged lines and plugs may cause electric
 shock or fire accident. Check the power cords regularly. If you find any
 damage, replace it at once.

4



- Proper space left for heat dissipation is necessary to avoid damage caused by overheating to the device. The long and thin holes on the device are designed for heat dissipation to ensure that the device works normally. Do not cover these heat dissipation holes.
- Do not put this device close to a place where a heat source exists or high temperature occurs. Avoid the device from direct sunshine.
- Do not put this device close to a place where it is over damp or watery. Do not spill any fluid on this device.
- Do not connect this device to any PCs or electronic products, unless our customer engineer or your broadband provider instructs you to do this, because any wrong connection may cause power or fire risk.
- Do not place this device on an unstable surface or support.



1.3 LEDs and Interfaces

Front Panel



The following table describes the LEDs of the device:

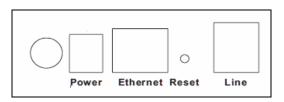
LEDs	Color	Status	Description
Power	Green	On	The device is powered on or the initiation of the
			device is successful.
		Off	The device is powered off.
	Red	On	The device is self-testing, the self-test has failed
			or the software is upgrading.
Link	Green	On	The device has established a connection with the
			physical layer of the office end.
		Slow	No signal is being detected.
		Blinks	
		Fast	The device is handshaking with the physical layer
		Blinks	of the office end.
Data	Green	On	The device has a successful WAN connection
			(PPP dial-up is successful) in the routing mode
			and no data is being transmitted on the Internet.
		Blinks	Data is being transmitted on the Internet in the
			routing mode.
		Off	The device is in the bridged mode.
	Red	On	In the routing mode, after the successful
			synchronization, the WAN connection has failed
			(PPP dial-up is failed).

6



LEDs	Color	Status	Description
Ethernet	Green	On	The LAN connection is normal and activated.
		Blinks	Data is being transmitted on the LAN or data is being transmitted on the Internet in the bridged mode.
		Off	The LAN connection of the device has failed.

Rear Panel



The following table describes the interfaces of the device:

Items	Description
	Power on or power off the device.
(Power switch)	
Power	Power interface, for connecting to the power adapter.
Ethernet	RJ-45 interface, for connecting to the Ethernet interface of PC or other Ethernet devices through the Ethernet cable.
Reset	Reset to the factory defaults. To reset to the factory defaults, keep the device powered on and push a paper clip in to the hole for over 5 seconds. Then release it, the configuration is reset to the factory defaults.
Line	RJ-11 interface, for connecting to the ADSL interface or a splitter through the telephone cable.



1.4 System Requirements

Recommended system requirements are as follows:

- A 10/100 base-T Ethernet card, installed on your PC
- Operating system: Win 98SE / 2000 / ME / XP
- Internet Explorer V6.0 or higher, Netscape V4.0 or higher, or Firefox 1.5 or higher

1.5 **Features**

The device supports the following features:

- External PPPoE dial-up access
- Internal PPPoE/PPPoA dial-up access
- 1483 Briged/1483 Routed/MER access
- Multiple PVCs (up to eight) and these PVCs can be isolated from each other
- A single PVC with multiple sessions
- Multiple PVCs with multiple sessions
- 802.1q and 802.1p protocol
- DHCP server
- NAT & NAPT
- Static routing
- Firmware upgrading through Web, TFTP, or FTP
- Resetting to the factory defaults through Reset button or Web
- DNS
- Virtual server
- DM7
- Two-level passwords and usernames
- Web interface
- Telnet CLI
- System status display
- PPP session PAP/CHAP
- IP filter



- IP quality of service (QoS)
- Remote access control
- Line connection status test
- Remote managing through Telnet or HTTP
- Backup and restoration of configuration file
- Ethernet interface supporting crossover detection, auto-correction, and polarity correction
- Universal plug and play (UPnP)

2 Hardware / Software Installation

2.1 Hardware Installation:

Connect the Line interface of the device and the Modem interface of the Step 1 splitter through a telephone cable. Connect the phone to the Phone interface of the splitter through a cable. Connect the incoming line to the Line interface of the splitter.

The splitter has three interfaces:

- Line: Connect to a wall phone jack (RJ-11 jack).
- Modem: Connect to the ADSL jack of the device.
- Phone: Connect to a telephone set.
- Connect the **Ethernet** interface of the device to the network card of the Step 2 PC through an Ethernet cable (MDI/MDIX).



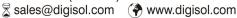
Note:

Use twisted-pair cables to connect with the hub or switch.

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Mark helpdesk@digisol.com







Plug one end of the power adapter to the wall outlet and connect the Step 3 other end to the **Power** interface of the device

Connection 1

Figure 1 shows the application diagram for the connection of the router, PC, splitter and the telephone sets, when no telephone set is placed before the splitter.

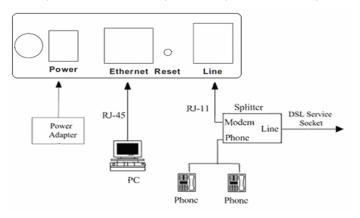


Figure 1 Connection diagram (Without connecting telephone sets before the splitter)



Connection 2

Figure 2 shows the connection when the splitter is installed close to the router.

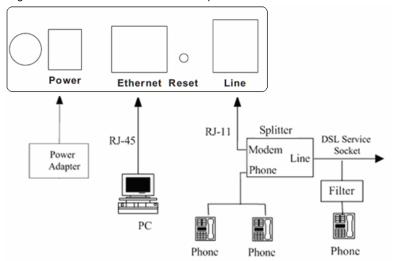


Figure 2 Connection diagram (Connecting a telephone set before the splitter)



Note:

When connection 2 is used, the filter must be installed close to the telephone cable. See Figure 2. Do not use the splitter to replace the filter.

Installing a telephone directly before the splitter may lead to failure of connection between the device and the central office, or failure of Internet access, or slow connection speed. If you really need to add a telephone set before the splitter, you must add a microfilter before a telephone set. Do not connect several telephones before the splitter or connect several telephones with the microfilter.



2.2 Software Installation:

1 Insert the supplied software installation CD in the CD-ROM of your computer. The following screen will appear. Click 'User manual' to get configuration guide in detail and click 'QIG' to view Quick Installation Guide. Click 'Start' to begin with the routers configuration.



2. Click 'Next'. to continue with the installation.





3. Click 'Next'. to continue with the installation.



4. Click 'Next', to continue with the installation.





5. The following screen displays the LED status of the router. Click 'Next', to continue with the installation



6. In this page, enter the user ID and password to log in to the router. The default user ID and password are 'admin' and 'admin' respectively. Click 'Next' to continue with the installtion

Router Login
Please enter the username and password to login to the router
User ID:
Password:
Note: The default User ID is 'admin' and Password is 'admin'



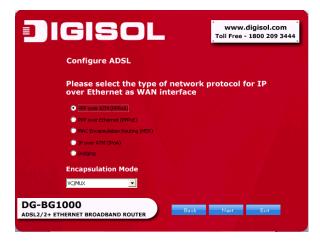
- 7. Configure the ADSL setting for the router in the following screen. Select the country and service provider from the drop-down list. You can change the default VPI/VCI values as instructed by your ISP.
- VPI: The valid value is in the range of 0 to 255.
- VCI: The valid value is in the range of 32 to 65535.

Click 'Next' to continue with the installation



8. In the following screen, select the WAN protocol. Click 'Next', to proceed with the installation





If you select PPPoE or PPPoA as the network protocol, then the following page appears.



In this page, enter the correct user ID and password that is provided by your ISP.

16



Click 'Next', to proceed with the installation.



Saving configuration

Then the following page appears. In this page, you can view the running status.



Running status

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Note: If the IP address appears 0.0.0.0, then click 'Refresh' for retrying the connection to Internet. If a valid IP address appears, other than 0.0.0.0, then click 'Finish' to complete the configuration.

Congrulations! The router configuration is now finished.



3 About the Web Configuration

This chapter describes how to configure the router by using the Web-based configuration utility.

3.1 Access the Router

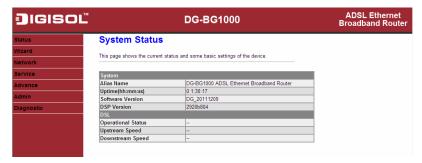
The following is the detailed description of accessing the router for the first time.

- Step 1 Open the Internet Explorer (IE) browser and enter http://192.168.1.1.
- Step 2 In the **Login** page that is displayed, enter the username and password.
- The username and password of the super user are admin and admin.
- The username and password of the common user are user and user.





If you log in as a super user, the page shown in the following figure appears. You can check, configure and modify all the settings.



If you log in as a common user, you can check the status of the router, but can not configure the most of the settings.

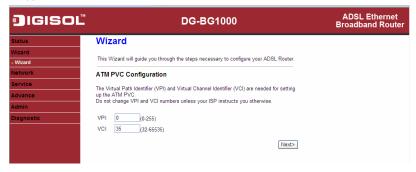
3.2 Wizard

The Wizard page guides fast and accurate configuration of the Internet connection and other important parameters. The following sections describe these various configuration parameters. Whether you configure these parameters or use the default ones, click **NEXT** to enable your Internet connection.

When subscribing to a broadband service, you should be aware of the method by which you are connected to the Internet. Your physical WAN device can be either PPP, ADSL, or both. The technical information about the properties of your Internet connection is provided by your Internet service provider (ISP). For example, your ISP should inform you whether you are connected to the Internet using a static or dynamic IP address, and the protocol that you use to communicate on the Internet.



In the navigation bar, click Wizard. The page as shown in the following figure appears.



The following table describes the parameters in this page:

Parameter	Description
VPI	Virtual path identifier (VPI) is the virtual path between two points in an ATM network. Its valid value is in the range of 0 to 255. Enter the correct VPI provided by your ISP. By default, VPI is set to 0 .
VCI	Virtual channel identifier (VCI) is the virtual channel between two points in an ATM network. Its valid value is in the range of 32 to 65535. (0 to 31 is reserved for local management of ATM traffic) Enter the correct VCI provided by your ISP. By default, VCI is set to 35.

After setting, click **Next**, the page as shown in the following figure appears.

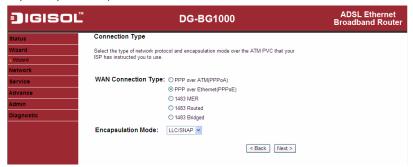
There are five WAN connection types: PPP over ATM (PPPoA), PPP over Ethernet (PPPoE), 1483 MER, 1483 Routed, and 1483 Bridged. The following describes them respectively.

21



PPPoE/PPPoA

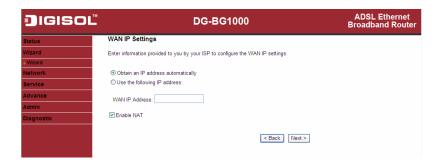
In the Connection Type page, set the WAN connection type to PPP over Ethernet (PPPoE), the encapsulation mode to LLC/SNAP.



Parameter	Description
WAN Connection Type	There are five WAN connection types: PPP over ATM (PPPoA), PPP over Ethernet (PPPoE), 1483 MER, 1483 Routed, and 1483 Bridged. In this example, the connection type is set to PPPoE.
Encapsulation Mode	You can select LLC/SNAP or VC-Mux . In this example, the encapsulation mode is set to LLC/SNAP .



After setting, click **Next**, the page as shown in the following figure appears.



Parameter	Description
Obtain an IP address	Select it, the DHCP assigns the IP address for
automatically	PPPoE connection.
Lies the following ID	Select it, you need to enter the IP address for
Use the following IP address	PPPoE connection, which is provided by your
address	ISP.
	Select the checkbox to enable network address
	translation (NAT). If you do not select it and you
Enable NAT	want to access the Internet normally, you must
Eliable INAT	add a route on the uplink equipment. Otherwise,
	the access to the Internet fails. Normally, it is
	required to enable NAT.



After setting, click **Next**, the page as shown in the following figure appears.



Parameter	Description
PPP Username	Enter the username for PPPoE dial-up, which is
	provided by your ISP.
PPP Password	Enter the password for PPPoE dial-up, which is provided
TTT T GOOWOIG	by your ISP.
	You can select Continuous, Connect on Demand, or
	Manual.
	Continuous: After dial-up is successful, PPPoE
	connection is always on-line, no matter whether
	the data is being transmitted or not.
	It is recommended to select it.
PPP Connection Type	Connect on Demand: After dial-up is successful,
	within the preset idle time, no data is being
	transmitted; the router automatically disconnects
	the PPPoE connection.
	In this case, you need to enter the idle time.
	Manual: Select it, you need to dial up and
	disconnect the connection mannually.





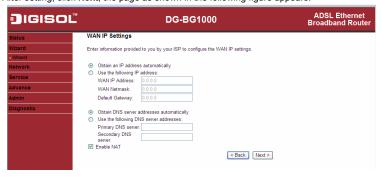
If the WAN connection type is set to PPPoA, the parameters of the WAN connection type are the same as that of PPPoE. For the parameters in these pages, refer to the parameter description of PPPoE.

1483 MER/1483 Routed

In the Connection Type page, set the WAN connection type to 1483 MER, the encapsulation mode to LLC/SNAP.



After setting, click Next, the page as shown in the following figure appears.





The following table describes the parameters in this page:

Parameter	Description
Obtain an IP address	Select it, DHCP automatically assigns the IP
automatically	address for WAN connection.
	Select it, you need to manually enter the IP
Use the following IP	address, subnet mask, and default gateway
address	for WAN connection, which are provided by
	your ISP.
Obtain DNS server	Select it, DHCP automatically assigns DNS
addresses automatically	server address.
Use the following DNS	Select it, you need to manually enter the
	primary DNS server address and secondary
server addresses	DNS server address.
	Select it to enable network address
	translation (NAT). If you do not select it and
	you want to access the Internet normally,
Enable NAT	you must add a route on the uplink
	equipment. Otherwise, the access to the
	Internet fails. Normally, it is required to
	enable NAT.

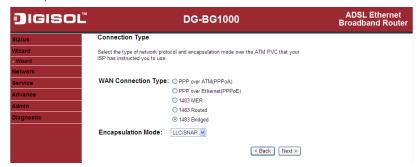
Note:

If the WAN connection type is set to **1483 Routed**, the parameters of the WAN connection type are the same as that of 1483 MER. For the parameters in these pages, refer to the parameter description of 1483 MER.

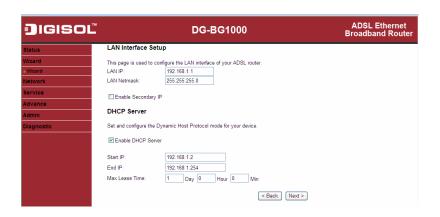


1483 Bridged

In the Connection Type page, set the WAN connection type to 1483 Bridged, the encapsulation mode to LLC/SNAP.



After setting, click Next, the page as shown in the following figure appears.

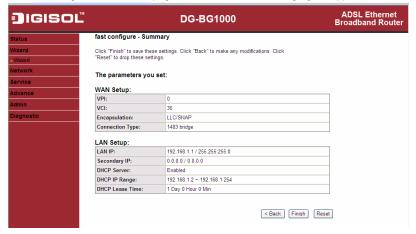




Parameter	Description
LAN Interface Setup	
LAN IP	Enter the IP address of LAN interface. Its valid value is in the range of 192.168.1.1 to 192.168.1.254. The default IP address is
	192.168.1.1.
LAN Netmask	Enter the subnet mask of LAN interface. Its valid value is in the range of 255.255.255.0 to 255.255.255.254.
Enable Secondary	Select the checkbox to enable the secondary LAN IP. The two LAN IP addresses must be in the different network.
DHCP Server	
Enable DHCP Server	Select the checkbox to enable DHCP server.
Start IP	Enter the start IP address that the DHCP sever assigns.
End IP	Enter the end IP address that the DHCP server assigns.
Max Lease Time	The lease time determines the period that the PCs retain the assigned IP addresses before the IP addresses change.



After setting, click **Next**, the page as shown in the following figure appears.



Click Back to modify the settings.

Click Finish to save the settings.

Click **Reset** to cancel the settings.



After you save the settings in the Wizard page, the PVC in the Wizard page replaces that in the Channel Configuration page. The preset PVCs in the Channel Configuration page do not take effect any more.

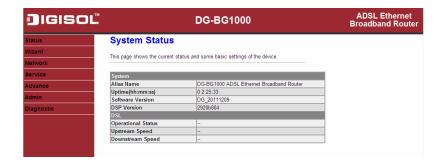


3.3 Status

In the navigation bar, click Status. In the Status page that is displayed contains System, LAN, WAN, Statistics and ARP Table.

3.3.1 **System**

Choose Status > System. The page that is displayed shows the current status and some basic settings of the router, such as, uptime, software version, upstream speed, downstream speed, and other informations.





3.3.2 LAN

Choose Status > LAN. The page that is displayed shows some basic LAN settings of the router. In the LAN Status page, you can view the LAN IP address, DHCP server status, MAC address and DHCP client table. If you want to configure the LAN network, refer to the chapter 3.4.1 LAN.



3.3.3 WAN

Choose Status > WAN. The page that is displayed shows some basic WAN settings of the router. In the WAN Status page, you can view basic status of WAN, default gateway, DNS server. If you want to configure the WAN network, refer to the chapter 3.4.2 WAN.





3.3.4 **Statistics**

Choose Status > Statistics. The Statistics page that is displayed contains Traffic Statistic and ADSL Statistic.

3.3.4.1 **Traffic Statistic**

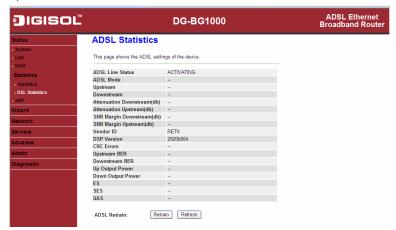
Click Traffic Statistic in the left pane, the page shown in the following figure appears. In this page, you can view the statistics of each network interface.





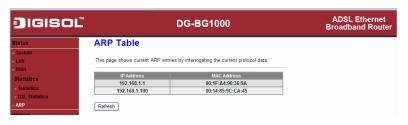
3.3.4.2 ADSL Statistic

Click ADSL Statistic in the left pane, the page shown in the following figure appears. In this page, you can view the ADSL line statistics, downstream rate, upstream rate and other information.



3.3.5 ARP Table

Choose Status > ARP Table. In the ARP table page, you can view the table that shows a list of learned MAC addresses.





3.4 Network

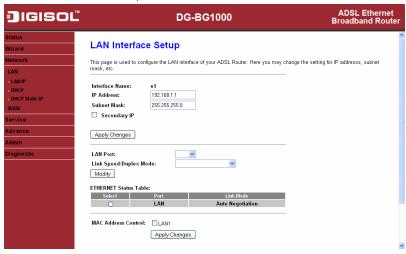
In the navigation bar, click **Network**. The **Network** page that is displayed contains LAN and WAN.

3.4.1 LAN

Choose Network > LAN. The LAN page that is displayed contains LAN IP, DHCP, and DHCP Static IP.

3.4.1.1 LAN IP

Click LAN IP in the left pane, the page shown in the following figure appears. In this page, you can change IP address of the router. The default IP address is 192.168.1.1, which is the private IP address of the router.





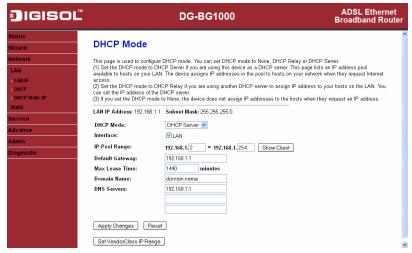
Parameter	Description
IP Address	Enter the IP address of LAN interface. It is recommended to use an address from a block that is reserved for private use. This address block is 192.168.1.1- 192.168.1.254.
Subnet Mask	Enter the subnet mask of LAN interface. The range of subnet mask is from 255.255.255.0-255.255.255.254.
Secondary IP	Select it to enable the secondary LAN IP address. The two LAN IP addresses must be in different network.
LAN Port	You can choose the LAN interface you want to configure.
Link Speed/Duplex Mode	You can select the following modes from the drop-down list: 100Mbps/Full Duplex 100Mbps/Half Duplex 10Mbps/Full Duplex 10Mbps/Half Duplex Auto Negotiation
MAC Address Control	It is the access control based on MAC address. Select it and the host whose MAC address is listed in the Current Allowed MAC Address Table can access the modem.
Add	Enter MAC address, and then click it to add a new MAC address.



3.4.1.2 DHCP

Dynamic Host Configuration Protocol (DHCP) allows the individual PC to obtain the TCP/IP configuration from the centralized DHCP server. You can configure this router as a DHCP server or disable it. The DHCP server can assign IP address, IP default gateway, and DNS server to DHCP clients. This router can also act as a surrogate DHCP server (DHCP proxy) where it relays IP address assignment from an actual real DHCP server to clients. You can enable or disable DHCP server or DHCP proxy.

Click **DHCP** in the left pane, the page shown in the following figure appears.



The following table describes the parameters of this page:

36



Parameter	Description
DHCP Mode	If set to DHCP Server , the router can assign IP
	addresses, IP default gateway and DNS Servers to
DHCF Wode	the host in Windows95, Windows NT and other
	operation systems that support the DHCP client.
	It specifies the first and the last IP address in the IP
IP Pool Range	address pool. The router assigns IP address that is in
	the IP pool range to the host.
Ola avv. Oli avat	Click it, the Active DHCP Client Table appears. It
Show Client	shows IP addresses assigned to clients.
Default Gateway	Enter the default gateway of the IP address pool.
	The lease time determines the period that the host
Max Lease Time	retains the assigned IP address before the IP
	address is changed.
	Enter the domain name if you know. If you leave this
	blank, the domain name obtained by DHCP from the
Damain Nama	ISP is used. You must enter host name (system
Domain Name	name) on each individual PC. The domain name can
	be assigned from the router through the DHCP
	server.
DNS Servers	You can configure the DNS server IP addresses for
	DNS Relay.
Cat VandarClass	Click it, the Device IP Range Table page appears.
Set VendorClass	You can configure the IP address range based on the
IP Range	device type.



Click Show Client in the DHCP Mode page, the page shown in the following figure appears. You can view the IP address assigned to each DHCP client.

Active DHCP Client Table This table shows the assigned IP address, MAC address and time expired for each DHCP leased client. IP Address MAC Address Expiry(s) Type Refresh Close

The following table describes the parameters and buttons in this page:

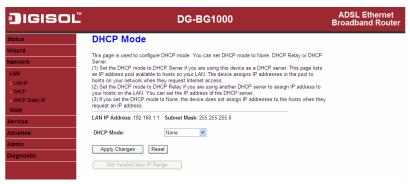
Parameter	Description
ID Address	It displays the IP address assigned to the DHCP
IP Address	client from the router.
	It displays the MAC address of the DHCP client.
	Each Ethernet device has a unique MAC address.
MAC Address	The MAC address is assigned at the factory and it
	consists of six pairs of hexadecimal character, for
	example, 00-A0-C5-00-02-12.
	It displays the lease time. The lease time determines
Expired (s)	the period that the host retains the assigned IP
	addresses before the IP addresses change.
Refresh	Click it to refresh this page.
Close	Click it to close this page.



Click Set VendorClass IP Range in the DHCP Mode page, the page as shown in the following figure appears. In this page, you can configure the IP address range based on the device type.

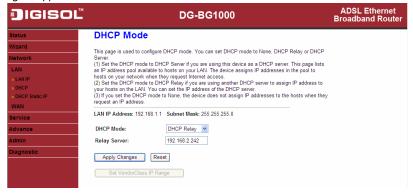


In the DHCP Mode field, choose None. The page shown in the following figure appears.





In the DHCP Mode field, choose DHCP Relay. The page shown in the following figure appears.



The following table describes the parameters and buttons of this page:

Parameter	Description
	If set to DHCP Relay, the router acts a surrogate
DHCP Mode	DHCP Server and relays the DHCP requests and
	responses between the remote server and the client.
Relay Server	Enter the DHCP server address.
Apply Changes	Click it to save the settings of this page.
Undo	Click it to refresh this page.



3.4.1.3 **DHCP Static IP**

Click DHCP Static IP in the left pane, the page shown in the following figure appears. You can assign the IP addresses on the LAN to the specific individual PCs based on their MAC address.



The following table describes the parameters and buttons of this page:

Parameter	Description
IP Address	Enter the specified IP address in the IP pool
	range, which is assigned to the host.
MAC Address	Enter the MAC address of a host on the LAN.
Add	After entering the IP address and MAC address,
	click it. A row will be added in the DHCP Static IP
	Table.
Delete Selected	Select a row in the DHCP Static IP Table, then
	click it, this row is deleted.
Reset	Click it to refresh this page.
DHCP Static IP Table	It shows the assigned IP address based on the
	MAC address.

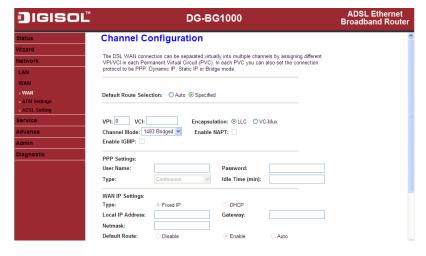


3.4.2 WAN

Choose Network > WAN. The WAN page that is displayed contains WAN, ATM Setting, and ADSL Setting.

3.4.2.1 WAN

Click **WAN** in the left pane, the page shown in the following figure appears. In this page, you can configure WAN interface of your router.





The following table describes the parameters of this page:

Parameter	Description
Default Route Selection	You can select Auto or Specified .
VDI	The virtual path between two points in an ATM
VPI	network, ranging from 0 to 255.
	The virtual channel between two points in an ATM
VCI	network, ranging from 32 to 65535 (1 to 31 are
	reserved for known protocols)
Encapsulation	You can choose LLC and VC-Mux.
Channel Mode	You can choose 1483 Bridged, 1483 MER, PPPoE,
Charmer Wode	PPPoA, or 1483 Routed.
	Select it to enable Network Address Port Translation
	(NAPT) function. If you do not select it and you want
Enable NAPT	to access the Internet normally, you must add a
	route on the uplink equipment. Otherwise, the
	access to the Internet fails. Normally, it is enabled.
Enable IGMP	You can enable or disable Internet Group
Enable folisi	Management Protocol (IGMP) function.
PPP Settings	T
User Name	Enter the correct user name for PPP dial-up, which
Cool Humo	is provided by your ISP.
Password	Enter the correct password for PPP dial-up, which is
1 dooword	provided by your ISP.
Type	You can choose Continuous, Connect on
Турс	Demand, or Manual.
	If set the type to Connect on Demand , you need to
	enter the idle timeout time. Within the preset
Idle Time (min)	minutes, if the router does not detect the flow of the
io.o i.iiio (iiiii)	user continuously, the router automatically
	disconnects the PPPoE connection.



Parameter	Description
WAN IP Settings	
Туре	You can choose Fixed IP or DHCP. If select Fixed IP, you should enter the local IP address, remote IP address and subnet mask. If select DHCP, the router is a DHCP client, the WAN IP address is assigned by the remote DHCP server.
Local IP Address	Enter the IP address of WAN interface provided by your ISP.
Gateway	Enter the gateway IP address provided by your ISP.
Netmask	Enter the subnet mask of the local IP address.
Unnumbered	Select this checkbox to enable IP unnumbered function.
Add	After configuring the parameters of this page, click it to add a new PVC into the Current ATM VC Table .
Modify	Select a PVC in the Current ATM VC Table , then modify the parameters of this PVC. After finishing, click it to apply the settings of this PVC.
Current ATM VC Table	This table shows the existed PVCs. It shows the interface name, channel mode, VPI/VCI, encapsulation mode, local IP address, remote IP address and other information. The maximum item of this table is eight.
•	Click it, and the PPP Interface-Modify page appears. You can modify the PVCs' parameters.

Click $\ensuremath{ \begin{subarray}{c} \ensuremath{ \begin{subar$ this page, you can configure parameters of this PPPoE PVC.



JigisoĽ		DG-BG1000	ADSL Ethernet Broadband Router
Status	PPP Interface - N	lodify	
Wizard			
Network	Protocol: ATM VCC:	PPPoE 0/32	
LAN	Login Name:	test	
WAN	Password:	••••	
» WAN	Authentication Method:	AUTO 🕶	
» ATM Settings	Connection Type:	Continuous	
■ ADSL Setting	Idle Time(s):	0	
Service	Bridge:	O Bridged Ethernet (Transparent Bridging)	
Advance		O Bridged PPPoE (Implies Bridged Ethernet)	
Admin		Disable Bridge	
Diagnostic	AC-Name:		
	Service-Name:		
	802.1q:	Disable	
		VLAN ID(1-4095): 0	
	MTU (576-1492):	1400	
	Static IP:		
	Source Mac address:	00:E9:07:90:36:9A (ex.00:E0:86:71:05:02) MAC Clone	
	Apply Changes Return	Reset	

The following table describes the parameters and buttons of this page:

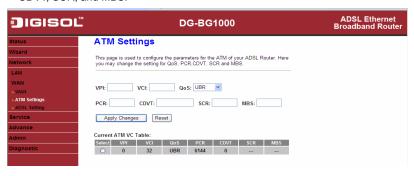
Parameter	Description
Protocol	It displays the protocol type used for this WAN
	connection.
ATM VCC	The ATM virtual circuit connection assigned for
	this PPP interface (VPI/VCI).
Login Name	The user name provided by your ISP.
Password	The password provided by your ISP.
Authentication Method	You can choose AUTO, CHAP, or PAP.
Connection Type	You can choose Continuous, Connect on
	Demand, or Manual.
Idle Time (s)	If choose Connect on Demand, you need to
	enter the idle timeout time. Within the preset
	minutes, if the router does not detect the flow of
	the user continuously, the router automatically



Parameter	Description
	disconnects the PPPoE connection.
Bridge	You can select Bridged Ethernet, Bridged
	PPPoE, or Disable Bridge.
AC-Name	The accessed equipment type.
Service-Name	The service name.
802.1q	You can select Disable or Enable . After enable
	it, you need to enter the VLAN ID. The value
	ranges from 0 to 4095.
Apply Changes	Click it to save the settings of this page
	temporarily.
Return	Click it to return to the Channel Configuration
	page.
Source Mac address	The MAC address you want to clone.
Mac Clone	Click it to enable the MAC Clone function with
	the MAC address that is configured.

ATM Setting 3.4.2.2

Click **ATM Setting** in the left pane, the page shown in the following figure appears. In this page, you can configure the parameters of the ATM, including QoS, PCR, CDVT, SCR, and MBS.





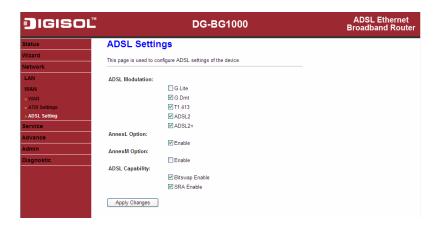
The following table describes the parameters of this page:

Parameter	Description
VPI	The virtual path identifier of the ATM PVC.
VCI	The virtual channel identifier of the ATM PVC.
QoS	The QoS category of the PVC. You can choose
	UBR, CBR, rt-VBR, or nrt-VBR.
PCR	Peak cell rate (PCR) is the maximum rate at which cells can be transmitted along a connection in the ATM network. Its value ranges from 1 to 65535.
CDVT	Cell delay variation tolerance (CDVT) is the amount of delay permitted between ATM cells (in microseconds). Its value ranges from 0 to 4294967295.
SCR	Subtain cell rate (SCR) is the maximum rate that traffic can pass over a PVC without the risk of cell loss. Its value ranges from 0 to 65535.
MBS	Maximum burst size (MBS) is the maximum number of cells that can be transmitted at the PCR. Its value ranges from 0 to 65535.

3.4.2.3 **ADSL Setting**

Click ADSL Setting in the left pane, the page shown in the following figure appears. In this page, you can select the DSL modulation. The router supports the following modulations: G.Lite, G.Dmt, T1.413, ADSL2, ADSL2+, AnnexL, and AnnexM. The router negotiates the modulation modes with the DSLAM.





3.5 Service

In the navigation bar, click Service. The Service page contains DNS, Firewall, UPNP, IGMP Proxy, TR-069, and ACL options.

3.5.1 DNS

Domain Name System (DNS) is an Internet service that translates the domain name into IP address. Because the domain name is alphabetic, it is easier to remember. The Internet, however, is based on IP addresses. Every time you use a domain name, DNS translates the name into the corresponding IP address. For example, the domain name www.example.com might be translated to 198.105.232.4. The DNS has its own network. If one DNS server does not know how to translate a particular domain name, it asks another one, and so on, until the correct IP address is returned.

Choose Service > DNS. The DNS page that is displayed contains DNS and DDNS.



3.5.1.1 DNS

Click **DNS** in the left pane, the page shown in the following figure appears.



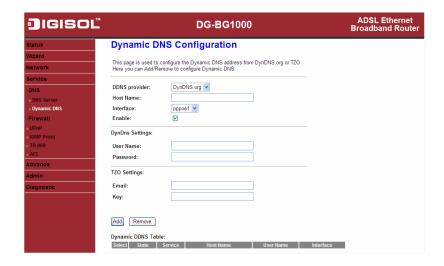
The following table describes the parameters and buttons of this page:

Parameter	Description
Obtain DNS Automatically	Select it, the router accepts the first received DNS assignment from one of the PPPoA, PPPoE or MER enabled PVC(s) during the connection establishment.
Set DNS	Select it, and then enter the IP addresses of the
Manually	primary and secondary DNS server.
Apply Changes	Click it to save the settings of this page.
Reset	Click it to start configuring the parameters in this page.

3.5.1.2 **DDNS**

Click **DDNS** in the left pane, the page shown in the following figure appears. This page is used to configure the dynamic DNS address from DynDNS.org or TZO. You can add or remove to configure dynamic DNS.





The following table describes the parameters of this page:

Parameter	Description
DDNC provider	Choose the DDNS provider name. You can choose
DDNS provider	DynDNS.org or TZO.
Hostname	The DDNS identifier.
Interface	The WAN interface of the router.
Enable	Enable or disable DDNS function.
Username	The name provided by DDNS provider.
Password	The password provided by DDNS provider.
Email	The email provided by DDNS provider.
Key	The key provided by DDNS provider.

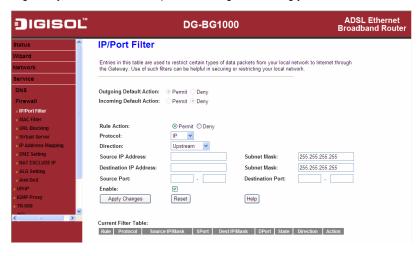


3.5.2 Firewall

Choose Service > Firewall. The Firewall page that is displayed contains IP/Port Filter, MAC Filter, URL Blocking, Virtual Server, IP Address Mapping, DMZ Setting, NAT EXCLUDE IP, ALG Setting, and Anti-DoS.

3.5.2.1 IP/Port Filter

Click IP/Port Filter in the left pane, the page shown in the following figure appears. Entries in the table are used to restrict certain types of data packets through the gateway. These filters are helpful in securing or restricting your local network.





3.5.2.2 MAC Filter

Click MAC Filter in the left pane, the page shown in the following figure appears. Entries in the table are used to restrict certain types of data packets from your local network to Internet through the gateway. These filters are helpful in securing or restricting your local network.





3.5.2.3 URL Blocking

Click URL Blocking in the left pane, the page shown in the following figure appears. This page is used to block a fully qualified domain name, such as tw.yahoo.com and filtered keyword. You can add or delete FQDN and filtered keyword.



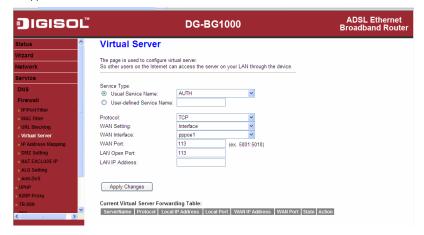
The following table describes the parameters and buttons of this page:

Parameter	Description	
URL Blocking	You can choose Disable or Enable .	
Capability	Select Disable to disable URL blocking function	
	and keyword filtering function.	
	Select Enable to block access to the URLs and	
	keywords specified in the URL Blocking Table.	
Keyword	Enter the keyword to block.	
AddKeyword	Click it to add a keyword to the URL Blocking Table.	
Delete Selected	Select a row in the URL Blocking Table and click it to	
Keyword	delete the row.	
URL Blocking	A list of the URL (s) to which access is blocked.	
Table		



3.5.2.4 Virtual Server

Click Virtual Server in the left pane, the page shown in the following figure appears.



The following table describes the parameters of this page:

ne following table describes the parameters of this page:		
Parameter	Description	
Service Type	You can select the common service type, for example, AUTH, DNS, or FTP. You can also define a service name. If you select Usual Service Name, the corresponding parameter has the default settings. If you select User-defined Service Name, you need to enter the corresponding parameters.	
Protocol	Choose the transport layer protocol that the service type uses. You can choose TCP or UDP .	



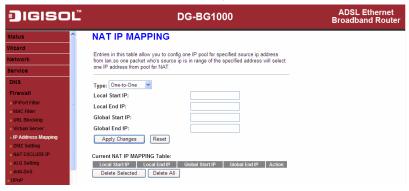
Parameter	Description
WAN Setting	You can choose Interface or IP Address.
WAN Interface	Choose the router port that uses virtual server.
WAN Port	Choose the access port on the WAN.
LAN Open Port	Enter the port number of the specified service type.
LAN IP Address	Enter the IP address of the virtual server. It is in the same network segment with LAN IP address of the router.

3.5.2.5 IP Address Mapping

NAT is short for Network Address Translation. The Network Address Translation Settings window allows you to share one WAN IP address for multiple computers on your LAN.

Click IP Address Mapping in the left pane, the page shown in the following figure appears.

Entries in this table allow you to configure one IP pool for specified source IP address from LAN, so one packet whose source IP is in range of the specified address will select one IP address from the pool for NAT.



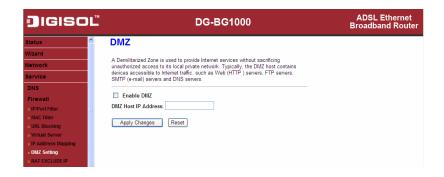


3.5.2.6 DMZ Setting

Demilitarized Zone (DMZ) is used to provide Internet services without sacrificing unauthorized access to its local private network. Typically, the DMZ host contains devices accessible to Internet traffic, such as web (HTTP) servers, FTP servers, SMTP (e-mail) servers and DNS servers.

Click **DMZ Setting** in the left pane, the page shown in the following figure appears. The following describes how to configure DMZ.

- Select **Enable DMZ** to enable this function. Step 1
- Step 2 Enter an IP address of the DMZ host.
- Step 3 Click **Apply Changes** to save the settings of this page temporarily.





3.5.2.7 NAT EXCLUDE IP

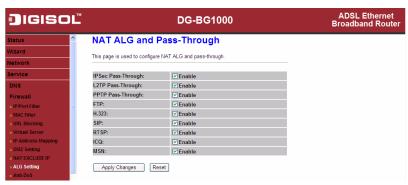
Click NAT EXCLUDE IP in the left pane, the page shown in the following figure appears.

In the page, you can configure some source IP addresses which use the purge route mode when accessing internet through the specified interface.



3.5.2.8 ALG Setting

Click **ALG Setting** in the left pane, the page shown in the following figure appears.





3.5.2.9 Anti-DoS

Denial-of-Service Attack (DoS attack) is a type of attack on a network that is designed to bring the network to its knees by flooding it with useless traffic.

Click **Anti-DoS** in the left pane, the page shown in the following figure appears. In this page, you can prevent DoS attacks.





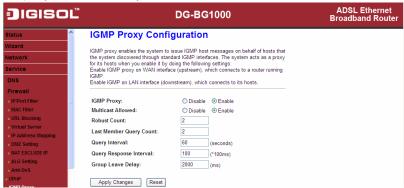
3.5.3 UPNP

Choose **Service** > **UPnP**, the page shown in the following figure appears. This page is used to configure UPnP. The system acts as a daemon after you enable it.



3.5.4 **IGMP Proxy**

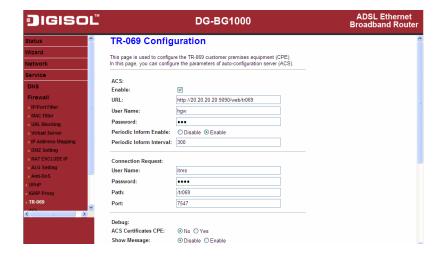
Choose Service > IGMP Proxy, the page shown in the following figure appears. IGMP proxy enables the system to issue IGMP host messages on behalf of hosts that the system discovered through standard IGMP interfaces. The system acts as a proxy for its hosts after you enable it.





3.5.5 TR-069

Choose **Service** > **TR-069**, the page shown in the following page appears. In this page, you can configure the TR-069 CPE.



The following table describes the parameters of this page:

Parameter	Description
ACS	
URL	The URL of the auto-configuration server to
	connect to.
User Name	The user name for logging in to the ACS.
Password	The password for logging in to the ACS.
Periodic Inform Enable	Select Enable to periodically connect to the
	ACS to check whether the configuration



Parameter	Description
	updates.
Periodic Inform	Specify the amount of time between
Interval	connections to ACS.
Connection Request	
User Name	The connection user name provided by TR-069
	service.
Password	The connection password provided by TR-069
	service.
Debug	
Show Message	Select Enable to display ACS SOAP messages
	on the serial console.
CPE sends GetRPC	Select Enable , the router contacts the ACS to
	obtain configuration updates.
Skip MReboot	Specify whether to send an MReboot event
	code in the inform message.
Delay	Specify whether to start the TR-069 program
	after a short delay.
Auto-Execution	Specify whether to automatically start the
	TR-069 after the router is powered on.

3.5.6 ACL

Choose Service > ACL, the page shown in the following figure appears. In this page, you can permit the data packets from LAN or WAN to access the router. You can configure the IP address for Access Control List (ACL). If ACL is enabled, only the effective IP address in the ACL can access the router.



Note: If you select Enable in ACL capability, ensure that your host IP address is in ACL list before it takes effect. DIGISOL ADSL Ethernet DG-BG1000 Broadband Router **ACL Configuration** You can specify which services are accessable form I AN or WAN side Entries in this ACL table are used to permit certain types of data packets from your local network or Internet network to the Gateway. Using of such access control can be helpful in securing or restricting the Gateway managment. » IP/Port Filter Direction Select: LAN WAN - MAC Filter » URL Blocking » Virtual Server Apply Changes LAN ACL Switch: O Enable Disable » IP Address Mapping DMZ Setting » NAT EXCLUDE IP IP Address: (The IP 0.0.0.0 represent any IP) Services Allowed: - Anti-DoS ✓ Any UPnP Add Reset ACI Current ACL Table: Select Direction IP Address/Interface Service Port Action

The following table describes the parameters and buttons of this page:

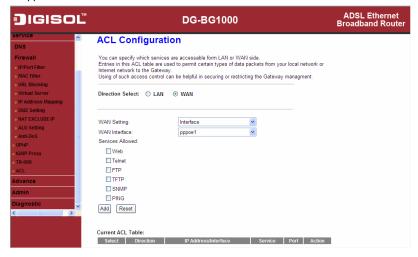
Parameter	Description	
Direction Select	Select the router interface. You can select LAN or	
	WAN. In this example, LAN is selected.	
LAN ACL Switch	Select it to enable or disable ACL function.	
	Enter the IP address of the specified interface. Only	
IP Address	the IP address that is in the same network segment	
IP Address	with the IP address of the specified interface can	
	access the router.	
Services Allowed	You can choose the following services from LAN:	
	Web, Telnet, FTP, TFTP, SNMP, or PING. You can	
	also choose all the services.	





Parameter	Description
Add	After setting the parameters, click it to add an entry to the Current ACL Table .
Reset	Click it to refresh this page.

Set direction of the data packets to **WAN**, the page shown in the following figure appears.





The following table describes the parameters and buttons of this page:

Parameter	Description
Discotion Coloot	Select the router interface. You can select LAN or
Direction Select	WAN. In this example, WAN is selected.
WAN Setting	You can choose Interface or IP Address.
NA/ANI / 6	Choose the interface that permits data packets from
WAN Interface	WAN to access the router.
	Enter the IP address on the WAN. Only the IP
IP Address	address that is in the same network segment with
	the IP address on the WAN can access the router.
	You can choose the following services from WAN:
Services Allowed	Web, Telnet, FTP, TFTP, SNMP, or PING. You can
	also choose all the services.
A -1-1	After setting the parameters, click it to add an entry
Add	to the Current ACL Table.
Reset	Click it to refresh this page.



3.6 Advance

In the navigation bar, click Advance. In the Advance page that is displayed contains Bridge Setting, Routing, QoS, SNMP and Others.

3.6.1 **Bridge Setting**

Choose Advance > Bridge Setting, the page shown in the following figure appears. This page is used to configure the bridge parameters. You can change the settings or view some information on the bridge and its attached ports.



The following table describes the parameters and button of this page:

Parameter	Description	
Aging Time	If the host is idle for 300 seconds (default value), its	
	entry is deleted from the bridge table.	
802.1d Spanning	You can select Disabled or Enabled .	
Tree	Select Enabled to provide path redundancy while	
	preventing undesirable loops in your network.	
Show MACs	Click it to show a list of the learned MAC addresses	
	for the bridge.	



Click **Show MACs**, the page shown in the following figure appears. This table shows a list of learned MAC addresses for this bridge.

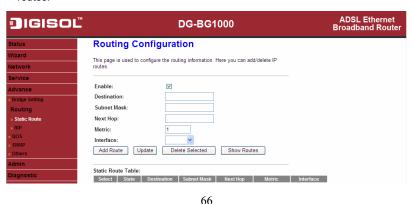


3.6.2 Routing

Choose Advance > Routing, the page shown in the following figure appears. The page that is displayed contains Static Route and RIP.

3.6.2.1 Static Route

Click Static Route in the left pane, the page shown in the following figure appears. This page is used to configure the routing information. You can add or delete IP routes.



2 1800-209-3444 (Toll Free)



The following table describes the parameters and buttons of this page:

Parameter	Description
Enable	Select it to use static IP routes.
Destination	Enter the IP address of the destination device.
Subnet Mask	Enter the subnet mask of the destination device.
Next Hop	Enter the IP address of the next hop in the IP route to the destination device.
Metric	The metric cost for the destination.
Interface	The interface for the specified route.
Add Route	Click it to add the new static route to the Static Route
	Table.
Update	Select a row in the Static Route Table and modify the
	parameters. Then click it to save the settings temporarily.
Delete	Select a row in the Static Route Table and click it to
Selected	delete the row.
Show	Click it, the IP Route Table appears. You can view a list
Routes	of destination routes commonly accessed by your
	network.
Static Route	A list of the previously configured static IP routes.
Table	

Click Show Routes, the page shown in the following figure appears. The table shows a list of destination routes commonly accessed by your network.

IP Route Table				
This table shows a list of destination routes commonly accessed by your network.				
Destination	Subnet Mask	Next Hop	Interface	
192.168.1.1	255.255.255.255	*	e1	
Refresh Close				



3.6.2.2 RIP

Click RIP in the left pane, the page shown in the following figure appears. If you are using this device as a RIP-enabled router to communicate with others using Routing Information Protocol (RIP), enable RIP. This page is used to select the interfaces on your devices that use RIP, and the version of the protocol used.



The following table describes the parameters and buttons of this page:

Parameter	Description	
RIP	Select Enable , the router communicates with other	
	RIP-enabled devices.	
Apply Changes	Click it to save the settings of this page.	
Interface	Choose the router interface that uses RIP.	
Receive Version	Choose the interface version that receives RIP	
	messages. You can choose RIP1, RIP2, or Both.	
	Choose RIP1 indicates the router receives RIP	
	v1 messages.	
	Choose RIP2 indicates the router receives RIP	
	v2 messages.	
	Choose Both indicates the router receives RIP	
	v1 and RIP v2 messages.	



Parameter	Description
Send Version	The working mode for sending RIP messages. You can choose RIP1 or RIP2 .
	Choose RIP1 indicates the router broadcasts
	RIP1 messages only.
	Choose RIP2 indicates the router multicasts
	RIP2 messages only.
Add	Click it to add the RIP interface to the Rip
	Configuration List.
Delete	Select a row in the Rip Configuration List and
	click it to delete the row.

3.6.3 QoS

Choose Advance > QoS, the page shown in the following figure appears. Entries in the QoS Rule List are used to assign the precedence for each incoming packet based on physical LAN port, TCP/UDP port number, source IP address, destination IP address and other information.



- Step 1 Enable IP QoS and click **Apply** to enable IP QoS function.
- Click add rule to add a new IP QoS rule. Step 2



The page shown in the following figure appears.



The following table describes the parameters and buttons of this page:

Parameter	Description
IP QoS	Select to enable or disable IP QoS function. You need
	to enable IP QoS if you want to configure the
	parameters of this page.
QoS Policy	You can choose stream based, 802.1p based, or
	DSCP based.
Schedule Mode	You can choose strict prior or WFQ (4:3:2:1).
Source IP	The IP address of the source data packet.
Source Mask	The subnet mask of the source IP address.
Destination IP	The IP address of the destination data packet.
Destination	The subnet mask of the destination IP address.
Mask	

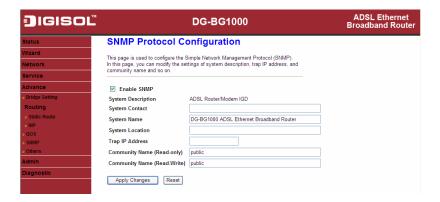


Parameter	Description
Source Port	The port of the source data packet.
Destination Port	The port of the destination data packet.
Protocol	The protocol responds to the IP QoS rules. You can
	choose TCP, UDP, or ICMP.
Physical Port	The LAN interface responds to the IP QoS rules.
Set priority	The priority of the IP QoS rules. P0 is the highest
	priority and P3 is the lowest.
IP Precedence	You can choose from 0 to 7 define the priority in the
	ToS of the IP data packet.
IP ToS	The type of IP ToS for classifying the data package
	You can choose Normal Service, Minimize Cost,
	Maximize Reliability, Maximize Throughput, or
	Minimize Delay.
802.1p	You can choose from 0 to 7.
delete	Select a row in the QoS rule list and click it to delete
	the row.
delete all	Select all the rows in the QoS rule list and click it to
	delete the rows.



3.6.4 SNMP

Choose Advance > SNMP, the page shown in the following figure appears. You can configure the SNMP parameters.



The following table describes the parameters of this page:

Parameter	Description
Enable SNMP	Select it to enable SNMP function. You need to enable SNMP, and then you can configure the parameters of this page.
Trap IP Address	Enter the trap IP address. The trap information is sent to the corresponding host.
Community name (Read-only)	The network administrators must use this password to read the information of this router.
Community name (Read-Write)	The network administrators must use this password to configure the information of the router.



3.6.5 Others

Choose Advance > Others, the page shown in the following figure appears.



3.7 Admin

In the navigation bar, click Admin. The Admin page that is displayed contains Commit/Reboot, Upgrade, System Log, Password and Time Zone.

3.7.1 Commit/Reboot

Choose Admin > Commit/Reboot, the page shown in the following figure appears. You can set the router reset to the default settings or set the router to commit the current settings.





The following table describes the parameters and button of this page:

Parameter	Description
Reboot from	You can choose Save the current configuration or Restore to the factory default configuration. Save the current configuration: Save the current settings, and then reboot the router. Restore to the factory default configuration: Reset to the factory default settings, and then reboot the router.
Reboot	Click it to reboot the router.

3.7.2 Upgrade

Choose Admin > Upgrade. The Upgrade page that is displayed contains Upgrade Firmware and Backup/Restore.



Caution:

Do not turn off the router or press the Reset button while the procedure is in progress.



3.7.2.1 **Upgrade Firmware**

Click **Upgrade Firmware** in the left pane, the page shown in the following figure appears. In this page, you can upgrade the firmware of the router.



The following table describes the parameters and button of this page:

Parameter	Description
Select File	Click Browse to select the firmware file.
Upload	After selecting the firmware file, click Upload to starting upgrading the firmware file.
Reset	Click it to starting selecting the firmware file.

3.7.2.2 Backup/Restore

Click Backup/Restore in the left pane, the page shown in the following figure appears. You can backup the current settings to a file and restore the settings from the file that was saved previously.





The following table describes the parameters and button of this page:

Parameter	Description
Save Settings to File	Click it, and select the path. Then you can save
	the configuration file of the router.
Load Settings from File	Click Browse to select the configuration file.
Upload	After selecting the configuration file of the
	router, click Upload to start uploading the
	configuration file of the router.

3.7.3 System Log

Choose Admin > System Log, the page shown in the following figure appears. In this page, you can enable or disable system log function and view the system log.





3.7.4 Password

Choose Admin > Password, the page shown in the following figure appears. By default, the user name and password are admin and admin respectively. The common user name and password are user and user respectively.



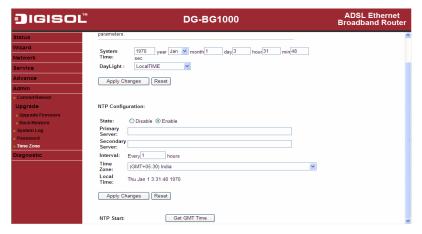
The following table describes the parameters of this page:

Parameter	Description
User Name	Choose the user name for accessing the
Oser Name	router. You can choose admin or user.
Privilege	Choose the privilege for the account.
Old Password	Enter the old password
New Decement	Enter the password to which you want to
New Password	change the old password.
Confirm Password	Enter the new password again.



3.7.5 **Time Zone**

Choose Admin > Time Zone, the page shown in the following figure appears. You can configure the system time manually or get the system time from the time server.



The following table describes the parameters of this page:

Parameter	Description
System Time	Set the system time manually.
NTP Configuration	
State	Select enable or disable NTP function. You need to enable NTP if you want to configure the parameters of NTP.
Primary Server	Set the primary NTP server manually.
Secondary Server	Set the secondary NTP server manually.
Time Zone	Choose the time zone in which area you are from the drop down list.



3.8 Diagnostic

In the navigation bar, click Diagnostic. The Diagnostic page that is displayed contains Ping, ATM Loopback, ADSL and Diagnostic Test.

3.8.1 Ping

Choose Diagnostic > Ping. The page shown in the following figure appears.



The following table describes the parameter and button of this page:

Parameter	Description
Host	Enter the valid IP address or domain name.
Run Ping	Click it to start to Ping.



3.8.2 **ATM Loopback**

Choose Diagnostic > ATM Loopback. The page shown in the following figure appears. In this page, you can use VCC loopback function to check the connectivity of the VCC. The ATM loopback test is useful for troubleshooting problems with the DSI AM and ATM network



Click Run Loopback to start testing.

383 ADSL

Choose **Diagnostic** > **ADSL**. The page shown in the following figure appears. It is used for ADSL tone diagnostics.



Click Start to start ADSL tone diagnostics.



3.8.4 **Diagnostic Test**

Choose Diagnostic > Diagnostic Test, the page shown in the following figure appears. In this page, you can test the DSL connection. You can also view the LAN status connection and ADSL connection.



Click Run Diagnostic Test to start testing.

This product comes with lifetime warranty. For further details about warranty policy and product registration, please support section of www.digisol.com

