



Quick Installation Guide

RANGER SERIES

150 MBPS WIRELESS ADSL2+ BROADBAND ROUTER

DG-BG4100N

V1.0
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Package Contents

The following items should be present in your package

- DG-BG4100N 150MBPS WIRELESS ADSL2+ BROADBAND ROUTER
- Switching Power Adapter
- POTS Splitter
- Two RJ-11 cables
- One RJ-45 patch cord
- Quick Installation Guide
- Installation Guide CD

Make sure that the package contains above items. If any of the listed items is damaged or missing, please contact your retailer immediately.

Product Overview

The ADSL access device supports multiple line modes. It provides four 10/100Base-T Ethernet interfaces at the user end. Utilizing the high-speed ADSL connection, the device provides users with broadband connectivity to the Internet or the Intranet for high-end users like net bars and office users. It provides a downlink speed up to 24 Mbit/s and an uplink speed up to 1 Mbit/s. The device supports WLAN access, as WLAN AP or WLAN router, to internet. It is compliant with IEEE 802.11,802.11b/g/n specifications and complies with WEP, WPA and WPA2 security specifications.

Product Features

- Supports various line modes.
- Supports external PPPoE dial-up access.
- Supports internal PPPoE/PPPoA dial-up access.
- Supports leased line mode.
- Supports 1483B/1483R/MER access.
- Supports multiple PVCs (eight at most) and these PVCs can be isolated from each other.
- Supports single PVC with multiple sessions.
- Supports multiple PVCs with multiple sessions.

- Supports the binding of the ports and the PVCs.
- Supports the 802.1Q and 802.1P protocol.
- Supports DHCP server.
- Supports NAT / NAT.
- Supports static route.
- Supports firmware upgrade: WEB/tftp/ftp.
- Supports reset to factory default: reset, WEB.
- Supports DNS relay.
- Supports Virtual server.
- Supports DMZ functions.
- Supports two-level passwords and usernames.
- Supports WEB interface.
- Supports telnet CLI.
- Supports System status display.
- Supports PPP session PAP / CHAP.
- Supports IP filter function.
- Supports IP QoS function.
- Supports remote access control.
- Supports line connection status test.
- Supports remote management (Telnet; HTTP).
- Supports configuration file backup and restoration function.
- Ethernet supported such as Crossover Detection, Auto-Correction and polarity correction.

System Requirements

The following system requirements are recommended

- A 10BaseT/100BaseT Ethernet card installed on your PC.
- A hub or switch is available for connecting one Ethernet interface on the device and several PCs.
- Operating system: Windows Vista, Windows 7, Windows 98SE, Windows 2000, Windows ME or Windows XP.
- Internet Explorer V7.0 or higher, or Netscape V4.0 or higher, or firefox 1.5 or higher.

Top View



The following table describes the LEDs of the device.

| LEDs | Color | Status | Description |
|-------------|-------|------------|---|
| Power | Green | On | The initialization of the Router is successful. |
| | | Off | The Router is powered off. |
| | Amber | On | The Router is booting, or software upgrade is under progress. |
| ADSL | Green | On | ADSL Signal between the Router and Exchange is established. |
| | | Slow Blink | No signal from Exchange is being detected. |
| | | Fast Blink | The Router is synchronizing with the Exchange. |
| Internet | Green | Blink | Internet data is being transmitted or received (Routing mode) |
| | | On | Internet Connection is established (Routing Mode) |
| | | Off | The Router is in bridged mode. |
| | Red | On | The Internet connection failed/password error. |
| LAN 1/2/3/4 | Green | On | The LAN connection is established and activated. |
| | | Blink | LAN data is being transmitted. |
| | | Off | The LAN interface/cable is disconnected. |
| WLAN | Green | On | Wireless connection has been activated. |

| | | | |
|-----|-------|-------|---|
| | | Blink | Wireless data is being transmitted. |
| | | Off | The Wireless connection is not activated. |
| WPS | Green | Blink | WPS process on the Router is initiated. |
| | | Off | WPS is disabled OR WPS process not initiated. |

Rear View



The following table describes the interfaces of the device.

| Item | Description |
|----------------|--|
| WLAN / WPS | Press the button and hold it for 1 second to enable WLAN. Press the button and hold it for at least 3 seconds, to initialize WPS negotiation. |
| ADSL | RJ-11 interface, for connecting to the ADSL interface or a splitter through a telephone cable. |
| LAN4/3/2/1 | RJ-45 interface, for connecting to the Ethernet interface of a computer or the Ethernet devices through an Ethernet cable. |
| Power ON / OFF | Power interface, for connecting to the power adapter. Power switch, power on or power off the device. |
| Reset | Reset to the factory default configuration. Keep the device powered on, and insert a pin into the reset hole for 3 seconds, then release it. The device is reset to the factory default configuration. |

Hardware Installation

Step 1 Connect the ADSL interface of the device and the router interface of the splitter through a telephone cable. Connect the phone to the Phone interface of the splitter through a telephone 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).
- Router: Connect to the ADSL jack of the device.
- Phone: Connect to a telephone set.

Step 2 Connect the LAN interface of the device to the network card of the PC through an Ethernet cable (MDI/MDIX).

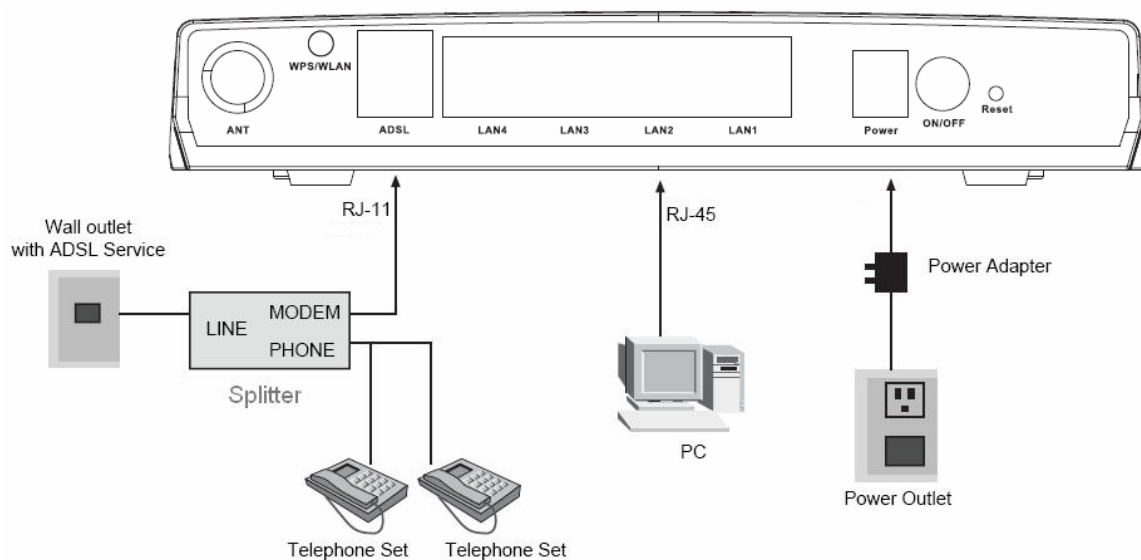


Note:

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

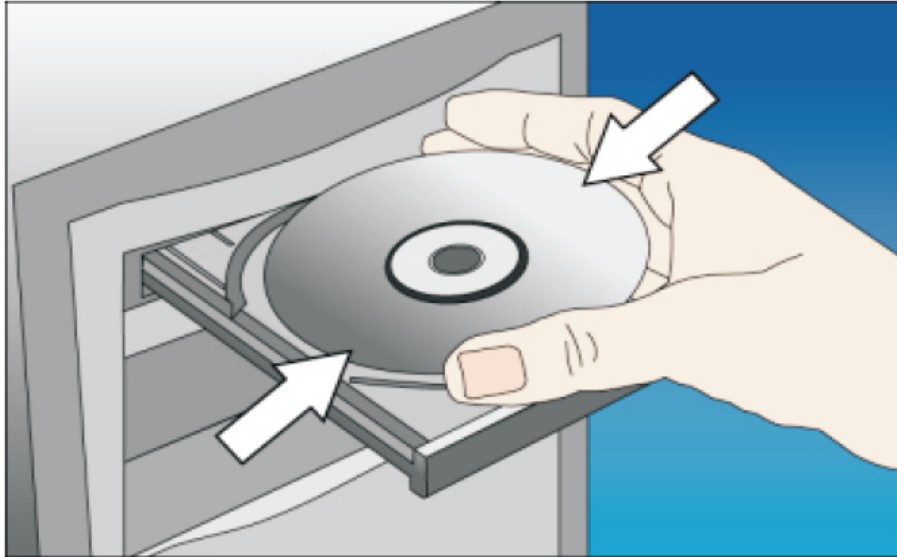
Step 3 Plug one end of the power adapter to the wall outlet and connect the other end to the Power interface of the device.

The following figure shows the application diagram for the connection of the router, PC, splitter and the telephone sets.



Software Installation

- Insert the Setup CD into your CD-ROM drive of notebook/desktop computer.



- Explore the CD and execute the “**India_autorun.exe**” file. Screen given below will be displayed. Click ‘Start’ to continue.



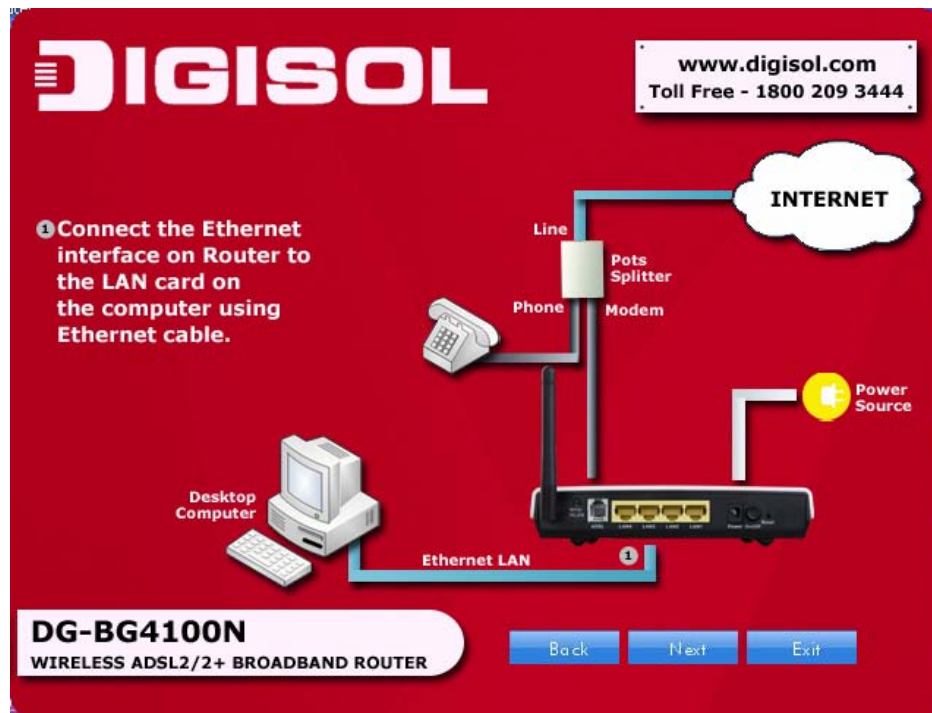
- Connect the ADSL line and the phone line to the router. Click 'Next'.



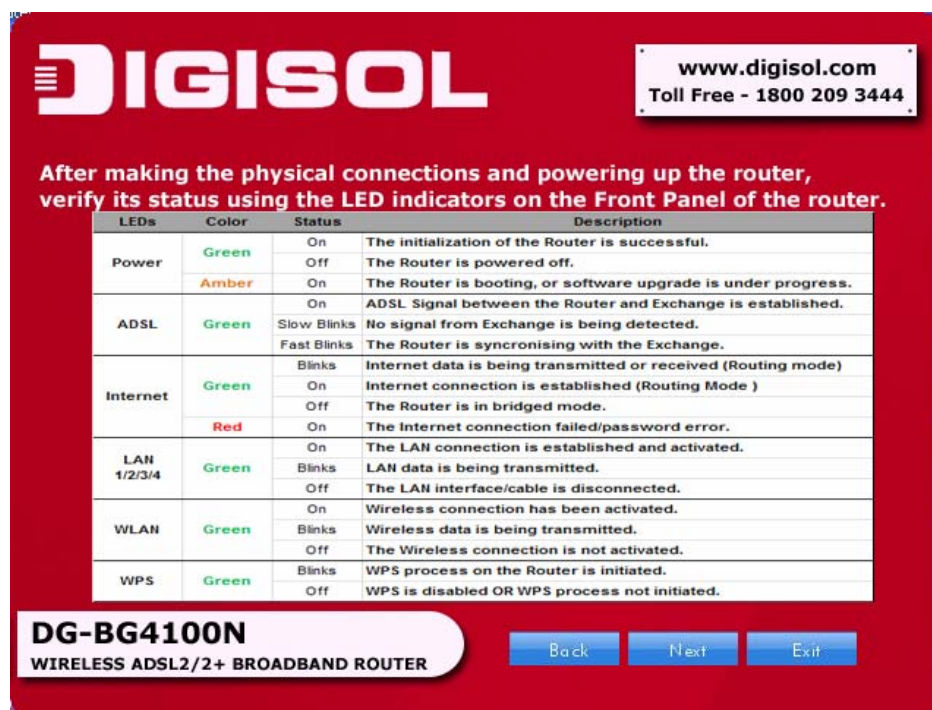
- Connect the power adapter to the AC Mains and the other end to the power interface on the router. Push the power button on the router to power up the device. Click 'Next'.



- Connect the Ethernet interface on the router to the LAN card on the computer using the Ethernet cable. Click 'Next'.



- After powering up the router, verify the status of the LED indicators on the front panel of the router. Click 'Next'.



- Please select your 'Country' and ADSL service provider. VPI and VCI values will auto fill.

The screenshot shows the Digisol configuration interface for ADSL settings. The background is red with white text. At the top left is the Digisol logo. At the top right, there is a white box containing the website address www.digisol.com and the toll-free number 1800 209 3444. The main heading is "Configure ADSL". Below this, there is a instruction: "Please select your 'Country' and ADSL Service Provider. The values for VPI and VCI will auto fill". The form includes a "Country:" dropdown menu with "India" selected, a "Service Provider:" dropdown menu with "BSNL" selected, a "VPI: (0 ~ 255)" text input field with "0" entered, and a "VCI: (32 ~ 65535)" text input field with "35" entered. A note states: "Note: You can set different values for VPI and VCI as provided by your ISP. If your ISP is not listed in the 'Service Provider' list then select 'OTHERS'". At the bottom left, there is a white pill-shaped button with the text "DG-BG4100N WIRELESS ADSL2/2+ BROADBAND ROUTER". At the bottom right, there are three blue buttons labeled "Back", "Next", and "Exit".

- Select the network protocol for WAN interface. Click 'Next'.

The screenshot shows the Digisol configuration interface for network protocol selection. The background is red with white text. At the top left is the Digisol logo. At the top right, there is a white box containing the website address www.digisol.com and the toll-free number 1800 209 3444. The main heading is "Configure ADSL". Below this, there is a instruction: "Please select the type of network protocol for IP over Ethernet as WAN interface". The form includes five radio button options: "PPP over ATM (PPPoA)", "PPP over Ethernet (PPPoE)", "MAC Encapsulation Routing (MER)", "IP over ATM (IPoA)", and "Bridging". The "PPP over Ethernet (PPPoE)" option is selected. Below the radio buttons, there is a section titled "Encapsulation Mode" with a dropdown menu showing "LLC/ENCAPSULATION". At the bottom left, there is a white pill-shaped button with the text "DG-BG4100N WIRELESS ADSL2/2+ BROADBAND ROUTER". At the bottom right, there are three blue buttons labeled "Back", "Next", and "Exit".

All the utility installation steps till here are the common steps to be followed for the modes.

Following are the steps for configuring **PPPoE connection:**

- Enter the username and password provided by your ISP. Click 'Next'.

The screenshot shows the DIGISOL configuration interface for PPPoE. At the top left is the DIGISOL logo. At the top right, a box contains the website www.digisol.com and the toll-free number 1800 209 3444. The main heading is "Configure ADSL (PPPoE)". Below this, the instruction reads: "Please enter the Username and Password provided by your ISP". There are two input fields: "User ID:" with the value "digitech" and "Password:" with the value "*****". At the bottom left, a white pill-shaped box contains the model number "DG-BG4100N" and the description "WIRELESS ADSL2/2+ BROADBAND ROUTER". At the bottom right, there are three blue buttons labeled "Back", "Next", and "Exit".

- Configure a wireless name (SSID) for your router. Click 'Next'.

The screenshot shows the DIGISOL configuration interface for setting the wireless name. At the top left is the DIGISOL logo. At the top right, a box contains the website www.digisol.com and the toll-free number 1800 209 3444. The main heading is "Configure wireless name for your router". Below this, the instruction reads: "Configure a name (SSID) for your wireless network, so you can always identify your wireless network." There are two input fields: "Wireless Name (SSID):" with the value "Digisol" and an example "[Example: MyNetwork, WIFI123]" below it, and "Wireless Channel:" with a dropdown menu set to "Auto Scan". At the bottom left, a white pill-shaped box contains the model number "DG-BG4100N" and the description "WIRELESS ADSL2/2+ BROADBAND ROUTER". At the bottom right, there are three blue buttons labeled "Back", "Next", and "Exit".

- Configure the wireless security. Click 'Next'.

The screenshot shows the 'Configure wireless security' page for a DIGISOL DG-BG4100N router. The page has a red background. At the top left is the DIGISOL logo. At the top right, there is a box with the website 'www.digisol.com' and the toll-free number '1800 209 3444'. The main heading is 'Configure wireless security'. Below this, there is a paragraph explaining that wireless security helps protect the network and that WPA Pre-Shared Key is the most secure encryption. It instructs the user to enable WPA Pre-Shared key and enter an 8 to 63 character alphanumeric key. There are two input fields: 'Security Mode' with a dropdown menu set to 'WPA-PSK' and 'Pre-Shared Key' with a text box containing 'digisol123'. At the bottom left, there is a white pill-shaped box with the model number 'DG-BG4100N' and the description 'WIRELESS ADSL2/2+ BROADBAND ROUTER'. At the bottom right, there are three blue buttons labeled 'Back', 'Next', and 'Exit'.

- The next screen is a summary of the wireless settings of the router.

The screenshot shows the 'Summarizing Wireless Configuration' page for a DIGISOL DG-BG4100N router. The page has a red background. At the top left is the DIGISOL logo. At the top right, there is a box with the website 'www.digisol.com' and the toll-free number '1800 209 3444'. The main heading is 'Summarizing Wireless Configuration'. Below this, there is a paragraph stating 'Following is the summary of wireless settings on the router:'. There is a list of settings: 'Internet Connection Type: PPPoE', 'Wireless Name (SSID): Digisol', 'Wireless Security: WPA-PSK', and 'Security Key: digisol123'. At the bottom left, there is a white pill-shaped box with the model number 'DG-BG4100N' and the description 'WIRELESS ADSL2/2+ BROADBAND ROUTER'. At the bottom right, there are three blue buttons labeled 'Back', 'Next', and 'Exit'.

- Click on 'Next', the following screen will appear.



- Once the connection is established, the router connection status will appear.



Bridging Mode:

- To configure the router in bridge mode select “Bridging” option. Click ‘Next’.

DIGISOL www.digisol.com
Toll Free - 1800 209 3444

Configure ADSL

Please select the type of network protocol for IP over Ethernet as WAN interface

PPP over ATM (PPPoA)
 PPP over Ethernet (PPPoE)
 MAC Encapsulation Routing (MER)
 IP over ATM (IPoA)
 Bridging

Encapsulation Mode
LLC/ENCAPSULATION

DG-BG4100N
WIRELESS ADSL2/2+ BROADBAND ROUTER

Back Next Exit

- Configure a wireless name (SSID) for your router. Click ‘Next’.

DIGISOL www.digisol.com
Toll Free - 1800 209 3444

Configure wireless name for your router

Configure a name (SSID) for your wireless network, so you can always identify your wireless network.

Wireless Name (SSID): Digisol
[Example: MyNetwork, WIFI123]

Wireless Channel: Auto Scan

DG-BG4100N
WIRELESS ADSL2/2+ BROADBAND ROUTER

Back Next Exit

- Configure the wireless security.

The screenshot shows the 'Configure wireless security' page on a red background. At the top left is the DIGISOL logo. At the top right, a white box contains the website 'www.digisol.com' and the toll-free number '1800 209 3444'. The main heading is 'Configure wireless security'. Below it, a paragraph explains that wireless security protects the network and that WPA Pre-Shared Key is the most secure encryption. It instructs the user to enable WPA Pre-Shared key and enter an 8 to 63 character alphanumeric key. There are two input fields: 'Security Mode' with a dropdown menu set to 'WPA-PSK', and 'Pre-Shared Key' with the text 'digisol123'. At the bottom left, a white pill-shaped box contains the model 'DG-BG4100N' and 'WIRELESS ADSL2/2+ BROADBAND ROUTER'. At the bottom right, there are three blue buttons: 'Back', 'Next', and 'Exit'.

- Click on 'Next' the following screen will appear.

The screenshot shows the 'Bridge Mode' page on a red background. At the top left is the DIGISOL logo. At the top right, a white box contains the website 'www.digisol.com' and the toll-free number '1800 209 3444'. The main heading is 'Bridge Mode'. Below it, a paragraph instructs the user to use third-party dial-up software or 'Windows New Connection Wizard' to configure Internet Dial-up access. A second paragraph explains that clicking 'Finish' will save settings and reboot the router, after which wireless clients can connect. At the bottom left, a white pill-shaped box contains the model 'DG-BG4100N' and 'WIRELESS ADSL2/2+ BROADBAND ROUTER'. At the bottom right, there is a single blue button labeled 'Finish'.

- Click on 'Finish' to finish the router configuration in Bridge mode.

**CONGRATULATIONS! THE WIRELESS ROUTER
CONFIGURATION IS COMPLETE.**

Web Management of 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.



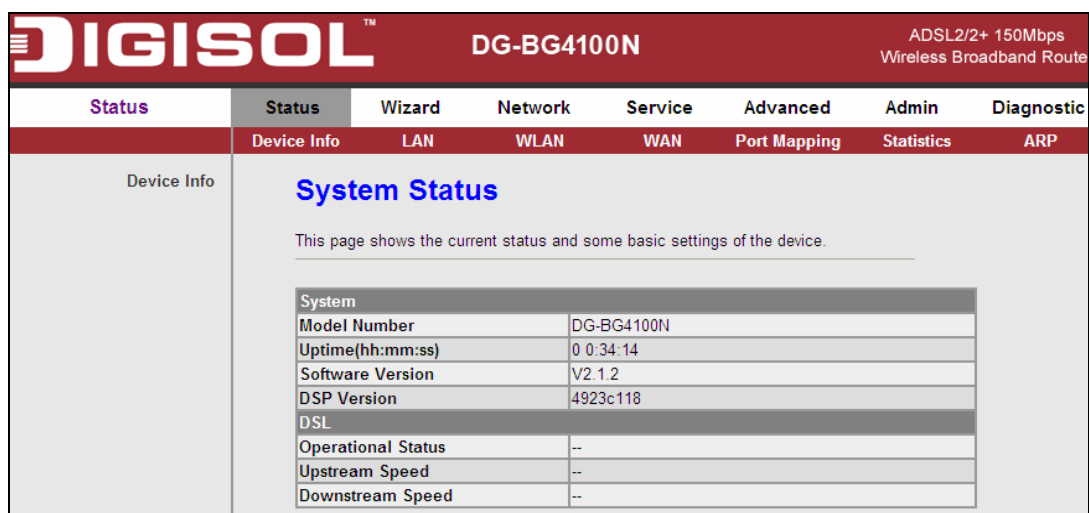
Connect to 192.168.1.1

User name:

Password:

Remember my password

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.



DIGISOL™ DG-BG4100N ADSL2/2+ 150Mbps Wireless Broadband Router

Status Wizard Network Service Advanced Admin Diagnostic

Device Info LAN WLAN WAN Port Mapping Statistics ARP

Device Info

System Status

This page shows the current status and some basic settings of the device.

| System | |
|--------------------|------------|
| Model Number | DG-BG4100N |
| Uptime(hh:mm:ss) | 0 0:34:14 |
| Software Version | V2.1.2 |
| DSP Version | 4923c118 |
| DSL | |
| Operational Status | -- |
| Upstream Speed | -- |
| Downstream Speed | -- |

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

FAQ

Following are the solutions to problems that may occur during the installation and operation of the DIGISOL DG-BG4100N Wireless Broadband Router.

1. Cannot login to the router.
 - Verify whether username and password you entered is correct.
 - If you have forgotten the password, then reset the router using reset button available on the rear side of the router.
 - Please keep reset button pressed till the router reboots to reset to factory default settings. Now, you can try login into the router using default user name and password.
 - Ensure that you take backup of the router configuration so you can restore the router back after resetting it.

2. Router cannot get connected to Internet.
 - Access the router's web configuration and verify internet connection status.
 - If you were previously able to connect a computer to internet directly, try to do that again, and verify whether you can access internet with your computer directly attached to the device provided by your internet service provider.
 - Check PPPoE user ID and password again.
Call your internet service provider and verify whether it connects to internet or not.
 - Try to reboot the router and verify whether it connects to internet or not.
 - Try to use IP address instead of hostname. If you can use IP address to communicate with a remote server but cannot use hostname. Please check DNS settings.

3. Wireless cannot locate the Router.

- Verify whether 'SSID broadcast' is set to off in router's web configuration.
- Verify whether antenna is properly connected and in correct direction.
- Is your wireless client far away from your router? Try to get closer to the router.
- Ensure that you input ESSID on your wireless client manually, if SSID broadcast is disabled.

This product comes with Life time warranty. For further details about warranty policy and Product Registration, please visit support section of www.digisol.com





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