

Chapter 2

Introduction

This chapter describes the features of the NETGEAR DG834GT 108 Mbps Super Wireless ADSL Router. The DG834GT Super Wireless ADSL Router is a combination of a built-in ADSL modem, router, 4-port switch, firewall, and up to 108 Mbps wireless access point that enables your entire network to safely share an Internet connection that otherwise is used by a single computer.



Note: If you are unfamiliar with networking and routing, refer to [Appendix B, “Network and Routing Basics”](#) to become more familiar with the terms and procedures used in this manual.

About the Router

The DG834GT 108 Mbps Super Wireless ADSL Router provides continuous, high-speed 10/100 Ethernet access between your Ethernet devices. The DG834GT Super Wireless ADSL Router enables your entire network to share an Internet connection through the built-in ADSL modem that otherwise is used by a single computer. With minimum setup, you can install and use the router within minutes.

The DG834GT Super Wireless ADSL Router provides multiple Web content filtering options, plus e-mail browsing activity, reporting, and instant alerts. Parents and network administrators can establish restricted access policies based on time of day, Web site addresses, and address keywords. They can also share high-speed ADSL Internet access for up to 253 personal computers. The included firewall and Network Address Translation (NAT) features protect you from hackers.

Key Features

The DG834GT Super Wireless ADSL Router provides the following features:

- 802.11g wireless networking, with the ability to operate in Auto 108 Mbps mode, 108 Mbps “turbo-g” only, the 802.11b+g modes, 802.11g-only, and 802.11b-only.
- A built-in ADSL modem
- A powerful, true firewall
- Easy, Web-based setup for installation and management
- Extensive Internet protocol support
- Content filtering
- Auto Sensing and Auto Uplink™ LAN Ethernet connections

These features are discussed below.

802.11g Wireless Networking

The DG834GT Super Wireless ADSL Router includes an 802.11g wireless access point, providing continuous, high-speed 54 Mbps access between your wireless and Ethernet devices. The access point provides:

- 802.11g wireless networking at up to 108 Mbps.
- 802.11g wireless networking, with the ability to operate in the following modes, thus providing backwards compatibility with 802.11b devices or dedicating the wireless network to the higher bandwidth 802.11g or 108 Mbps only devices:
 - Auto 108 Mbps mode (i.e., all 802.11g, 802.11b, and Netgear 108 Mbps wireless stations can be used; this mode is the second fastest mode)
 - 108 Mbps only (fastest)

Note: Only use the 108 Mbps only mode when all wireless adapters in your open network bear the 108 Mbps logo.

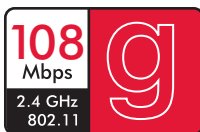


Figure 2-1: 108 Mbps Logo

- 802.11b+g modes
- 802.11g-only
- 802.11b-only
- 64-bit and 128-bit WEP encryption security.
- WEP keys can be generated manually or by passphrase.
- Wireless access can be restricted by MAC address.
- Wireless network name broadcast can be turned off so that only devices that have the network name (SSID) can connect.

A Powerful, True Firewall

Unlike simple Internet sharing NAT routers, the DG834GT is a true firewall, using stateful packet inspection to defend against hacker attacks. Its firewall features include:

- Denial of Service (DoS) protection
Automatically detects and thwarts Denial of Service (DoS) attacks such as Ping of Death, SYN Flood, LAND Attack and IP Spoofing.
- Blocks unwanted traffic from the Internet to your LAN.
- Blocks access from your LAN to Internet locations or services that you specify as off-limits.
- Logs security incidents
The DG834GT will log security events such as blocked incoming traffic, port scans, attacks, and administrator logins. You can configure the router to email the log to you at specified intervals. You can also configure the router to send immediate alert messages to your email address or email pager whenever a significant event occurs.

Easy Installation and Management

You can install, configure, and operate the DG834GT within minutes after connecting it to the network. The following features simplify installation and management tasks:

- Browser-based management
Browser-based configuration allows you to easily configure your router from almost any type of personal computer, such as Windows, Macintosh, or Linux. A user-friendly Setup Wizard is provided and online help documentation is built into the browser-based Web Management Interface.

- **Smart Wizard**
The router automatically senses the type of Internet connection, asking you only for the information required for your type of ISP account.
- **Remote management**
The router allows you to log in to the Web management interface from a remote location via the Internet. For security, you can limit remote management access to a specified remote IP address or range of addresses, and you can choose a nonstandard port number.
- **Diagnostic functions**
The router incorporates built-in diagnostic functions such as Ping, DNS lookup, and remote reboot. These functions allow you to test Internet connectivity and reboot the router. You can use these diagnostic functions directly from the DG834GT when you are connected on the LAN or when you are connected over the Internet via the remote management function.
- **Visual monitoring**
The router's front panel LEDs provide an easy way to monitor its status and activity.
- **Flash erasable programmable read-only memory (EPROM) for firmware upgrades.**

Protocol Support

The DG834GT supports Transmission Control Protocol/Internet Protocol (TCP/IP) and Routing Information Protocol (RIP). [Appendix B, "Network and Routing Basics"](#) provides further information on TCP/IP.

- **The Ability to Enable or Disable IP Address Sharing by NAT**
The DG834GT allows several networked PCs to share an Internet account using only a single IP address, which may be statically or dynamically assigned by your Internet service provider (ISP). This technique, known as Network Address Translation (NAT), allows the use of an inexpensive single-user ISP account. This feature can also be turned off completely while using the DG834GT if you want to manage the IP address scheme yourself.
- **Automatic Configuration of Attached PCs by DHCP**
The DG834GT dynamically assigns network configuration information, including IP, router, and domain name server (DNS) addresses, to attached PCs on the LAN using the Dynamic Host Configuration Protocol (DHCP). This feature greatly simplifies configuration of PCs on your local network.
- **DNS Proxy**
When DHCP is enabled and no DNS addresses are specified, the router provides its own address as a DNS server to the attached PCs. The router obtains actual DNS addresses from the ISP during connection setup and forwards DNS requests from the LAN.

- **Classical IP (RFC 1577)**
Some Internet service providers, in Europe for example, use Classical IP in their ADSL services. In such cases, the router is able to use the Classical IP address from the ISP.
- **PPP over Ethernet (PPPoE)**
PPP over Ethernet is a protocol for connecting remote hosts to the Internet over an ADSL connection by simulating a dial-up connection. This feature eliminates the need to run a login program such as EnterNet or WinPOET on your computer.
- **PPP over ATM (PPPoA)**
PPP over ATM is a protocol for connecting remote hosts to the Internet over an ADSL connection by simulating an ATM connection.
- **Dynamic DNS**
Dynamic DNS services allow remote users to find your network using a domain name when your IP address is not permanently assigned. The router contains a client that can connect to many popular Dynamic DNS services to register your dynamic IP address.
- **Universal Plug and Play (UPnP)**
UPnP is a networking architecture that provides compatibility between networking technologies. UPnP compliant routers provide broadband users at home and small businesses with a seamless way to participate in online games, videoconferencing and other peer-to-peer services.

Content Filtering

With its content filtering feature, the DG834GT prevents objectionable content from reaching your PCs. The router allows you to control access to Internet content by screening for keywords within Web addresses. You can configure the router to log and report attempts to access objectionable Internet sites.

Auto Sensing and Auto Uplink™ LAN Ethernet Connections

With its internal 4-port 10/100 switch, the DG834GT can connect to either a 10 Mbps standard Ethernet network or a 100 Mbps Fast Ethernet network. The local LAN ports are autosensing and capable of full-duplex or half-duplex operation.

The router incorporates Auto Uplink™ technology. Each local Ethernet port will automatically sense whether the Ethernet cable plugged into the port should have a ‘normal’ connection such as to a computer or an ‘uplink’ connection such as to a switch or hub. That port will then configure itself to the correct configuration. This feature also eliminates the need to worry about crossover cables, as Auto Uplink will accommodate either type of cable to make the right connection.

What’s in the Box?

The product package should contain the following items:

- DG834GT 108 Mbps Super Wireless ADSL Router
- AC power adapter (varies by region)
- Category 5 (Cat 5) Ethernet cable
- Telephone cable
- Microfilters (quantity and type vary by region)
- *108 Mbps Super Wireless ADSL Router Resource CD*, including:
 - This guide
 - Application Notes
- A printed Quick Installation Guide
- Warranty and Support Information cards

If any of the parts are incorrect, missing, or damaged, contact your NETGEAR dealer. Keep the carton, including the original packing materials, in case you need to return the product for repair.

The Router’s Front Panel

The DG834GT 108 Mbps Super Wireless ADSL Router front panel shown below contains status LEDs.

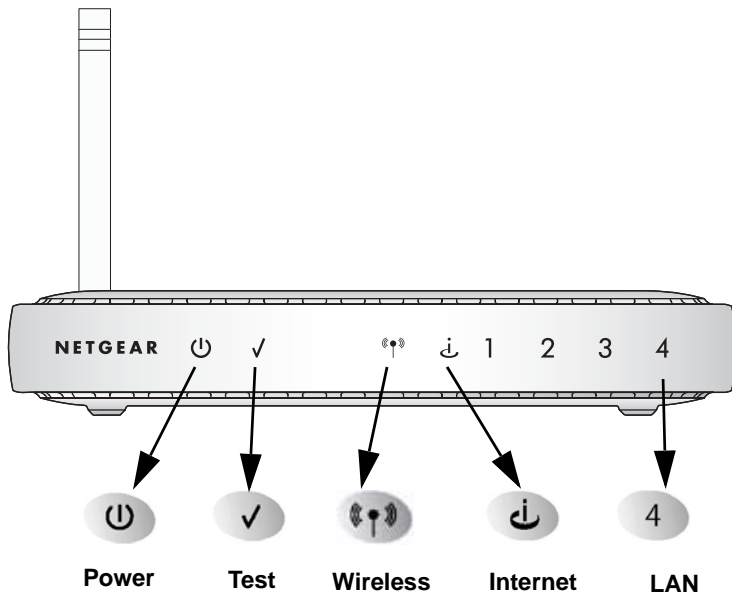


Figure 2-2: DG834GT Front Panel

You can use the LEDs to verify various conditions. [Table 2-1](#) lists and describes each LED on the front panel of the router. These LEDs are green when lit.

Table 2-1. LED Descriptions

Label	Activity	Description
Power	On Off	Power is supplied to the router. Power is not supplied to the router.
Test	On Off	The system is initializing. The system is ready and running.
Wireless	On Off	Indicates that the Wireless port is initialized. The Wireless Access Point is turned off.
Internet	Blink -- Amber On -- Green Blink -- Green	Indicates ADSL training. The Internet port has detected a link with an attached device. Data is being transmitted or received by the Internet port.
LAN	On (Green) Blink (Green) On (Amber) Blink (Amber) Off	The Local port has detected a link with a 100 Mbps device. Data is being transmitted or received at 100 Mbps. The Local port has detected a link with a 10 Mbps device. Data is being transmitted or received at 10 Mbps. No link is detected on this port.

The Router's Rear Panel

The rear panel of the DG834GT 108 Mbps Super Wireless ADSL Router ([Figure 2-3](#)) contains port connections.

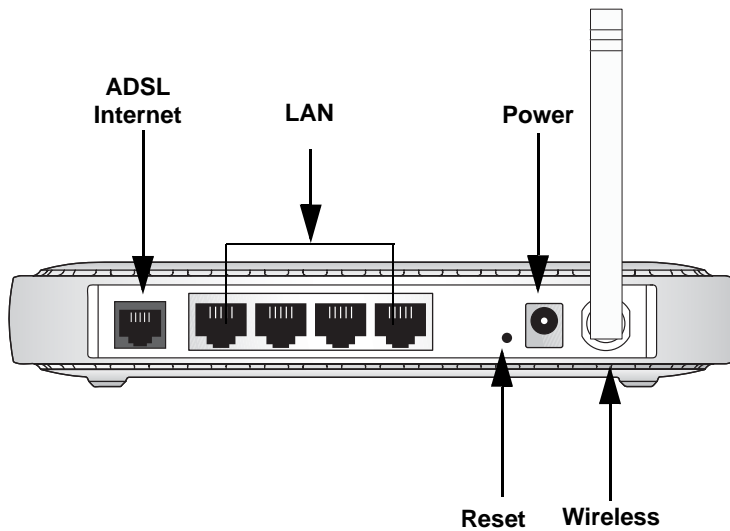


Figure 2-3: DG834GT Rear Panel

Viewed from left to right, the rear panel contains the following elements:

- ADSL port for connecting the router to an ADSL line
- Four Local Ethernet RJ-45 LAN ports for connecting the router to the local computers
- Factory Default Reset push button
- DC power in
- Wireless antenna

