

# Chapter 2

## Introduction

This chapter describes the features of the NETGEAR DG834 ADSL Modem Router. The DG834 ADSL Modem Router is a combination of a built-in ADSL modem, modem router, 4-port switch, and firewall which enables your entire network to safely share an Internet connection that otherwise would be used by a single computer.



**Note:** If you are unfamiliar with networking and routing, refer to “[Internet Networking and TCP/IP Addressing:](#)” in [Appendix C](#) to become more familiar with the terms and procedures used in this manual.

### About the Modem Router

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The DG834 ADSL Modem Router provides continuous, high-speed 10/100 Ethernet access between your Ethernet devices. With minimum setup, you can install and use the modem router within minutes.

The DG834 ADSL Modem Router provides multiple Web content filtering options, plus e-mail alerts and logging. 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.

The DG834 also supports Trend Micro Home Network Security, a bundle of services that includes router-based Parental Controls and network-wide protection from viruses, Trojans, spyware, spam, and other Internet threats.

## Key Features

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The DG834 ADSL Modem Router provides the following features:

- A built-in ADSL modem
- A powerful, true firewall
- Easy, Web-based setup for installation and management
- Extensive Internet protocol support
- Trustworthy VPN Communications over the Internet
- VPN Wizard for easy VPN configuration
- Auto Sensing and Auto Uplink™ LAN Ethernet connections
- Content filtering
- Support for Trend Micro Home Network Security

These features are discussed below.

### A Powerful, True Firewall

Unlike simple Internet sharing NAT routers, the DG834 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 DG834 will log security events such as blocked incoming traffic, port scans, attacks, and administrator logins. You can configure the modem router to email the log to you at specified intervals. You can also configure the modem 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 DG834 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 modem 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**  
A wizard built into the modem router automatically senses the type of Internet connection, asking you only for the information required for your type of ISP account.
- **Remote management**  
The modem 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, or you can choose a nonstandard port number.
- **Diagnostic functions**  
The modem 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 modem router. You can use these diagnostic functions directly from the DG834 when you are connected on the LAN or when you are connected over the Internet via the remote management function.
- **Visual monitoring**  
The modem 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 DG834 supports Transmission Control Protocol/Internet Protocol (TCP/IP) and Routing Information Protocol (RIP). [“Internet Networking and TCP/IP Addressing:”](#) in [Appendix C](#) provides further information on TCP/IP.

- **The Ability to Enable or Disable IP Address Sharing by NAT**  
The DG834 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 DG834 if you want to manage the IP address scheme yourself.

- **Automatic Configuration of Attached PCs by DHCP**  
The DG834 dynamically assigns network configuration information, including IP, modem 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 modem router provides its own address as a DNS server to the attached PCs. The modem 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 modem 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 modem 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.

## Virtual Private Networking (VPN)

The DG834 ADSL Modem Router provides a secure encrypted connection between your local area network (LAN) and remote networks or clients. It includes the following VPN features:

- Supports 8 VPN connections.
- Supports industry standard VPN protocols  
The DG834 ADSL Modem Router supports standard Manual or IKE keying methods, standard MD5 and SHA-1 authentication methods, and standard DES and 3DES encryption methods. It is compatible with many other VPN products.
- Supports 3DES encryption for maximum security.
- VPN Wizard based on VPNC recommended settings.

## Auto Sensing and Auto Uplink™ LAN Ethernet Connections

With its internal 4-port 10/100 switch, the DG834 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 modem 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.

## Content Filtering

With its content filtering feature, the DG834 prevents objectionable content from reaching your PCs. The modem router allows you to control access to Internet content by screening for keywords within Web addresses. You can configure the modem router to log and report attempts to access objectionable Internet sites.

## Trend Micro Home Network Security

This service bundle from Trend Micro has three components:

- **Trend Micro dashboard**  
This component is free for unlimited use. From the dashboard you can:
  - Scan your computer and entire network for security vulnerabilities
  - View individual computer and network-wide security reports

- Detect and remove spyware
- View attempts to access content restricted by Parental Controls
- Purchase subscriptions for Parental Controls and Trend Micro Internet Security
- **Trend Micro Internet Security**  
You can install this program on up to 10 computers and try it free for 60 days. Its features include:
  - Real-time and scheduled scanning to remove viruses, Trojans, spyware, and other Internet threats
  - Personal firewall
  - Network intruder detection
  - Anti-spam
- **Router-based Parental Controls**  
This service restricts home network users from viewing inappropriate Web content. It is free for 60 days, and when you register your free trial of Trend Micro Internet Security, your free use of Parental Controls is automatically extended to one year.

For instructions on activating these services, refer to [“Trend Micro Home Network Security” on page 3-15](#).

## What’s in the Box?

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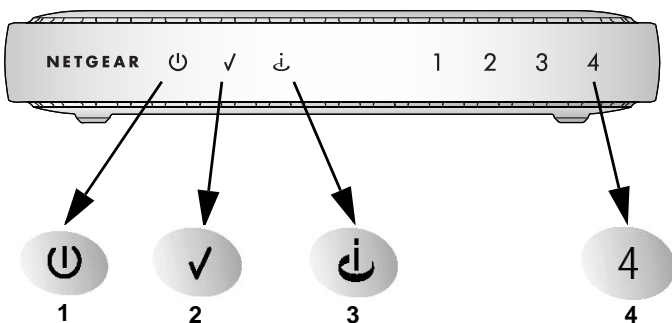
The product package should contain the following items:

- DG834 ADSL Modem Router
- AC power adapter (varies by region)
- Category 5 (Cat 5) Ethernet cable
- Telephone cable with RJ-11 connector
- Microfilters (quantity and type vary by region)
- *ADSL Modem Router Resource CD*, including this guide
- A Printed Quick Installation Guide
- Warranty and Support Information Cards
- Two plastic feet that can be used to stand the DG834 ADSL Modem Router on end.

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 Modem Router's Front Panel

The DG834 ADSL Modem Router front panel shown below contains status LEDs.



**Figure 2-1**

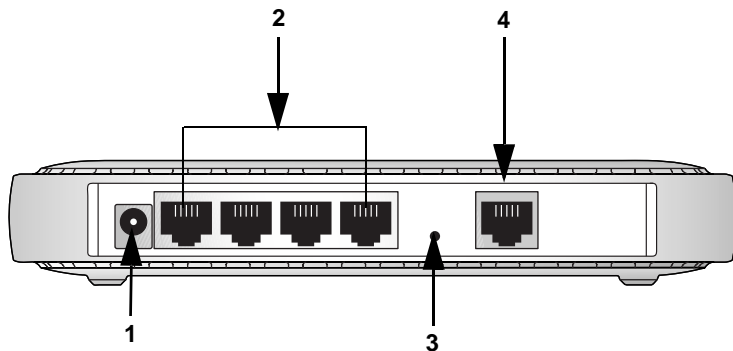
You can use the LEDs to verify various conditions. [Table 2-1](#) lists and describes each LED on the front panel of the modem router. These LEDs are green when lit.

**Table 2-1. LED Descriptions**

Label	Activity	Description
1. Power	On Off	Power is supplied to the modem router. Power is not supplied to the modem router.
2. Test	On Off	The system is initializing. The system is ready and running.
3. 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.
4. 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 DG834 ADSL Modem Router ([Figure 2-2](#)) contains port connections.



**Figure 2-2**

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

1. AC power adapter outlet
2. Four Local Ethernet RJ-45 LAN ports for connecting the firewall to the local computers
3. Factory Default Reset push button
4. RJ-11 ADSL port for connecting the firewall to an ADSL line

## Connecting the Router to the Internet

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To connect your DG834 ADSL Modem Router to the Internet, refer to the on the *ADSL Modem Router Resource CD* or online as shown in the following table.

**Table 2-1.**

Language	URL
Dutch	<a href="http://documentation.netgear.com/dg834/nld/208-10011-01/">http://documentation.netgear.com/dg834/nld/208-10011-01/</a>
English	<a href="http://documentation.netgear.com/dg834/enu/208-10005-01/">http://documentation.netgear.com/dg834/enu/208-10005-01/</a>
French	<a href="http://documentation.netgear.com/dg834/fra/208-10006-01/">http://documentation.netgear.com/dg834/fra/208-10006-01/</a>
German	<a href="http://documentation.netgear.com/dg834/deu/208-10007-01/">http://documentation.netgear.com/dg834/deu/208-10007-01/</a>
Italian	<a href="http://documentation.netgear.com/dg834/ita/208-10008-01/">http://documentation.netgear.com/dg834/ita/208-10008-01/</a>
Spanish	<a href="http://documentation.netgear.com/dg834/esp/208-10009-01/">http://documentation.netgear.com/dg834/esp/208-10009-01/</a>
Swedish	<a href="http://documentation.netgear.com/dg834/sve/208-10010-01/">http://documentation.netgear.com/dg834/sve/208-10010-01/</a>

