

About This User Manual

For brevity, throughout this manual the “Wireless Broadband Router” is referred to as “the router” or “the device” and following terms or abbreviations are used interchangeably:

- Access Point-AP
- Wireless LAN-WLAN
- Ethernet network-LAN-network

This User Manual contains information on how to install and configure your Wireless Broadband Router to get your network started accessing the Internet. From now on, we will guide you through the correct configuration steps to get your device up and run.

802.11g Draft Compliance Notice

Though 802.11g is mentioned as a feature of this wireless device, users should be aware that the device supports only draft-level 802.11g specification. At the time of the release of this product, 802.11g remains in draft form, which has yet to be finalized and ratified by IEEE.

Contents

1	Introduction	1
	1.1 Overview.....	1
	1.2 Features	2
	1.3 Package Contents	3
	1.4 System Requirements	3
2	Hardware Description & Installation	5
	2.1 Physical Outlook.....	5
	Front Panel.....	5
	Rear Panel and Connectors	6
	2.2 Hardware Connection	7
	Choosing a Place for the Router	7
	Connecting the Wireless Broadband Router	7
3	Setting Up Ethernet / WLAN Client	9
	3.1 Overview.....	9
	3.2 Setting up TCP/IP.....	10
	For Windows 98/ME.....	10
	For Windows 2000/XP.....	12
	3.2 Setting up Wireless Client.....	14
	3.3 Checking Connection with the Router.....	15
4	Web Configuration	17
	4.1 Accessing Web-Based Configuration Utility.....	17
	To enable Your Settings	18
	4.2 Viewing System Status	19
	4.3 Configuration for NAT Routing Mode	20
	WAN Configuration for NAT Routing Mode	21
	LAN Configuration for NAT Routing Mode.....	26
	Viewing Current DHCP Assignments	27

4.4 Configuration for Bridge Mode.....	28
4.5 Wireless LAN (2.4G) Configuration.....	31
4.6 Wireless LAN Security.....	32
4.6 Filters.....	36
Specifying Your IP Filter Rules.....	36
Filter Types.....	37
Filter Scenario of the Wireless Broadband Router.....	38
Viewing Filter Log.....	39
Other Firewall Settings.....	39
4.7 Forwarding.....	41
Setting Up Forwarding Entries.....	41
If you have a Web server on your network... ..	42
4.8 Administration.....	44

5 Troubleshooting 47

A Implementing 802.1x.....49

A.1 Overview.....	49
A.2 802.1x Function.....	50
A.2.1 Required Components.....	50
A.2.2 Authentication Procedure.....	51
A.2.3 EAP and Authentication Type.....	53
A.3 Configuration Example.....	54
Part 1: Windows 2000 Server.....	55
Part 2: Access Point.....	59
Part 3: 802.1x Station.....	61

B Specification.....67

B.1 Hardware.....	67
B.2 Software.....	68

1 Introduction

1.1 Overview

Thank you for choosing this Wireless Broadband Router. This Wireless Broadband Route is a multi-function device featuring a wireless 54Mbps Access Point, a 4-port LAN switch and a WAN port which extends your existing broadband Cable/ADSL connection. It allows your Internet connection to be shared through either the 54Mbps Access Point feature or the 10/100Base-TX Ethernet switch. Now your wired and wireless network are integrated to enjoy various bandwidth-consuming applications over the Internet.

With the support of new emerged 802.11g draft standard, the Access Point provides data transfer of up to 54 Mbps, up to 5 times faster than 802.11b. Since draft 802.11g draft operates on the same frequency of 2.4 GHz as 802.11b, it is backwards compatible with existing Wi-Fi 802.11b devices. The benefit is that you can preserve the existing 802.11b infrastructure while migrating to the new screaming fast 802.11g draft standard.

The router can act as a DHCP server to automatically assign IP addresses to your LAN devices. With the built-in Network Address Translation (NAT) function, your LAN can access the Internet through a single external IP address and at the same time is protected against outside intruders. The router can also be configured to filter internal access to the Internet. It is designed to provide a reliable Internet access solution for the corporate environment, the small office and the home user.

1.2 Features

- One 10/100 Base-TX RJ-45 auto sensing and crossover Ethernet WAN port for Broadband connection (Cable/DSL or direct Ethernet)
- Four RJ-45 LAN ports for 10/100Base-TX auto sensing & crossover Ethernet Switch LAN connection
- 802.11g draft Wireless LAN
- 802.1x security
- One external and one built-in antennas for wireless technology
- PPPoE (PPP over Ethernet) Client with Keep Alive/Connect On Demand Support
- PAP and CHAP Authentication
- DHCP Client
- MAC Address Cloning
- DHCP Server
- NAT
- Firewall Support
- Bridge Mode Support
- 802.1D Spanning Tree Bridging
- IP Filtering, IP Forwarding
- DMZ Hosting
- ASCII/HEX Format 64/128 Bit WEP Key for Wireless LAN
- Allow/Deny List for Wireless LAN
- VPN Support (IPSec Passthrough, and PPTP Passthrough)
- Configurable through Web Browser via WAN/LAN
- Software Upgrade
- NTP/Manual System Clock
- Configuration Saving/Retrieving
- Event Log

1.3 Package Contents

Check the contents of the package against the pack contents checklist below. If any of the items is missing, then contact the dealer from whom the equipment was purchased.

- | | |
|--|----|
| • Wireless Broadband Router | x1 |
| • Power Adapter and Cord (or AC Power Adapter) | x1 |
| • CD-ROM | x1 |
| • RJ-45 Ethernet Cable | x1 |

1.4 System Requirements

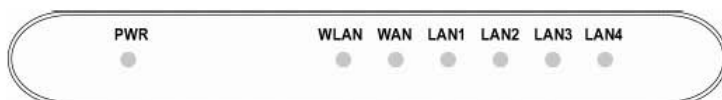
- Cable/ADSL modem and an Internet access account for Internet connection
- One computer with 10/100Base-T Ethernet card and TCP/IP protocol installed for initial setup
- Internet Explorer 5.0 or higher for Web configuration
- 802.11g draft or 802.11b compliant wireless adapters (for wireless connection)

2 Hardware Description & Installation

2.1 Physical Outlook

Front Panel

The following illustration shows the front panel of the Wireless Broadband Router:



LED Indicators

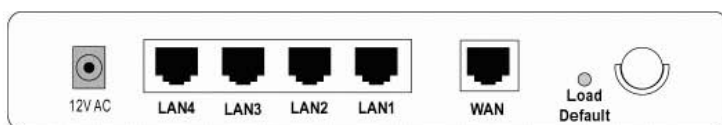
The Wireless Broadband Router is equipped with seven LEDs on the front panel as described in the table below:

LEDs	Function	Color	Status	Description
 /PWR	Power	Green	Off	No power is supplied to the unit.
			Solid	Power is connected to the unit.
WLAN	Wireless LAN Port Ready/Activity	Green	Off	WLAN interface is not initialized properly.
			On	WLAN interface is initialized properly and ready.
			Blinking	Transmitting/receiving packets on the WLAN port.
LAN 1-4	LAN Port Status	Green (100 Mbps)*	Off	Power is off or no Ethernet device is connected.
			On	Ethernet device is connected.

LEDs	Function	Color	Status	Description
		Green (10 Mbps)	Blinking	Transmitting/receiving packets on the LAN port.
WAN	WAN Port Status	Green	Off	Power is off or no broadband device is connected.
			On	Broadband device is connected.
			Blinking	Transmitting/receiving packets on the WAN port.

Rear Panel and Connectors

The following figure illustrates the rear panel of your Wireless Broadband Router.



The following table describes the components on the rear panel :

Connector	Description
12V AC	Power connector
LAN Ports 1-4	RJ-45 Connectors. Integrated 4-port 10/100BaseT switch. Connects to a hub, switch or NIC-equipped PC in your network. The LAN ports support Auto-MDIX feature which eliminates the need for crossover cables.
WAN	RJ-45 connector. Connects to the Cable/ADSL Modem. The WAN port also supports Auto-MDIX feature which eliminates the need for crossover cables.
Load Default	To reset the device to factory defaults, insert a straightened paperclip into the reset / Load Default hole to press the button. Keep pressing and power cycle (off and on) the device. Wait for at least 5 seconds to release the button. Then wait for the device to finish booting. If you want to restore your customized settings after loading defaults, refer to "4.8 Administration" for more information.

2.2 Hardware Connection

Choosing a Place for the Router

- Place the device close to the power outlet for the cable to reach it easily.
- Avoid placing the device in places where people may walk on the cables. Also keep it away from direct sunshine or heat sources.
- Place the device on a flat and stable stand.

Connecting the Wireless Broadband Router

Prior to connecting the hardware, make sure to power off your Ethernet device, Cable/ADSL modem and Wireless Broadband Router. Then follow the steps below to connect the related devices.

Step 1 Connecting Your network to the LAN port.

Attach one end of the Ethernet cable with RJ-45 connectors to your hub, switch or a PC's Ethernet port, and the other end to the **LAN** port of your Wireless Broadband Router.

Step 2 Connecting Cable/ADSL Modem to the Internet/WAN port.

Connect the Ethernet cable attaching to your Cable/ADSL modem to the **Internet/WAN** or **WAN** port of your Wireless Broadband Router.

Step 3 Connecting the power adapter.

Connect the power adapter cord to the power jack on the back of the Wireless Broadband Router. Then connect the adapter to a power outlet.

Caution: Use only the adapter supplied with the router. Connecting the wrong adapter could damage the device.

The figure below illustrates a connection diagram example:

