



## 4Port ADSL/CATV/FTTH Broadband Router *Roadrunner* BRL-04FM



### ▶ Feature

The BRL-04FM utilizes MIPS 32bit processor to achieve high speed routing approaching 91Mbps (WAN->LAN throughput). In addition to its basic broadband router functionality, the product supports UPnP (Universal Plug and Play) , PPPoE unnumbered connection, log output, automatic IP address update in dynamic DNS services and VLAN on LAN ports. Moreover, the product's Access Control and Unauthorized Access Detection features ensure robust network security.

#### ■ MIPS 32bit chipset greatly improves throughput

Its on-board MIPS 32bit processor achieves a maximum data rate of 91Mbps, a significant improvement over the average throughput of conventional broadband routers. The highly improved throughput facilitates the sending and receiving of large-volume multimedia data, allowing the user to take full advantage of broadband environments that are becoming faster at an accelerating rate.

#### ■ Supports UPnP (Universal Plug and Play)

The product's UPnP feature eases the configuration tasks of network applications used on its network. The following functions of Windows Messenger ( a UPnP compliant application) are supported by BRL-04FM:

Windows Messenger

Instant Message, Voice Chat, Video Chat, Receive/Send Files, Remote Assistance, Application Sharing, White Board (the "Place Call" function is not supported)

#### ■ Supports Special Application feature

When NAT/IP masquerading is enabled, applications whose send packets and receive packets use different protocols and port numbers are usually blocked. Nonetheless, the special application function of the product allows the user to access such applications in the same environment. The following special applications are enabled by default, and more applications may be added as well.

\* Age of Empire/ H.323(CUseMe & MS NetMeeting & TGI Phone)/ ICU II(ICU 2)/ Internet Phone/

Yahoo Messenger

### ■ PPPoE Unnumbered Connection

The product supports services that provide multiple global IP addresses. The BRL-04FM enables flexible network configuration as its IP allocation scheme is capable of directly assigning global IP to LAN clients.

### ■ VPN Packet Pass-Through

The product can pass through packets that are encoded between LAN and WAN via a VPN gateway device. The BRL-04FM supports three VPN protocols (IPsec/PPTP/L2TP) and it enables the construction of a router-based VPN network.

### ■ Supports Dynamic DNS services

The BRL-04FM supports Dynamic DNS Network Services provided by LLC. Simply enter the user name, password and domain name registered at dyndns.org to this product, and it will automatically update the registered information by itself.

### ■ Firewall with SPI (Stateful Packet Inspection) support

Its on-board Unauthorized Access Detection function achieves robust network security (supports log output) The product utilizes SPI (stateful packet inspection) as its firewall method. SPI verifies the consistency of packets for each communication session. Since it blocks all ports upon the completion of a session, the technology implements a truly "hole-less" firewall.

Furthermore, SPI blocks communication as soon as it detects DoS (Denial of Service) attack from the Internet (WAN side). Detected attacks can be saved in a log, and the log data can be sent out in the form of syslog or E-mail.

#### Detectable DoS Attacks

IP Spoofing/ Land Attack/ Ping of Death/ Zero Length IP/ Smurf Attack/ UDP Port Loopback/ Snork Attack/ TCP null scan/ TCP Synflood

### ■ Controls access from the LAN side

The product is capable of controlling access to the Internet from the LAN side. The following access rules (or filters) can be assigned to each group of PC's attached to the LAN.

(1) Access control by schedule (time/day of the week)

(2) Access control by service (40 services including E-mail and Web browsing are registered by default. New services can be added to the list of services to be blocked.

(3) URL filtering (blocks access from PC's on the LAN to preconfigured URL's. Either the URL, IP address or keyword for the target URL may be entered. )

## ■ Supports VLAN

The product supports VLAN (Virtual LAN) feature that logically segments a LAN port to multiple groups. VLAN enables communication among ports that belong to the same VLAN group while it blocks communication between ports belonging to separate VLAN groups. This feature protects clients from i)secondary infection of computer viruses and worms from the source of infection as well as ii)attacks that use virtual computer terminals and global IP terminals for unnumbered connection as a tool of spreading themselves. VLAN can be also used at households and Internet buildings to block communication between devices attached to the product ports for the purpose of protecting privacy, etc.

## ■ Supports network games, enables the establishment of servers on the net

Its Local Server (port forwarding) function as well as Virtual Computer (DMZ Host) function which provides static IP masquerading allow the user to play NAT noncompliant network games. The two functions also enable the user to set up globally accessible servers

## ■ On-board 4-port Switch automatically detects the two cable types

Its internal 4-port 10/100BASE Auto-Negotiation Switch provides connection to network devices on the LAN side. Since its Auto-MDI/MDX function automatically detects the straight and crossover cable types, the user can connect PC's directly to the switch or perform hub cascading without worrying about the cable type differences.

## ■ Supports DHCP

The product's DHCP Server/Client feature automatically 1)obtains an IP address from a DHCP server on the WAN side and 2)allocates an IP address to each client attached to its LAN ports.

## ■ PPPoE Connectivity

In addition to ordinary Ethernet (static/DHCP) connection, the product supports Point to Point Protocol over Ethernet (PPPoE). Since the BRL-04FM provides PPPoE client function by itself, there is no need to install a separate PPPoE program to each client PC connected to the product.

-Enables Concurrent Internet Access from Multiple Clients

Its NAT/IP masquerading (NAPT) feature allows multiple computers to access the Internet simultaneously using just one PPPoE account.

-Automatic Connection/Disconnection:

Its PPPoE Service On Demand function and Idle Access Monitoring/ Automatic Disconnection function allow its users to access the Internet as if they were using a leased line - there is absolutely no need to manually connect to or disconnect from the Internet.

## ■ Web-based configuration

The internal parameters and operation settings of the product can be easily configured via a WWW browser. Moreover, the password-protected configuration screen prevents unauthorized access from

outsiders.

### ■ Firmware upgrade via the Web-based configuration screen

All system functions of the product are stored in the on-board flash memory in the form of firmware (software). Periodically download new firmware from our web site to always keep the product's functions up-to-date. Firmware upgrade requires no special utility to be installed on terminal PC's, and it can be used with a wide range of OSes including Windows, Macintosh and Linux.

Note: Some ISP's place limitations on the use of routers like this product or access to the Internet from multiple users. Please be sure to verify the service agreement provided by your ISP.

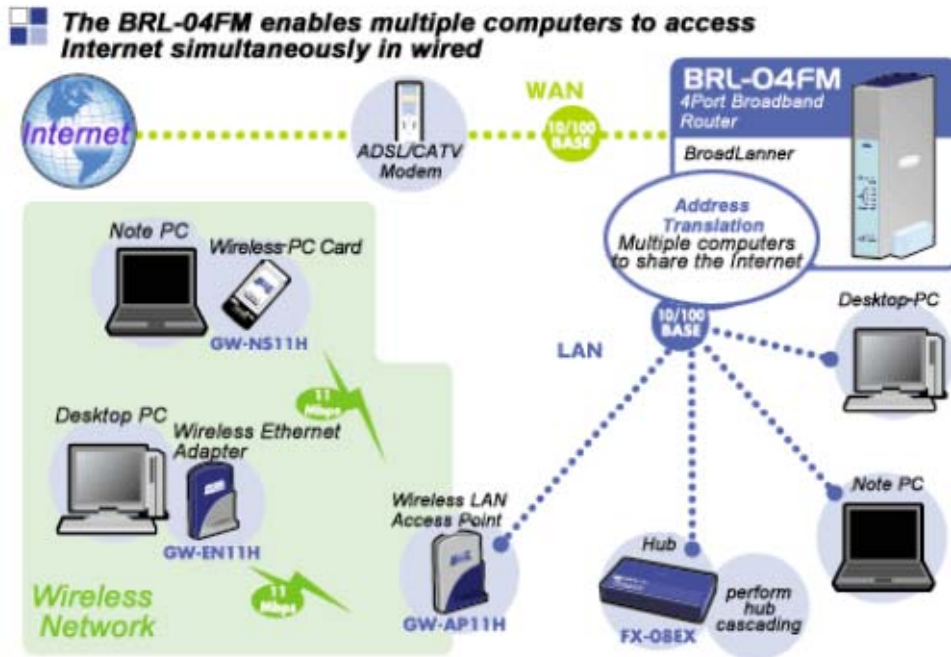
\*bRoadLanner series products are not dial-up routers

## ► Specification

<b>Product Model Number</b>		<b>BRL-04FM</b>
<b>Standards Conformance</b>		LAN: IEEE802.3 10BASE-T,IEEE802.3u 100BASE-TX WAN: IEEE802.3 10BASE-T,IEEE802.3u 100BASE-TX
<b>Data Transfer Speed</b>		10/100Mbps (Auto-Negotiation)
<b>Network Port Configuration</b>	WAN port	10/100BASE-TX Auto-Negotiation Port x 1 (RJ-45 connector)
	LAN ports	10/100BASE-TX Auto-Negotiation Port x 4 (RJ-45 connectors) * All ports support Auto MDI/MDI-X as well as port-based VLAN (4 groups maximum)
<b>Supported WAN Lines</b>		ADSL/SDSL/CATV/FTTH/leased lines, etc.
<b>Supported Network Cables</b>		10BASE-T Category 3 (or greater) twisted-pair cable (100m) 100BASE-TX Category 5 (or greater) twisted-pair cable (100m)
<b>Supported Protocol</b>		IP
<b>Address Translation</b>		NAT/IP masquerading
<b>DHCP Server</b>		Supports up to 253 addresses (LAN ports only, can be disabled)
<b>DHCP Client</b>		Acquires an IP address from ISP (WAN port only, can be disabled)
<b>DNS Relay</b>		Supported
<b>PPPoE</b>		Supports 1 session, PPPoE Service-on-Demand, Idle Connection Monitoring/Automatic Disconnection, unnumbered connection
<b>Routing Protocols</b>		Static Routing, Dynamic Routing (RIP Ver.1)
<b>VPN Pass Through</b>		PPTP/L2TP/IPSec

<b>Local Server</b>	Forwards packets to a specific PC on the LAN per TCP/ UDP port
<b>Virtual Computer (DMZ)</b>	Forwards packets from WAN port to a specific PC on the LAN
<b>Access Control</b>	By schedule (time/days of the week): supports log output By service content: supports log output URL filtering
<b>Firewall</b>	DoS attack detection (supports log output and notification via syslog/E-mail), SPI(Stateful Packet Inspection)
<b>Configuration Interface</b>	Web browser
<b>Log Management</b>	Log can be viewed via Web browser, sent to preconfigured e-mail addresses, or transmitted to a preconfigured syslog server
<b>System Upgrade</b>	Upgradable Flash ROM (upgraded via a Web browser)
<b>LED Indicators</b>	Power, Status, LAN Link/Act, LAN 100M, WAN, PPPoE
<b>Power Input</b>	DC12V, 1200mA
<b>Power Consumption</b>	8.0W max.
<b>Dimensions</b>	180(W) x 150(H) x 29.3(D)mm
<b>Weight (main unit only)</b>	582g
<b>Operating Temperature</b>	0 to 40 degrees Celsius
<b>Operating Humidity</b>	35 to 85%
<b>Supported OSes and Platforms</b>	-Windows 95/98/Me/2000/XP PC equipped with an Ethernet (RJ-45) port -Computer equipped with an Ethernet (RJ-45) port that runs a TCP/IP compliant OS (Mac OS , UNIX OSes, etc.)
<b>Required Network Cables</b>	Twisted-pair cable Required quantity: the number of PC's attached to the product
<b>ADSL/Cable Modem</b>	The product supports the following ADSL/cable modems. -External ADSL modem with an RJ-45(LAN) port -Exenal cable modem with an RJ-45(LAN) port
<b>EMI</b>	VCCI Class B, FCC Class B, CE
<b>Package Contents</b>	BRL-04FM, AC adapter, vertical stand, twisted-pair cable (straight, 1m) x 1, short cord x 1, user's manual

▼ Connection Sample



▼ Product view

■ Front View

