BLACK BOX®
NETWORK SERVICES

Load Balancer *LRS8002AE*

Key Features

Load Balancing and connection Backup
Use both WAN ports simultaneously for maximum performance with automatic Load Balancing, or use the 2nd port as a backup.

High-Performance NAT Router
Up to 12MBits throughput. Two (2) WAN ports for twice the bandwidth of a single modem !

Multiple Connection Methods
All popular DSL and Cable Modems and connection methods are supported, including Fixed IP, Dynamic IP, PPPoE, PPTP, even multiple-session PPPoE.

Multiple IP Address Support
Fully supports situations where your ISP allocates multiple IP addresses.

Advanced NAT features
Access Filters, DMZ, DDNS, Remote Management, Routing, Special Applications, URL blocking, Virtual Servers, SNMP, ARP proxy – it's all here !

The xDSL Load Balancer is a high-performance NAT Router which provides Broadband Internet Access for your LAN. Supporting two (2) Broadband Modems, the xDSL Load Balancer is a convenient, inexpensive method of providing both increased performance and greater reliability for your Internet connection. Flexible configuration options allow use of the second Broadband connection as a backup (used whenever the primary connection fails) or for concurrent operation to provided increased bandwidth and greater reliability.

Feature List
Flexible, High-Performance Dual Modem Support
Two (2) WAN ports allow connection of two (2) Broadband modems, doubling the available bandwidth to 12MBits/sec. Each port can use a different type of modem and connection method. Also, you can determine how the Internet traffic is shared between the 2 modems.

Supports all common Connection Methods
All popular DSL and Cable Modems and connection methods are supported,

including Fixed IP, Dynamic IP, PPTP, PPPoE, multi-session PPPoE, and multiple fixed IP addresses.

4-Port Switching Hub, DHCP, Routing Table
A 4-port 10/100BaseT switching hub is included, complete with auto-crossover for easy connection to an existing hub. It also includes a DHCP Server, Routing table, and ARP proxy to cater for all network situations.

Access Filter
Gain fine control over the Internet access and applications available to LAN users. Five (5) user groups are available, and each group can have different access rights.

Special Applications
Use non-standard applications, where the port number used for the response is different to the port number used by the sender.

Virtual Servers
Allow Internet users to access Internet servers on your LAN. Easy configuration of standard servers such as Web, FTP or E-Mail servers, plus the ability to define you own Server types if required. And DDNS allows use of a Domain name

even with a dynamic IP address.

Multiple DMZ
If your ISP has given you multiple IP addresses, you can have multiple "DMZ" PCs. Each "DMZ" PC has unrestricted 2-way Internet access, providing the ability to run programs which are otherwise incompatible with NAT routers like the xDSL Load Balancer.

Block URL
Block access to undesirable Web sites by LAN users. You can even have different settings for different users.

Easy Setup and Management
Use your favorite WEB browser for configuration, even via the Internet (remote management). Or use SNMP; the choice is yours.

Specifications

WAN — 2-port 10Mbps RJ45; Auto-MDI/MDIX; 802.3/802.3u
LAN — 4-port 10/100Mbps RJ45; Auto-MDI/MDIX; 802.3/802.3u
Throughput — Over 12MBits/sec
Outbound Load Balance & Backup — Outbound load balance by bytes, packet, & session; Auto backup connection
Protocols —
Security: NAT, UPAP, CHAP;
Network: TCP/IP, DHCP, PPP, UPAP, PPPoE, Multi-session PPPoE;
Routing: static route for WAN & LAN, ICMP, ARP proxy, HTTP, RIP I/II;
Connection: static IP, dynamic IP, PPPoE, PPTP

VPN — PPTP & IPSec pass through PPTP client
Firewall — NAT (Network Address Translation); NAPT (Network Address Port Translation); DoS (Denial of Service); Access control by group; Ping to Death; ICMP filter for WAN; Packet filter; URL block;
Security —
Admin passwords; Authentication with UPAP and CHAP for PPPoE

Management — Management through WAN & LAN port; HTTP web based management; Email alert of disconnection
Firmware upgrade — HTTP web based download; TFTP download

Application — Support MSN & Netmeeting; Support with H.323 VoIP products; Multi-session PPPoE; SMTP bind; SNMP; NAT status & connection list; Virtual server; Multi-DMZ; MTU changeable for WAN; Dial-on-demand & Auto-disconnect; Dynamic DNS; MAC address clone; Transparent Bridge Mode

Power — DC 9V / 1A
Operating environment — 0° C to 40° C
Storage Temperature — -10° C to 70° C
Certification — CE Mark; FCC part 15 class A; UL
Dimensions — 245 x 37 x 30 mm (W x D x H)
Weight — 890 g

▼ *Ordering information*

ITEM	CODE
xDSL Load Balancer	.LRS8002AE

Load Balancer *LRS8004AE*

Key Features

▶ Flexible, High-Performance Dual Modem Support

▶ Integrated load balancing and auto backup connection

▶ Shared Internet access up to 253 users

▶ High-Performance NAT Router

▶ Multiple IP Address support. Fully supports situations wherer your ISP allocated multiple IP addresses.

▶ Advanced NAT features to set up DMZ, DDNS, Remote Management Routing, Virtual Servers, SNMP, and ARP proxy.

▶ 5 groups of access filter to LAN users

▶ VPN support

▶ Multiple DMZ

▶ QoS (Quality of Service) support

▶ Packet filter & block URL

▶ Easy setup and management

Smart Load Balancing
Three load balancing types allow administrators to manage the load balancing methods best suited to the LAN environment and to maximize bandwidth across different connections.

High availability with double bandwidth
For small-to-medium size business, LRS8004AE Load Balancer is the ideal product. With the LRS8004AE Load Balancer, up to 253 users are connected to the Internet with Double Broadband Speed.

QoS (Quality of Service)
LRS8004AE Load Balancer supports QoS for controlling traffic priority. With QoS, businesses can make the critical traffic or application at high priority and rotue first.

WAN port Health Check to against connection fail
LRS8004AE Load Balancer offers automatic outbound traffic backup to against the failure of either broadband connection to protect your business.

Specifications

WAN — 2-port 10Mbps RJ45; Auto-MDI/MDIX; 802.3/802.3u
LAN — 4-port 10/100Mbps RJ45; Auto-MDI/MDIX; 802.3/802.3u
Throughput — Over 40MBits/sec
Outbound Load Balance & Backup — Outbound load balance by bytes, packet, & session; Auto backup connection
Protocols —
Security: NAT, UPAP, CHAP;
Network: TCP/IP, DHCP, PPP, UPAP, PPPoE, Multi-session PPPoE, ICMP, ARP proxy;
Routing: static route for WAN & LAN, HTTP, RIP I/II;
Connection: static IP, dynamic IP, PPPoE, PPTP

VPN — PPTP & IPSec pass through PPTP client
Firewall — NAT (Network Address Translation); NAPT (Network Address Port Translation); DoS (Denial of Service); Access control by group; SPI (Stateful Packet Inspection); Ping to Death; ICMP filter for WAN; Packet filter; URL block;
QoS (Quality of Service) — Policy priority set by source and destination IP, source and destination MAC address, and service types
Security —
Admin passwords; Authentication with UPAP and CHAP for PPPoE

Management — Management through WAN & LAN port; HTTP web based management; Email alert of WAN fail; Syslog
Firmware upgrade — HTTP web based download; TFTP download
Application — Support MSN & Netmeeting; Support with H.323 VoIP products; Multi-session PPPoE; SMTP bind; SNMP; UPnP; NAT status & connection list; Virtual server; Multi-DMZ; MTU changeable for WAN; Dial-on-demand & Auto-disconnect; Dynamic DNS; MAC address clone; Transparent Bridge Mode

Power — DC 5V / 1.5A
Operating environment — 0° C to 40° C
Storage Temperature — -10° C to 70° C
Certification — CE Mark; FCC part 15 class A; UL
Dimensions — 245 x 37 x 30 mm (W x D x H)
Weight — 890 g

▼ ***Ordering information***

ITEM	CODE
Load Balancer	.LRS8004AE

Link Balancer *LRS8006AE*

Key Features

▶ Outbound traffic load balancing and failover

▶ Inbound traffic load balancing and failover

▶ Supports QoS (Quality of Service)

▶ Integrated firewall security features

For small-to-medium size business, LRS8006AE is the ideal product for inbound & outbound Load Balancing.

Outbound traffic load balancing and fail-over
Users request information from Internet servers, generating outbound traffic. LRS8006AE controls all of outbound traffic to optimal connection on three intelligent load balancing modes-by bytes, by packet, and by sessions. On three load balancing modes, traffics are assigned based on the bandwidth capability of each WAN port. Utilizing proprietary WAN port health check, the device will dynamically redirect outbound traffic to available link.

Inbound traffic load balancing and failover
Users on the Internet requests information from enterprise servers, generating inbound traffic.
LRS8006AE utilizes an advanced DNS algorithm to load balance and failover inbound traffic via DNS proxy responses. supports SOA, NS, A, MX, CNAME, and PTR records. LRS8006AE provides load balance and maintain network on two ISPs to against connection fail.

Support QoS (Quality of Service)
LRS8006AE Link Balancer supports QoS for controlling traffic priority. With QoS, businesses can make the critical traffic application at high priority and can be routed over the best routing connection.

Integrated firewall security features
LRS8006AE offers a powerful firewall capability, including NAT, NAPT, Denial of Service (DoS), access control by group, Ping to Death, ICMP filter for WAN, packet filter, and URL block. With the firewall security protection, users can avoid the threat of data stealing or a server crash caused by hackers.

Specifications

WAN — 2-port 10/100Mbps RJ45 Auto-MDI/MDIX; 802.3/802.3u
LAN — 4-port 10/100Mbps RJ45 Auto-MDI/MDIX; 802.3/802.3u
Throughput— Over 40MBits/sec
Two-Way Load Balancing — Inbound load balance;
Outbound load balance by bytes, packet, & session;
Auto backup connection
Protocol — *Security:* NAT, UPAP, CHAP; *Network:* TCP/IP, HTTP, DHCP, PPP, UPAP, PPPoE, Multi-session PPPoE, ICMP, ARP proxy;
Routing: static route for WAN & LAN, RIPv1, RIPv2;
Connection: static IP, dynamic IP, PPPoE, PPTP

VPN — PPTP & IPSec pass through PPTP client
Firewall — NAT, NAPT, DoS, Access control by group, Ping to Death, Port Scan, SPI, ICMP filter for WAN, Packet filter, URL block
QoS (Quality of Service) — Policy priority set by source and destination IP, source and destination MAC address, and service types
Security — Admin passwords; Authentication with UPAP and CHAP for PPPoE
Management — Management through WAN & LAN port;
HTTP web based management:
Email alert of WAN fail;
Syslog;

Application — Support MSN & Netmeeting;
Support with H.323 VoIP products;
Multi-session PPPoE;
SMTP bind; SNMP; UPnP;
NAT status & connection list;
Virtual server; Multi-DMZ;
MTU changeable for WAN;
Dial-on-demand & Auto-disconnect;
Dynamic DNS; MAC address clone;
Transparent Bridge Mode;
Disable Port Translation
Firmware Upgrade —
HTTP web based download;
TFTP download;

POWER — DC 5V / 1.5A
Operating Environment — 0°C ~ 40°C
STORAGE TEMPERATURE — -10°C ~ 70°C
CERTIFICATION — CE Mark; FCC part 15 class A; UL
DIMENSIONS — 245 x 137 x 30 mm (W x D x H)
WEIGHT — 890 g

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