D-Link®

DFL-1500

Rack-mount firewall/VPN router with complete access control, intruder protection, load balancing remote VPN connection and DMZ functions for company networks.

Network Secure Firewall/VPN Router for Enterprise

The DFL-1500 is a cost-effective firewall/VPN router that provides comprehensive network protection, performance and reliability. This firewall/VPN router offers an ideal protection for the enterprise, with complete security against outside intruders, Virtual Private Network (VPN) support, network availability through connection backup/load balancing, and easy administration.

Firewall Protection
Your office is connected to the outside world through the Internet. It is easy for hackers to intrude your databases to steal or destroy data. The DFL-1500 provides a wide range of protection against outside attacks, plus comprehensive security that includes user authentication, scheduled policies and Virtual Server Mapping. The DFL-1500 provides NAT translation of IP addresses from the internal private network to the public IP network.

Content Filtering
As part of its firewall protection, the DFL-1500 provides filtering of potentially malicious codes embedded in web pages to remove Active objects, java, JavaScript and other potential threats.

Network Backup/Load Balance
The DFL-1500 implements intelligent auto-routing algorithm to dynamically balance outgoing traffic to multiple WAN links. It does not require configuration of complex routing table the way normal routers do, hence minimizes the effort of MIS. The DFL-1500 supports different types of WAN connections, including leased line (e.g. T1, E1), broadband (DSL/cable modem) and ISDN. By substituting expensive leased lines with multiple broadband links, you can save substantial WAN connection fee while maintaining a high level of connection reliability.

Multihoming
Stable and highly available Web connectivity has become a basic requirement for many enterprises and organizations whose businesses depend on the Internet. To meet this requirement, a vital technology called multihoming becomes necessary. Multihoming is as important to outbound traffic as auto-routing to inbound traffic. DFL-1500 offers true multihoming that load-balances inbound traffic as well as detects and redirect traffic away from the failed links. It does not need complex BGP programming or cooperation from ISP.

High Availability
As an advanced fail-over function, 2 DFL-1500 devices can work as a team in a master-slave fashion. Normally the master is the active device while the slave is its backup. Should the master go out of service, the slave will become active and take over the role of the master until the master is back on-line again. The fail-over mode offers the ultimate fault tolerance for organizations that demand the highest availability.

Bandwidth Management/QoS
The quality of the services may degrade or even fail due to bandwidth misuse. How to guarantee the quality of service (QoS) becomes an important topic of today's enterprises. Adding more bandwidth is not really a solution because it does not guarantee availability. The correct way of solving this problem is to apply bandwidth management. With the DFL-1500's built-in bandwidth management capability, you can easily set up bandwidth policies based on their network configuration and company's policies. DFL-1500 will make sure that bandwidth need of anticipated traffic can be met and bandwidth consumption of unexpected traffic is monitored and controlled. Bandwidth policies of the DFL-1500 can be specified based on source, destination (IP or subnet), and applications.

Access Control
Administration access can be controlled such that the DFL-1500 can be administered from the protected internal network or the external public Internet. The DFL-1500 supports an internal database for authenticating user access to various services. It maps public IP addresses to information servers on the internal network to allow public access. You can also prevent access to particular web sites, using powerful pattern matching to block access to URLs.

Scheduled Policies
Firewall policies may be scheduled for different times of the day/week/month and for one time use or recurring.

LAN-to-LAN VPN Connection
The DFL-1500 supports VPN functions including IPSec, ESP security in tunnel mode, LAN to-LAN and mobile remote access.

Hardware Acceleration
The DFL-1500 uses a special design ASIC to perform VPN encryption and decryption. This off-loads CPU loading through hardware-based acceleration.

Management
The DFL-1500 supports web-based management using a secure SSL connection from a remote terminal either on the internal corporate network or even from an external remote site. The DFL-1500 can also be administered on-site using its RS-232 serial connection.

Key Features

- *Firewall protection with content filtering*
- *VPN router with IPSec data encryption/authentication, VPN tunnels and VPN pass-through support*
- *Fast hardware-based VPN encryption and decryption*
- *5 10/100BASE-TX ports user-configurable as WAN ports, internal LAN ports and DMZ port*
- *Secure system management via VPN Tunnel on an interface*
- *Session bandwidth control in VPN tunnel*

- *Configurable as 2 WAN ports with integrated WAN load balancer/backup*
- *Automatic checking of WAN connection statusUser authentication/access control*
- *Scheduled policies/parental control with URL/domain blocking*
- *Bandwidth management with real-time monitoring providing traffic detail viewable via Web browser*
- *Web-based management and remote control via browser*
- *Software update via browser*

Hardware

Processor
Intel Celeron 1.2GHz

System Memory
On-board 256MB

Flash Memory
32MB Compact Flash card

Network Interfaces
5 10/100Mbps ports (every port can be configured as trusted (LAN) or DMZ or un-trusted (WAN) port, max. 2 WAN ports, 1 DMZ port)

LED Indicators
- Power
- Status
- Interface link and activity

Software

Security Features
- **Firewall:** Stateful Packet Inspection (SPI) to Prevent Denial of Service (DoS) attacks (Syn flood, ICMP flood, UDP flood, "ping of death", IP spoofing, land attack, tear drop attack, IP address sweep attack, Win Nuke attack), Intrusion Detection System (IDS) including logging, reporting and e-mail alerts, address, service and protocol, Web URL content filtering.

- **VPN Functionality:** 2,000 dedicated VPN tunnels, manual key and IKE Security Association (SA) assignment, 56-bit (DES) or 168-bit (3DES) IPsec encryption algorithm, MD5 or SHA-1 authentication algorithm, pre-shared key, perfect forward secrecy (Diffie-Helman and Oakley client support), key life and IKE lifetime time settings, prevent replay attack, remote access VPN (client-to-site), site-to-site VPN.

- **Mode of Operation:** Network Address Translation (NAT), static routing, unrestricted users per port.

Protocol Support
- **Network:** IP routing, TCP/IP, UDP, ICMP, PPPoE
- **IP addressing:** DHCP (client and server)
- **Routing:** RIP v1, RIP v2 (Static Routing, Dynmic Routing)
- **VPN/ Security:** IPSec (ESP), MD5, SHA-1, DES, 3DES, IKE, PPTP, L2PT

RFC Support
- PPTP client and server (RFC 2637)
- IPSec tunnel mode (RFC 2401)
- HMAC-MD5-96 (RFC 2403)
- HMAC-SHA1-96 (RFC 2404)
- Encapsulation Security Payload Protocol (RFC 2406)
- DHCP server (RFC 2131)
- DHCP client (RFC 2131)
- TFTP client (RFC 1350)
- IP routing (RIP1, RIP2) (RFC 2453)
- NAT (many-to-one) (RFC 1631)
- PPPoE (RFC 2516)

Authentication
- HMAC MD5 or HMAC SHA-1 Authentication/data integrity

Key Exchange
- Automatic IKE based on Pre-Shared Key

Attack Protection Provided
- IP Source Routing
- IP Spoofing
- SYN flood attack
- ICMP flood
- UDP flood
- Land attack
- Address sweep attack
- Tear drop attack
- Win nuke attack
- Port Scan attack
- Ping of Death

Number of Dedicated VPN Tunnels
2,000 (max.)

Number of Concurrent Sessions
460,000 (max.)

User Authentication Support
RADIUS external database

On-Site Configuration Setup
Through RS-232 console port

Physical & Environmental

Power Input
100 to 250VAC internal switching power supply

Power Consumption
120 watts (max.)

Dimensions
426 x 240 x 46 mm (standard rack-mount width, 1 U height)

Operating Temperature
$0°$ to 60 $°$C

Storage Temperature
-25$°$ to 70 $°$C

Humidity
5% to 95% non-condensing

EMI Certification
- FCC Class A
- CE Class A

Safety
- CSA international

CSA 950
UL 1950
IEC 950
EN 60950

Ordering Information

Firewall/VPN Router
DFL-1500   5 10/100BASE-TX ports

For country-specific power cord, please specify one of the following after the model number:

/A	Includes an American standard power cord
/BE	Includes both EU and U.K. standard power cord
/N	Includes an Australian standard power cord
/E	Includes an EU standard power cord
/B	Includes an UK standard power cord
/CN	Includes a China power cord

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