BLACK BOX ®
NETWORK SERVICES

V-TUNNEL

V-TUNNEL 25

V-TUNNEL 50

V-TUNNEL 100
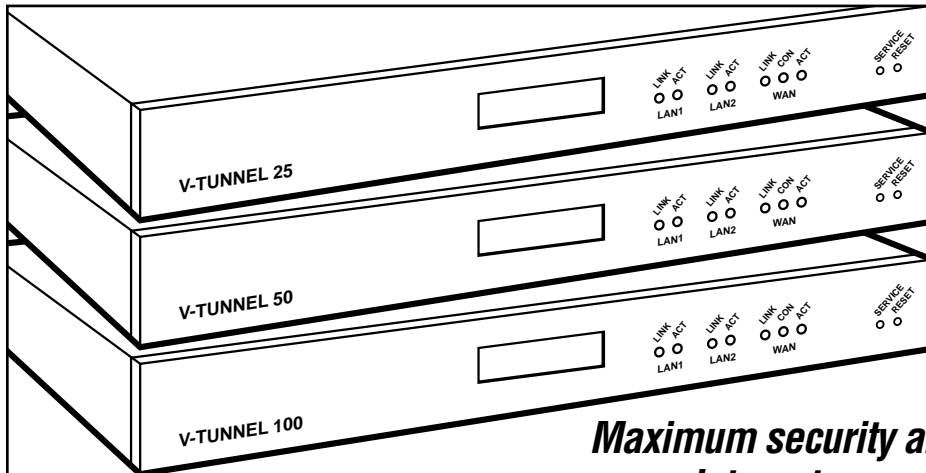
Maximum security and performance over the Internet are yours with V-Tunnel.

Key Features

▶ *Secure communications over the Internet.*

▶ *IPSec key management.*

▶ *3-DES encryption.*

▶ *Handles not only one 2-Mbps (E1) line, but also multiple T1/E1 lines.*

▶ *Fast Ethernet functionality.*

▶ *Lets you manage your network via SNMP or a popular browser.*

▶ *Use digital certificates at no extra cost.*

Secure data connections over the Internet are yours with V-Tunnel from Black Box. It uses a Virtual Private Network (VPN) instead of leased lines to connect data links between branch offices, home offices, and computer users on the road. And you pay only for a single Internet connection.

Security
A Virtual Private Network (VPN) offers the same functionality as a traditional private network, but instead uses the Internet to create "virtual leased lines" that tunnel through the public network. Since encryption protocols are always used with VPNs, encrypted data sent over a VPN is actually more secure than non-encrypted data sent over traditional leased-line connections.

Specifically, V-Tunnel offers the following security features:

• IP Security Standard (IPSec), the security standard developed by the IP Security Working Group of the Internet Engineering Task Force (IETF), is the most secure and comprehensive standard available today for encryption, authentication, and key management.

• IKE key exchange (called IKE) is the automated key-exchange protocol in IPSec that's used each time a VPN tunnel is established. The IKE determines which protocol, algorithms, and keys to use and verifies that both ends in the communication are who they claim to be. Then it negotiates a session key, which is a temporary key used by IPSec for data encryption and authentication. IKE can use certificates or shared keys to verify the identities of both ends.

• The V-Tunnel uses 3-DES, the most trusted encryption algorithm today, which can encrypt with an effective strength of 112 bits. Other algorithms are considered to be equally good or better, but these have not been as thoroughly checked and tested. The predecessor to 3-DES, simply named DES, is no longer trusted as well, since the key is so short that hackers can probably decipher it easily.

• A built-in firewall features Network Address Translation (NAT), which is hidden inside the IP addressing. Packet filtering discards unwanted traffic based on the IP address. And spoofing filtering prevents attacks containing internal source addresses.

• The V-Tunnel supports X.509 digital certificates and has a built-in certification authority.

8/10/2000   #24851

Digital certificates are a bit of structured information issued by a certificate authority (CA). *Digital signatures* testify (or certify) that a public key belongs to a particular person. The CA issues a digital certificate. The digital certificate is sent together with an encrypted message to verify that the sender is indeed the entity identified in the transmission.

Performance

This powerful combination of high-level security and high-speed performance makes V-Tunnel easy to fit into any existing corporate network. It handles not only one 2-Mbps (E1) line, but also multiple T1/E1 lines. It can share T3/E3 connections with other services, and features Fast Ethernet functionality.

Hardware compression in V-Tunnel doubles the amount of data that can be pushed through the Internet tunnels.

Available models

The V-Tunnel comes in three models:

• For small-office applications, choose V-Tunnel 25 (it supports up to 20 users) or V-Tunnel 50 (it supports 5-Mbps 3-DES encryption and up to 100 remote users).

• For enterprise networks, choose V-Tunnel 100. It supports 20-Mbps 3-DES encryption for up to 1000 remote users.

How do I get started?

• V-Tunnel can be mounted in a rack and is easy to install and configure. The administration tool resides on your PC that's directly connected to the box. The final installation stage is performed remotely using the browser's encryption capabilities. V-Tunnel integrates easily into existing networks through 10/100BASE-T interfaces.

• You can set up V-Tunnel in three ways: parallel mode (requires no changes in the current network setup), serial mode (set up directly towards the Internet with an external router), or extranet mode (creates an extra-secure DMZ network with limited access).

• You can manage your network easily. In Web-enabled mode, local or remote configuration is easy with popular browsers. In SNMP interface mode, you can monitor the network via network administration software, like HP OpenView.

Specifications

Authentication: MDS in hardware, SHA-1 hash processing

Certification Authority: Built-in

Compression: Lempel-Ziv hardware data compression

Digital Certificates: X.509v3 standard

Encryption: 192/168/128-bit, 3-DES hardware encryption (112-bit effective protection)

Firewall: Full NAT with packet filtering

Key Exchange: IKE (ISAKMP/Oakley 1024-bit Diffie-Helman)

Management: Browser-based configuration and management, SNMP

Memory: 16 MB RAM, 8 MB Flash

Operating System: Linux®

Processor: 175 Dhrystone Mips RISC

Routing: IP, RIP, OSPF routing with bridging of all other protocols

Tunneling: IPSec (ESP)

Indicators: LEDs: LAN: (2) LINK, (2) ACT; WAN: (1) LINK, (1) CON, (1) ACT; System: (1) Service, (1) Reset

Connectors: (2) RJ-45 10/100BASE-T, PCI slot

Power: 100 to 240 VAC, 47 to 63 Hz

Size: 1.7"H x 16.1"W x 9.8"D (4.4 x 41 x 25 cm)

Weight: 6.6 lb. (3 kg)

Why Buy From Black Box? Exceptional Value. Exceptional Tech Support. Period.

Recognize any of these situations?

• You wait more than 30 minutes to get through to a vendor's tech support.

• The so-called "tech" can't help you or gives you the wrong answer.

• You don't have a purchase order number and the tech refuses to help you.

• It's 6 p. m. and you need help, but your vendor's tech support line is closed.

According to a survey by Data Communications magazine, 90% of network managers surveyed say that getting the technical support they need is extremely important when choosing a vendor. But even though network managers pay anywhere from 10 to 20% of their overall purchase price for a basic service and support contract, the technical support and service they receive falls far short of their expectations—and certainly isn't worth what they paid.

At Black Box, we guarantee the best value and the best support. You can even consult our Technical Support Experts before you buy if you need help selecting just the right component for your application.

Don't waste time and money—call Black Box today.

What the Package Includes

• V-Tunnel

• (2) CD-ROM disks: (1) client software, (1) installation manager

• (1) 6-ft. (1.8-m) CAT5 cable

• Power supply

• Quick install guide

• Comprehensive users' manual

Ordering Information

ITEM	CODE
V-Tunnel	
25	LR7001A-25
50	LR7001A-50
100	LR7001A-100
To connect the V-Tunnel to a leased line, order…	
WAN Interface Card	LR7003C
CSU/DSU MS	MT132A-R2
You might also want to order…	
Category 5 Solid-Conductor Cable, 4-Pair, Straight-Pinned, PVC, 10-ft. (3-m)	EYN737MS-0010