

## Cisco Secure PIX Firewall 525

THE CISCO SECURE PIX FIREWALL 525 IS PART OF THE WORLD-LEADING CISCO SECURE PIX FIREWALL SERIES, PROVIDING TODAY'S NETWORKING CUSTOMERS WITH UNMATCHED SECURITY, RELIABILITY, AND PERFORMANCE. IDEAL FOR PROTECTING THE ENTERPRISE HEADQUARTERS' PERIMETER, THE PIX 525 DELIVERS FULL FIREWALL PROTECTION, AS WELL AS IP SECURITY (IPSEC) VIRTUAL PRIVATE NETWORK (VPN) CAPABILITIES.

### Strongest Security

The growth of the Internet has resulted in increased security risks to corporate, government, and private networks. Existing solutions such as proxy-based firewalls that run at the application level have many limitations, including slow performance, the need for costly general-purpose platforms, and the security risks inherent in using an open system such as UNIX.

The Cisco Secure PIX Firewall offers an unprecedented level of security protection. At the heart is a protection scheme based on the Adaptive Security Algorithm (ASA), which offers stateful connection-oriented firewalling. Stateful security is less complex and more robust than packet filtering. It also offers higher performance and is more scalable than application-level proxy firewalls. The ASA tracks the source and destination address, Transmission Control Protocol (TCP) sequence numbers, port numbers, and additional TCP flags of each packet. Access is permitted through the Cisco Secure PIX Firewall only if an appropriate connection exists to validate passage. This gives organizations transparent access for internal and authorized external users, while protecting internal networks from unauthorized access.

The real-time embedded system also enhances the security of the Cisco Secure PIX Firewall series. Although UNIX servers are ideal open-development platforms with widely available source codes, such general-purpose operating systems provide less-than-optimum performance and security. The dedicated Cisco Secure PIX Firewall series is designed specifically for secure, high-performance protection.



### Secure VPN Interoperability with IPsec

Firewalls have traditionally provided perimeter security by maintaining stateful control of all connections between connected network segments. Today, more and more customers are looking to the firewall for VPN services in addition to access control. With a VPN, remote users or distributed branches can securely access corporate networks at a low cost. Using the Internet for access dramatically reduces the telecommunications costs associated with previous leased-line or other dedicated networks. Companies also no longer need to maintain large modem banks and access servers—a large capital outlay and administrative headache—to handle remote dial-in users. With just a local phone call to an Internet Service Provider (ISP), users can securely access private corporate intranets over the Internet.

The PIX 525 enables secure private communications over the Internet or any IP network. It integrates key features of VPNs—tunneling, data encryption, security, and firewalling—to provide a secure, scalable platform to better and more cost-effectively accommodate remote-access, remote-office, and extranet connectivity using public data services. The PIX 525 provides users with a complete implementation of IPsec standards. IPsec ensures confidentiality, integrity, and authenticity. For secure data encryption, Cisco's implementation of IPsec supports both the 56-bit Data Encryption Standard (DES) and 168-bit Triple DES algorithms.

### Extremely Reliable

The PIX Firewall offers unsurpassed reliability, with a mean time between failure (MTBF) of more than 60,000 hours. Even with this level of dependability, organizations whose Internet, intranet, or extranet connections are their corporate lifeline know that firewall redundancy is critical. Every minute a firewall is down means lost revenue, opportunity, or critical information. Cisco has created a failover bundle package for use with the PIX 525-UR, enabling this need to be met simply and inexpensively. This package provides organizations with a second firewall designed to run exclusively in failover mode, for a fraction of the cost of a standard PIX 525-UR bundle.

### Amazing Flexibility

The Cisco Secure PIX Firewall 525 supports a broad range of network interface cards (NICs). Standard NICs include single-port or four-port 10/100 Fast Ethernet, Gigabit Ethernet, 4/16 Token Ring, and dual-attached multimode FDDI cards.

The PIX 525 also offers multiple power supply options. Users can choose between AC or a 48 DC power supply. Either option can be paired with a second "Failover" PIX system for the ultimate in redundancy and high-availability.

### Key Features and Benefits

- *Part of a Cisco End-to-End Solution*—Allows businesses to extend a cost-effective, seamless network infrastructure to the branch office
- *Lowest Cost of Ownership*—Simple to install and configure, resulting in little network downtime. In addition, permits transparent support of Internet multimedia applications, eliminating the need to physically modify and reconfigure each client workstation or PC
- *Non-UNIX, Secure, Real-Time, Embedded System*—Eliminates the risks associated with a general-purpose operating system and delivers outstanding performance
- *Standards-Based VPN*—Enables administrators to reduce the costs of connecting mobile users and remote sites to the corporate network over the Internet or other public IP networks

- *Adaptive Security Algorithm*—Provides stateful security for all TCP/IP sessions to protect sensitive, private resources
- *Stateful Failover/Hot Standby*—Delivers high availability to maximize network reliability
- *Network Address Translation (NAT)*—Saves costly IP renumbering; expands network address space; obscures IP addresses from the outside world
- *Cut-Through Proxy*—Offers highest authentication performance in the industry; lowers cost of ownership by reusing existing authentication database
- *Multiple Network Interface Cards*—Provides strong security for Web and any other publicly accessible servers, multiple extranet links to different partners, protected logging and URL filtering servers, and more
- *Up to 280,000 Simultaneous Connection Support*—Dramatically outperforms proxy servers, resulting in deployment of fewer firewalls
- *Prevention of Denial-of-Service Attacks*—Protects the firewall, as well as the servers and clients behind it from disruptive or damaging hackers
- *Broad Range of Supported Applications*—Reduces the impact of a firewall on network users
- *Java Applet Filter*—Enables firewall to stop potentially dangerous Java applications on a per-client or per-IP address basis
- *Multimedia Application Support*—Reduces administrative time and cost required to support these protocols; requires no special client configurations
- *Easy Setup*—Allows a general security policy to be implemented in as little as six commands.
- *Compact Design*—Requires only two rack units
- *URL Filtering*—Provides the ability to control which Web sites users visit and maintains an audit trail for accounting purposes, when combined with Websense Enterprise software; has minimum impact on PIX Firewall performance
- *Mail Guard*—Removes the need for external mail relay in the perimeter network and eliminates service-denial attacks on external mail relays

## Technical Specifications

### Hardware

- Processor: 600 MHz Intel Pentium III
- Random Access Memory: Up to 256 MB
- Flash Memory: 16 MB
- Interfaces: Dual integrated 10/100BaseT Fast Ethernet, RJ-45
- PCI Slots: 3
- Console Port: RJ-45
- Device Update Process: Trivial File Transfer Protocol (TFTP) only
- Failover Port: DB-15 (RS 232)

### Physical Dimensions

- Height: 3.5 (8.89 cm)
- Width: 17.5 in. (44.45 cm)
- Depth: 18.25 in (46.36 cm)
- Weight:~ 32 lb (14.5 kg)

### Power Requirements (AC, DC)

- Autoswitching: 100-240 VAC
- Frequency: 50-60 Hz
- Current: 5-2.5 amps

### Operating Environment

- Operating Temperature: -5 to +55°C (-25 to 131°F)
- Nonoperational Temperature: -25 to +70°C (-13 to 158°F)
- Operational Humidity: 95% relative humidity (RH)
- Operational Altitude: 3000m (9843 feet), 40°C (104°F)
- Nonoperational Altitude: 4570m (15,000 feet), 25°C (77°F)
- Operational Shock: 1.14 m/sec (45 in./sec) 1/2 sine input
- Nonoperational Shock: 30G
- Operational Vibration: 0.41 Grms<sup>2</sup> (5-500 Hz) random input
- Nonoperational Vibration: 0.41 Grms<sup>2</sup> (5-500 Hz) random input
- Heat Dissipation (worst case with full power usage): 410 BTU/hr
- EMI: CE, VCCI class II, FCC, BCIQ, Austel
- Safety Agencies: UL, C-UL, TUV, IEC 950
- UL-1950 Standard: 3rd edition
- TUV EN 60950: 2nd edition, Am.1-4
- IEC-950/VDE-0805 EN-60-950 Standard: Yes
- Bellcore: No

## Restricted Software

The PIX 525 with a restricted software license provides the entry to enterprise level security and performance. The 525-R includes 128 MB of RAM and the ability to use up to six 10/100 Fast Ethernet interfaces.

## Unrestricted Software

Designed for the large-enterprise organization, the PIX 525 with an unrestricted license provides all the functionality of the PIX 525-R, and more. The 525-UR adds the ability to statefully failover to a backup PIX firewall, as well as support and additional two (for a total of eight) 10/100 Fast Ethernet ports. It has enough power for more than 280,000 concurrent connections and up to 370 Mbps of clear text throughput.

## Cisco Secure PIX 525 Firewall Pricing and Part Numbers

PIX-525-R-BUN	PIX 525 Restricted Bundle (Chassis, restricted software, two 10/100 ports)
PIX-525-UR-BUN	PIX 525 Unrestricted Bundle (Chassis, unrestricted software, two 10/100 ports)
PIX-525-FO-BUN	PIX 525 Failover Bundle (Chassis, failover software, two 10/100 ports)
PIX-PL2	Private Link 2 DES only encryption accelerator card
PIX-1FE	One 10/100 Mbps Ethernet interface, RJ45
PIX-4FE	Four-port 10/100 Mbps Ethernet interface, RJ45
PIX-1GE	Single Gigabit Ethernet Interface for PIX Firewall
PIX-1TR	One 4/16 Mbps Token-ring interface
PIX-FDDI	FDDI Interface for PIX Firewall
PIX-VPN-DES	56-bit DES IPsec software license for PIX Firewall
PIX-VPN-3DES	168-bit 3DES IPsec software license for PIX Firewall

## Export Considerations

The PIX 525 encryption software may be export controlled.

Please refer to the export compliance Web site at: <http://www.cisco.com/wwl/export/crypto/> for guidance. For specific export questions, please contact [export@cisco.com](mailto:export@cisco.com)

## Additional Information

Cisco Secure PIX Firewall:

<http://www.cisco.com/go/pix/>

Cisco Enterprise Virtual Private Network Solutions:

<http://www.cisco.com/go/evpn/>

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