
New Products: Cisco 827 and Cisco 827-4V — ADSL Routers

Product Overview

The Cisco 827 business-class ADSL routers provide business-class functionality for small offices and corporate teleworkers through the power of Cisco IOS technology. They enable service providers and resellers to increase service revenue by supporting features for differentiated classes of service, integrated toll-quality voice/ data, and business-class security. These value-added features, along with the manageability and proven reliability of Cisco IOS technology, provide the mission-critical networking that businesses require.

Internet service providers and resellers must deliver New World services and platforms to stay competitive in today's Internet economy. The Internet economy is producing an explosion of network-savvy small and medium-sized businesses (SMBs), opening an enormous market opportunity for business-class services. SMBs need enterprise-like services to support guaranteed access to critical information and intelligent, application-aware network services.

They don't have the budgets and resources for enterprise-level solutions but want reliable, secure, and flexible service options that deliver scalable services as their business needs grow. And they need a solution that is simple, yet robust.

The newest member of the award-winning Cisco 800 series is the Cisco 827 business-class asymmetric digital subscriber line (ADSL) router. With the software-upgradable platform of the Cisco 827, service providers and resellers can increase revenue by offering DSL services today and provide value-added services as customer technology needs grow.

The Cisco 827 is ideal for up to 20 users in a small office or as an enterprise telecommuting solution, supporting scalable, secure, quality, and proven business solutions such as:

- Differentiated classes of service
- Intranet toll-quality voice
- Business-class security

Because the Cisco 827 is based on Cisco IOS technology, service providers and resellers can leverage their training and investments in Cisco IOS software to reduce their overall costs of doing business. With key management and troubleshooting features, service providers and resellers can cost-effectively deploy and manage the Cisco 827 router at the business customers' premises, thanks to the following advantages:

- Cisco IOS manageability, including interactive diagnostics/debug features
- Familiar Cisco IOS command-line interface (CLI)
- Proven reliability

Key Features and Benefits

Table 8-1: Features and Benefits of Cisco 827

Feature	Benefit
Differentiated Classes of Service	
Quality of Service (QoS)/ Class Based Weighted Fair Queuing	Ensures consistent response times for multiple applications by allocating bandwidth intelligently Allows for classification of applications and gives the most important applications priority use of the WAN line
ATM traffic UBR, VBRnrt, VBRrt and CBR with per VC queuing and traffic shaping	Ensures QoS guarantees for real-time traffic, with ability to send traffic over the appropriate Virtual Circuit to provide ATM level shaping and ensure that no head of line blocking can happen between circuits of different or equal traffic-classes.
Choice of Encapsulation (PPP over ATM and RFC 1483)	Ensures compatibility with existing network
Integrated Toll Quality Voice/Data	
Four Analog Telephone (FXS) Interfaces	Provides toll quality, award winning derived voice over IP and software-upgradeable to Voice over ATM/AAL2 (CYQ3 '00).

Feature	Benefit
Standards-Based H.323 (H.225) signaling	Allows an ecosystem of third party vendors to develop applications for a complete solution; allows rapid low-cost deployment of Voice over IP
DSPs and Voice Compression Codecs G.711, G.729, G.723.1	Provides hardware based compressed voice to fit significantly more voice lines over a single copper pair without breaking to the end-to-end delay budget.
Business Class Security	
PAP, CHAP, MS-CHAP, and ACLs	Protect network from unauthorized access
Route and Router Authentication	Accepts routing table updates from only known routers, which ensures no corrupt information from unknown sources is received
NAT/PAT	Hides internal IP addresses from external networks Prevents certain denial of services attacks from outside networks on internal hosts
Enhanced Security	
Cisco IOS Firewall Feature Set (available on the Cisco 827 in 2HCY00)	Offers internal users secure, per-application dynamic access control (stateful inspection) for all traffic across perimeters Defends and protects router resources against denial-of-service attacks Checks packet headers, dropping suspicious packets Protects against unidentified, malicious Java applets Details transactions for reporting on a per-application, per-feature basis
IPSec Encryption (available on the Cisco 827 in 2HCY00)	Ensures confidential data integrity and authenticity of origin by using standards-based encryption Provides encryption for all users on the LAN without configuring individual PCs
Lower Cost of Operations	
Cisco IOS interactive debug features	Allows service providers to remotely or locally diagnose network problems in detail (e.g. via telnet or terminal connection into the router)
Cisco IOS CLI	Allows customers to leverage existing knowledge of Cisco IOS CLI for easier installation and manageability without additional training
Simplified Set Up, Installation, and Management	
Cisco Fast Step Software	Simplifies high volume installation with easy three step, non-technical graphical user interface
NAT/PAT	Lets businesses and service providers conserve valuable IP address space Reduces time and costs by reducing IP address management
Cisco IOS Easy IP	Enables true mobility-client IP addresses to be transparently configured via the Cisco IOS Dynamic Host Control Protocol (DHCP) server each time a client powers up
Color-coded Ports and Cables and Quick Start Reference Guide	Helps users make proper connections Provides easy-to-follow installation instructions
SNMP	Remote management and monitoring via SNMP, Telnet or HTTP and local management via console port
Proven Reliability	
Cisco IOS Technology	Offers technology that is used throughout the backbone of the Internet and in most enterprise networks.
Safe Investment	
Field-expandable Memory	Allows customers to add features as networking needs expand
Advanced Processor and Memory Architecture	Ensure the platform can support processor-intensive applications
World-class Support	Helps customers keep their Cisco 800 series routers running all the time

Specifications

Hardware

Table 8-2: Cisco 827 Hardware Specifications

Hardware Specifications	Cisco 827	Cisco 827-4V
Processor	MMC 855T RISC	MMC 855T RISC
Speed	50 MHz	50 MHz
Default DRAM1 Memory	16 MBytes	24 Mbytes
Maximum DRAM Memory	32 MBytes	32 Mbytes
Default Flash2 Memory	12 MBytes	12 Mbytes
Maximum Flash Memory	20 MBytes	20 Mbytes
Analog Telephone Ports	-	4
REN	-	5 REN/ port
Ethernet	10 Mbps	10 Mbps
Console	RJ-45	RJ-45
LEDs	7	11
Support for Kensington-Style Physical Lock	Yes	Yes
Stackable	Yes	Yes
Crossover Hub Switch (To PC - To HUB)	Yes	Yes
Power Supply	Universal 100-240V AC	Universal 100-240V AC

Software

Table 8-3: Memory Requirements for Cisco 827 IOS Feature Sets

Cisco 827 IOS Feature Sets	Cisco 827 Memory Requirements	
	Flash	DRAM
IP	12 MB	16 MB
IP Plus	12 MB	16 MB
IP/IPX/Plus	12 MB	20 MB
IP Firewall	12 MB	20 MB
IP Firewall Plus	12 MB	20 MB
VPN IPX Feature Set: IP/IPX/Plus/Firewall/IPSec 3DES	12 MB	20 MB
VPN Feature Set: IP/Plus Firewall IPSec 56-bit DES	12 MB	20 MB

Table 8-4: Memory Requirements for Cisco 827-4V IOS Feature Sets

Cisco 827-4V IOS Feature Sets	Cisco 827-4V Memory Requirements	
	Flash	DRAM
IP/ Voice Plus 1	12 MB	24 MB
IP/IPX/Voice Plus	12 MB	24 MB
IP/Firewall/Voice Plus 1	TBD	TBD

Cisco 827-4V IOS Feature Sets	Cisco 827-4V Memory Requirements	
VPN/IPX/Voice = IP/IPX/Firewall/Voice Plus IPSec 3DES 1	TBD	TBD
VPN/Voice = IP/Firewall/Voice Plus IPSec 3DES 1	TBD	TBD

Ordering Information

Product and Part Numbers

Part Numbers for the Cisco 827 and Cisco 827-4V

Part Description	Part Number
Cisco 827 router - 1 Ethernet/1 ADSL	Cisco827
Cisco 827-4V router - 1 Ethernet/4 Voice Port	Cisco827-4V

Cisco 827 Platform Memory Options

DRAM Factory Upgrades

Cisco 820 Series 16MB-20MB DRAM factory upgrade	MEM820-16U20D
Cisco 820 Series 16MB-24MB DRAM factory upgrade	MEM820-16U24D
Cisco 820 Series 16MB-32MB DRAM factory upgrade	MEM820-16U32D
Cisco 820 Series 24MB-32MB DRAM factory upgrade	MEM820-24U32D

FLASH Factory Upgrades

Cisco 820 Series 12MB-20MB FLASH factory upgrade	MEM820-12U20MFC
--	-----------------