





Cisco SOHO Series and 800 DSL Routers

The Cisco SOHO Series and 800 Series routers provide business-class features to small offices and teleworkers for ADSL, ADSL over ISDN, or G.SHDSL WAN connections. The SOHO Series allows multiple users to share a DSL line with basic Internet security while the Cisco 800 Series adds a stateful inspection firewall and support for integrated VPNs for secure business connections, along with the proven reliability and manageability of Cisco IOS® Software. Cisco SOHO and 800 Series DSL routers offer the following models:

- Cisco SOHO 76 and 826 ADSL over ISDN routers
- Cisco SOHO 77H and 827H and 827-4V ADSL routers
- Cisco SOHO 78 and 828 G.SHDSL

			
			
Features @ FCS	Cisco SOHO 76 and SOHO 77H	Cisco 826, 827H, 827-4V	Available Since
			FCS* 12.11XB and later 12.3XG
Security			
IP ACLs	X	X	FCS
Time based, reflexive and dynamic ACLs	-	X	FCS
EIGRP, Route and Router Authentication	-	X	FCS
Multi-Level Login Access (Users & Administrators)	X	X	FCS
Physical lock: Kensington compatible locking slot	X	X	FCS
IPSEC, 3DES	-	X	FCS
Secure Shell (SSH) ¹	-	X (IPSEC)	12.2(2)XD



Features @ FCS (Continued)	Cisco SOHO 76 and SOHO 77H	Cisco 826, 827H, 827-4V	
NAT Passthrough for IPSEC ²	X	X	12.2(2)XK
TACACS+	-	X (Plus)	FCS
Radius client ²	-	X (Plus)	12.2(2)XK
Lock and key	-	X	FCS
L2TP tunneling	-	X	FCS
Stateful Inspection Firewall	X	X	FCS
Java Blocking	X	X	FCS on 800
Denial of Service Detection & Prevention	X	X	FCS on 800
Real Time Alerts	X	X	FCS on 800
QoS			
ATM Layer: CBR, UBR and VBR-nrt	X	X	FCS
CAR ³	-	X (Plus)	12.2(2)XH
Real Time: VBR-rt	-	X	FCS
Per VC shaping and queuing	X (shaping only)	X	FCS
Policy-based Routing	X	X	FCS
Low Latency Queueing ⁴	-	X	12.1(5)YB
Link Fragmentation and Interleaving ⁴	-	X	12.1(5)YB
TX Ring adjustment ⁴	-	X (Plus)	12.2(5)YB
RSVP	-	X	FCS
Weighted Random Early detection	-	X	FCS
Weighted Fair queuing	-	X	FCS
Management and Ease of Deployment (for improved customer response and to eliminate truck roll)			
Web based User setup tool	X	X	FCS
Extensive remote status and monitoring features	X	X	FCS
Extensive remote debug features	X	X	FCS
SNMP, Telnet, Console Port	X	X	FCS
Syslog	X	X	FCS
Factory Pre-Configured and Shipped to End Users (avoid Truck Roll)	X	X	FCS
ATM OAM F5 Continuity Check ²	X	X	12.2(2)XK
Service Assurance Agent (SA Agent, SAA) ¹	X	X	12.2(2)XD
Remote Troubleshooting and Loop Analysis			
ADSL (Layer 1)			
Bit per DMT-bin analyzing	X	X	FCS
Train speed, noise ratio, errors, line status	X	X	FCS
Extensive DSL debug	X	X	FCS



Features @ FCS (Continued)	Cisco SOHO 76, 77	Cisco 826, 827, 827-4V	
Router Hardware and Traffic			
Extensive PPP debug	X	X	FCS
Interface status basic	X	X	FCS
Interface advanced (MTU size, load, packet rate, queue, collisions, more physical status)	X	X	FCS
Memory usage (including buffers, etc.)	X	X	FCS
CPU usage	X	X	FCS
Configuration file overview, editable	X	X	FCS
Variable analyzing (like debug on access-lists)	X	X	FCS
Remote Troubleshooting			
Traceroute	-	X	FCS
Syslog	-	X	FCS
CDP	-	X	FCS
Voice Features			
Analog voice ports	-	X (827-4V)	FCS
VoIP H.323	-	X (827-4V)	FCS
G.711, G.729, G.723 codecs	-	X (827-4V)	FCS
VoATM AAL2	-	X (upcoming)	FCS
Loop start key system support	-	X (827-4V)	FCS
Compressed RTP	-	X (upcoming)	FCS
VoAAL2 Profile 9 for TDSof ²	-	X (827-4V)	12.2(2)XK
H.323 Caller ID and limited international phone support ⁵	-	X (827-4V)	12.2(2)XI
Others			
PPPOE	X	X (IP Plus)	
NAT/PAT with H323 support	X (PAT)	X (Plus)	FCS
Built in Memory for future scalability	16 MB	16-32 MB (upgradeable)	FCS
Upgradeable Memory	-	X	FCS
DHCP Server Memory	X	X	12.2(2)XD
IPCP Subnet Delivery ¹	X	X	12.2(2)XD
DHCP Server Import ¹	-	X	12.2(2)XD
Named IP Access lists ¹	-	X (IPSec)	12.2(2)XD
SNTP	-	X (Plus)	FCS
Number of VCs	8	10	FCS
GRE	-	X	FCS
IRB	-	X	FCS
IP Multicast proxy	X	X	FCS
Remote Upgradability	X (IP only)	X	FCS



Key	
X	Feature Supported (may be in Optional Value Add Feature Sets)
-	Feature Not Supported
FCS	First Customer Shipment Release 12.1XB and later 12.1(3)XG
For more information on these features please see the corresponding URLs below:	
1	http://www.cisco.com/warp/public/cc/pd/rt/800/prodlit/1332_pp.htm
2	http://www.cisco.com/warp/public/cc/pd/rt/70/prodlit/1552_pp.htm
3	http://www.cisco.com/warp/public/cc/pd/rt/800/prodlit/1404_pp.htm
4	http://www.cisco.com/warp/public/cc/general/bulletin/software/ios121/1277_pp.htm
5	http://www.cisco.com/warp/public/cc/pd/rt/800/prodlit/1497_pp.htm

Business-Class Features

Beyond shared broadband access, Cisco SOHO and 800 Series routers provide other key features for business customers, including security, ease of deployment, and ongoing management.

Internet Security

When using an always-on DSL connection, Internet security is crucial for businesses of all sizes to protect against unauthorized access to company or personal resources. Cisco SOHO and 800 Series DSL routers provide a stateful inspection firewall. A stateful inspection firewall provides more intelligent perimeter security than simple packet filtering. It denies or permits WAN traffic based on a session's state, so requests from users behind the firewall can be received, while preventing unauthorized access.

For secure connections to a corporate network virtual private networks (VPNs) use encryption to keep data secure while it is transmitted over the Internet. IPSec encryption can be installed on individual users' PCs or on a shared and remotely managed access device such as a router. The SOHO Series and the 800 Series DSL routers support IPSec pass-through for users with VPN software clients installed on individual PCs. The Cisco 800 Series also supports integrated VPN encryption. By combining firewall and VPN capabilities in one device, a network manager can remotely manage and control the security settings and policies of the remote connections, rather than relying on PC software installed on PCs. Additionally, using a router for VPNs allows an IP Phone to be connected to the router for encrypted voice traffic.

Lower Deployment Costs

Cisco SOHO Series and the Cisco 800 Series DSL routers are simple to deploy because they provide a Web-based configuration tool that nontechnical users can use to set up the router. Users simply connect a PC to the router and point a Web browser to the router. The Cisco Router Web Setup tool is a graphical user interface that enables network managers to enter router configuration items such as user name and password, configure NAT, and turn on a stateful firewall. By using Cisco Router Web Setup Tool, even users with no technical knowledge of networking can easily set up a Cisco router.

The Cisco 800 Series DSL routers and the Cisco Router Web Setup tool support Cisco Easy VPN, enabling setup of VPNs with static or dynamic IP addresses without router preconfiguration or remote-site technicians. Users in remote locations can use the graphical interface to enter in VPN configuration information, similarly to using a VPN software client on a PC. After the VPN connection is set up, updated policies can then be pushed to the remote offices, easing remote VPN connection management.



All Cisco routers support Cisco Configuration Express where routers can be shipped direct from the Cisco factory with custom configurations provided by customers when ordering products from the Cisco Web site (Cisco.com). These preconfigured routers are then shipped directly to the end user site. Cisco IOS Reliability and Manageability.

Cisco IOS Reliability and Manageability

The Cisco SOHO Series and 800 Series DSL routers are based on powerful Cisco IOS technology. They support centralized administration and management via Simple Network Management Protocol (SNMP) and Telnet, and local management through the router console port. Cisco IOS Software is run on most of the routers that compose the Internet, and businesses of all sizes can take advantage of the reliability and manageability benefits. Because Cisco IOS Software is widely used for mission-critical enterprise networks, small business and enterprise teleworkers can also depend on Cisco SOHO and 800 series routers.

Table 1 Cisco SOHO and 800 Series—DSLAM Interoperability

	Alcatel ASAM 1000		Alcatel 7300		Cisco 6x60/6015		ECI		
	AME ADSL	AME ADSL	GSI G.SHDSL	ADI ADSL	GSI ADSL	GSI G.SHDSL	ADI 918 ADSL	ADI 930 ADSL	Metalink G.SHDSL
Cisco 826	X	X	-	-	P (ext)	-	P	P	-
Cisco 827H	X	X	-	X*	X	-	P	P	-
Cisco 828	-	-	P	-	-	X	-	-	R
Cisco SOHO 76	X	X	-	-	P (ext)	-	P	P	-
Cisco SOHO 77H	X	X	-	X*	X	-	P	P	-
Cisco SOHO 78	-	-	P	-	-	X	-	-	R

	Siemens Xpresslink 2.0		Fujitsu/Westell		Marconi DSLAM AXH600		Lucent Stinger	
	TI ADSL	GSI G.SHDSL	AME ADSL	GSI G.SHDSL	AME ADSL	Metalink G.SHDSL	AME ADSL	GSI ADSL
Cisco 826	P		-		-		?	R
Cisco 827H	P	-	P	-	R	-	?	R
Cisco 828	-	R	-	P	-	R	-	-
Cisco SOHO 76	P	-	-	-	-	-	?	R
Cisco SOHO 77H	P	-	P	-	R	-	?	R
Cisco SOHO 78	-	R	-	P	-	R	-	-

Legend	
P	In progress
P (ext)	In progress
X	Supported
R	On roadmap
-	No plan/not supported
*	Needs external attenuator
?	TDB, testing required



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