

CISCO 1800 SERIES INTEGRATED SERVICES ROUTERS CISCO 1801, 1802, 1803, 1811, 1812 ROUTERS (FIXED- CONFIGURATION MODELS)

Cisco Systems® is redefining best-in-class enterprise and small- to midsized-business routing with a new line of integrated services routers that are optimized for the secure delivery of data services. Founded on 20 years of leadership and innovation, the Cisco® 1800 Series integrated services routers intelligently embed data, security, and wireless technology into a single, resilient system for fast, secure, scalable delivery of mission-critical business applications. The best-in-class Cisco 1800 Series architecture has been specifically designed to meet requirements of small to medium-sized businesses (SMBs), enterprise branch offices, and service provider-managed services for delivery of concurrent services for broadband access. The integrated secure systems architecture of the Cisco 1800 Series delivers maximum business agility and investment protection.

PRODUCT OVERVIEW

Cisco 1800 Series integrated services routers are the next evolution of the award-winning Cisco 1700 Series modular and fixed-configuration routers. The Cisco 1801, 1802, 1803, 1811, and 1812 integrated services routers (Figure 1) are fixed-configuration, while the Cisco 1841 integrated services router is modular and described in a separate data sheet http://www.cisco.com/en/US/products/ps5853/products_data_sheet0900aecd8016a59b.html. The fixed configuration routers are designed for secure broadband, Metro Ethernet, and wireless connectivity providing significant performance improvements, feature enhancements, and increased value compared to prior generation of Cisco 1700 Series routers. The Cisco 1800 Series fixed-configuration routers offer:

- Secure broadband access with concurrent services for branch and small offices
- Integrated ISDN Basic Rate Interface (BRI), analog modem, or Ethernet backup port for redundant WAN links and load balancing
- Secure Wireless LAN option for simultaneous 802.11a /b/g operations with use of multiple antennas
- Advanced security including:
 - Stateful Inspection Firewall
 - IP Security (IPSec) VPNs (Triple Data Encryption Standard [3DES] or Advanced Encryption Standard [AES])
 - Intrusion Prevention System (IPS)
 - Antivirus support through Network Admission Control (NAC) and enforcement of secure access policies
- 8-port 10/100 managed switch with VLAN support and optional Power over Ethernet (PoE)
- Easy deployment and remote-management capabilities through Web-based tools and Cisco IOS® Software

Figure 1. Cisco 1800 Series Fixed-Configuration Routers



Cisco 1801, 1802, and 1803 routers provide high-speed DSL broadband access through asymmetric DSL (ADSL) over basic telephone service (Cisco 1801), ADSL over ISDN (Cisco 1802), or Symmetrical High-Data-Rate DSL (G.SHDSL) (Cisco 1803) while helping to ensure reliable networking with integrated ISDN S/T BRI backup. The Cisco 1811 and 1812 provide high-speed broadband or Ethernet access through two 10/100BASE-T Fast Ethernet WAN ports and also provide integrated WAN backup through a V.92 analog modem (Cisco 1811) or ISDN S/T BRI interface (Cisco 1812).

The Cisco 1800 Series fixed-configuration routers help enable a network infrastructure for SMBs and enterprise small branch offices, providing access to the Internet, corporate networks, or other remote offices, while securing and protecting critical data with integrated Cisco IOS Software security features and capabilities. They also help businesses reduce costs by enabling deployment of a single device to provide multiple services (integrated router with redundant link, LAN switch, firewall, VPN, IPS, wireless technology, and quality of service [QoS]) typically performed by separate devices. Cisco IOS Software allows this flexibility, providing the industry's most robust, scalable, and feature-rich internetworking support, using the accepted standard networking software for the Internet and private WANs.

Table 1 summarizes the Cisco 1800 Series fixed-configuration router features.

Table 1. Product Summary

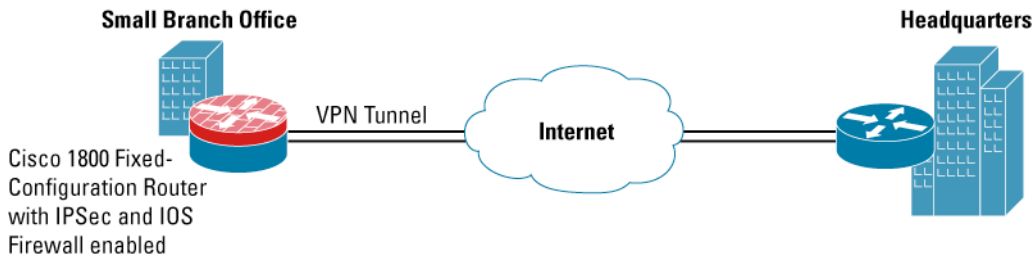
Feature	Cisco 1801	Cisco 1802	Cisco 1803	Cisco 1811	Cisco 1812
DSL WAN Port	ADSL over POTS	ADSL over ISDN	G.SHDSL (4-wire)	–	–
10/100 FE WAN Ports	1	1	1	2	2
8-Port Managed Switch	Yes	Yes	Yes	Yes	Yes
ISDN BRI Dial Backup	Yes	Yes	Yes	–	Yes
V.92 Analog Modem Dial Backup	–	–	–	Yes	–
USB 2.0 Ports	0	0	0	2	2
802.11a/b/g Wireless Option	Yes	Yes	Yes	Yes	Yes
Auxiliary and Console Ports	Yes	Yes	Yes	Yes	Yes

NETWORK APPLICATIONS

Secure Network Connectivity

Network security has become a fundamental building block of any network, and Cisco routers play an important role in embedding security at the customer's access edge. Recognizing this requirement, the Cisco 1800 Series fixed-configuration routers are equipped with the Cisco IOS Software Advanced IP Services feature set as the default software image (except for the Cisco 1801). This Cisco IOS Software feature set facilitates hardware-based encryption on the motherboard and provides a robust array of security capabilities such as Cisco IOS Firewall, URL Filtering, IPS support, IPSec VPNs (DES, 3DES, and AES), Dynamic Multipoint VPN (DMVPN), Easy VPN server and client support, NAC for defense against worms and viruses, security policy enforcement, Secure Shell (SSH) Protocol Version 2.0, and Simple Network Management Protocol (SNMP) in a single solution set. As Figure 2 demonstrates, the Cisco 1800 Series fixed-configuration routers help enable customers to deploy high-performance, concurrent, mission-critical data applications with integrated, end-to-end security.

Figure 2. Securing Small Branch Office with a Cisco 1800 Series Fixed-Configuration Router



Highly Available Internet Connectivity

The Cisco IOS Software Advanced IP Services feature set offers basic and advanced routing capabilities to deliver failover protection and load balancing. These capabilities include Border Gateway Protocol (BGP), Open Shortest Path First (OSPF) Protocol, Enhanced Interior Gateway Routing Protocol (EIGRP), and Routing Information Protocol (RIP) routing protocols along with dial-on-demand routing (DDR) and reliable static routing using object tracking. Each of the Cisco 1800 Series fixed-configuration routers is equipped with an ISDN BRI or V.92 analog modem port, and an Ethernet port for secondary WAN backup connection. If the primary DSL, cable, or Ethernet-access WAN is disconnected for some reason, the router will detect this failure and will automatically fail over to the secondary backup WAN. As Figure 3 and 4 demonstrate, the Cisco 1800 Series fixed-configuration routers help enable customers to deploy high-performance and highly-available, mission-critical business applications.

Figure 3. Small Branch Network Deploying Dual Redundant WAN Links

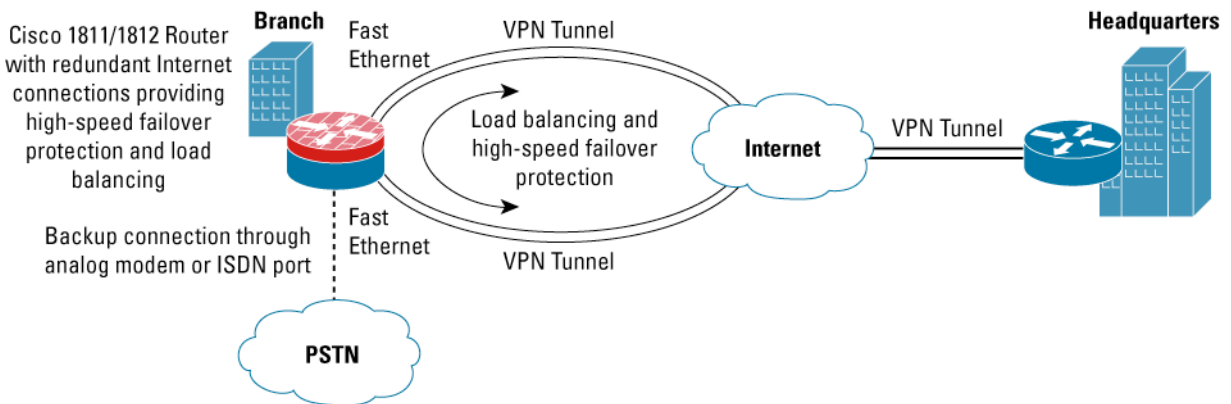
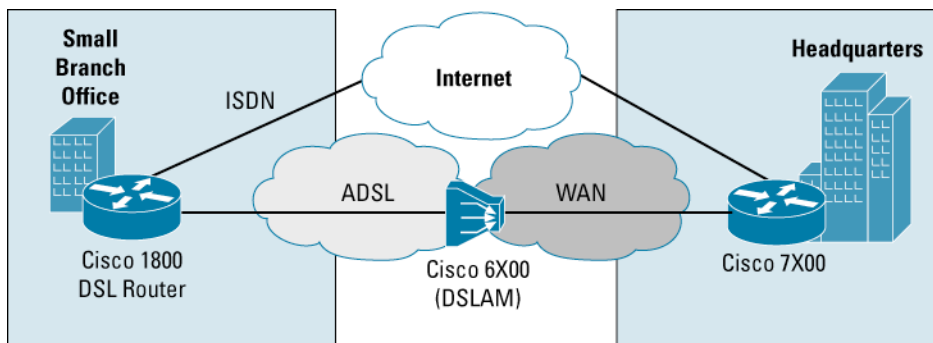


Figure 4. High-Availability Small Branch Network with Cisco 1801, 1802, or 1803 Router



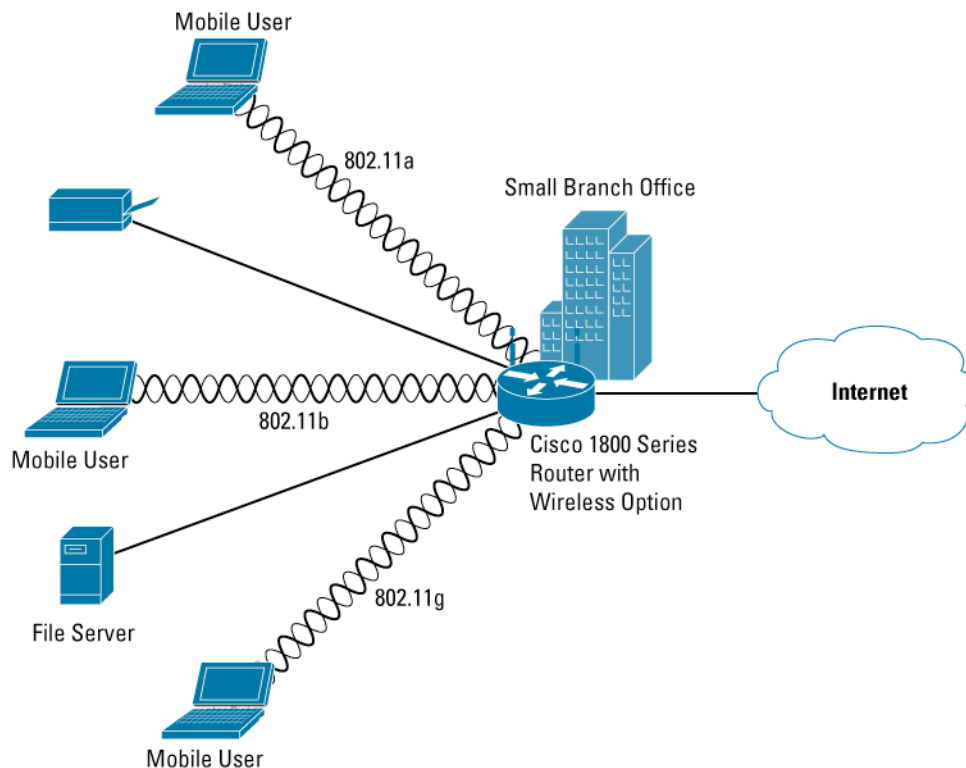
Integrated Secure Wireless LAN Connectivity

Cisco 1800 Series fixed-configuration routers offer additional models with an integrated wireless access point, providing secure routing and secure wireless LAN services in one device, helping businesses reduce total cost of ownership with simplified WLAN and WAN deployment and management capabilities. The optional wireless access point supports IEEE 802.11a/b/g simultaneously to provide high-speed wireless capability and flexibility with the support of 2.4-GHz and 5-GHz dual-band simultaneous operation, making them ideal choices for public hotspot deployments and wireless office solutions. Wi-Fi Certified client devices including Cisco Aironet®, Wi-Fi Certified and Cisco Compatible client devices are fully supported.

The Cisco 1800 Series wireless routers are Wi-Fi Certified and support Wi-Fi Protected Access (WPA) providing secure mutual authentication and encryption via Cisco IOS Software features to meet the strict demands of today's businesses. These products also provide support for multiple wireless VLANs that can be configured to provide additional security, segmentation, and separation of wireless users. When using the routers in conjunction with the Cisco Service Selection Gateway (SSG) and Subscriber Edge Services Manager (SESM), managed service providers can incorporate service-based authorization and accounting, and service and subscriber management for customizable, on-demand wireless services such as public wireless hotspots. Additional features such as survivable local authentication allow users to maintain wireless connectivity to the router in the event that a remote authentication server goes down. Quality of Service (QoS) via Wi-Fi Multimedia (WMM) is also supported. (See Integrated Services Routers with Wireless Services Solution Overview for more information)???

Figure 5 shows a Cisco 1800 Series fixed-configuration wireless router deployed in a small branch-office WLAN application.

Figure 5. Small Branch-Office WLAN



Business-Class DSL and Ethernet Connectivity

The Cisco 1801, 1802, and 1803 routers combine the cost benefits of DSL service with the advanced routing capability required for business use of the Internet. These products are available with built-in ADSL over POTS (Cisco 1801), ADSL over ISDN (Cisco 1802), or G.SHDSL (Cisco 1803) WAN port. They deliver strong network security, QoS, and other Cisco IOS features at broadband speeds. Enhanced DSL QoS features, such as Weighted Random Early Detection (WRED), committed access rate (CAR), and Class-Based Traffic Shaping, help ensure high performance for mission-critical applications. The G.SHDSL interface on the Cisco 1803 supports standards based 4-wire capability providing longer reach and higher bandwidth performance.

The Cisco 1811 and 1812 routers offer the flexibility to connect to broadband DSL modems, Cable modems, or Ethernet access services. For Ethernet access, these routers are designed to be customer premises equipment (CPE) in Metro Ethernet deployments. Because of their high-speed performance and dual Fast Ethernet WAN ports, they can support the high-bandwidth demands of Metro Ethernet and provide failover protection and load balancing if desired. The integrated eight port switch is sufficient for connecting numerous devices and the optional PoE capability can supply power to IP telephones or other IEEE 802.3af compliant devices.

KEY FEATURES AND BENEFITS

The Cisco 1800 Series fixed-configuration routers have been specifically architected to meet the requirements of SMBs and enterprise branch offices as well as service provider-managed applications to deploy concurrent services for broadband access. The Cisco 1801, 1802, 1803, 1811, 1812, and 1841 routers together with other Cisco integrated services routers such as the Cisco 800, 2800, and 3800 series provide the broadest range of secure connectivity options in the industry combined with high-availability features. In addition, Cisco IOS Software supports a complete suite of transport protocols, QoS, and network security. Table 2 lists the architecture features and benefits of the Cisco 1800 Series fixed-configuration routers.

Table 2. Architecture Features and Benefits

Feature	Benefit
Hardware Architecture	
<i>High-Performance Processor</i>	High-speed processor delivers exceptional processing power for routing applications and concurrent security and wireless services.
<i>Integrated ADSL or G.SHDSL</i>	Eliminates the need to deploy and manage a separate DSL modem.
<i>Integrated 10/100BASE-T WAN Ports</i>	Offers flexibility to connect to various types of DSL broadband or cable access or Ethernet access. Additional capability to deploy redundant WAN connections for failover protections and load balancing.
<i>Integrated 8-Port 10/100BASE-T Managed Switch</i>	Fully managed LAN switch ports connect multiple LAN devices and reduce the need for an additional LAN switch.
<i>Integrated WAN Backup</i>	Built-in ISDN S/T BRI or analog modem port provides high availability by establishing a backup WAN connection if the primary connection fails.
<i>Onboard Hardware Encryption Acceleration</i>	Delivers high-speed IPSec encryption and decryption rates for DES, 3DES, and AES to help ensure all available bandwidth to the Internet is utilized for maximum performance.
<i>Expandable Memory Architecture</i>	The default memory of 32-MB Flash and 128-MB DRAM is sufficient to support complex configurations and advanced services and help ensure operation for an extended period. Memory is expandable to support maximum of 128-MB Flash and 384-MB DRAM, offering additional investment protection.

Feature	Benefit
<i>IEEE 802.1Q VLAN</i>	A total of 8 VLANs can be configured to segment a network and offer additional security and separation of network traffic.
<i>Real-Time Clock</i>	Built-in, real-time clock maintains an accurate date and time for applications that require an accurate time stamp—such as logging and digital certificates.
<i>Internal Power Supply</i>	Eliminates the need for a cumbersome external power-adaptor module and provides easier cable management.
<i>USB Ports</i>	Integrated USB ports can be configured in the future to work with optional USB security token for off-platform storage of VPN credentials or USB flash token for transferring IOS software and configurations.
<i>Power over Ethernet (PoE)</i>	802.3af Power over Ethernet support delivers power to IP phones or external wireless access points through the 10/100 switch ports to eliminate the need for power cords for these devices.
<i>Rack- and Wall-Mountable</i>	Delivers flexibility in mounting on a wall or in a standard 19 inch rack. Optional rack mount kit can be ordered for support in 19-inch rack.
Secure Networking	
<i>Site-to-Site VPN</i>	Connects remote access clients and branch offices to central sites more cost-effectively and flexibly than networks using leased lines, Frame Relay, or ATM.
<i>Cisco IOS Firewall, Including URL Filtering</i>	Stateful firewall with URL filtering protects the network from unauthorized user access. URL filtering prevents inappropriate Websites from being accessed and downloading of offensive content.
<i>Intrusion Protection System (IPS)</i>	Detects harmful network activity and generates alarms to warn of threats and intrusion attempts. New IPS signatures can be dynamically loaded.
<i>Dynamic Multipoint VPN (DMVPN)</i>	Allows for secure, direct spoke-to-spoke communication with the added benefit of configuration simplicity and zero-touch deployment. It enables enterprises to better scale large and small meshed IPsec VPNs by combining generic routing encapsulation (GRE) tunnels, IPsec encryption, and Next Hop Resolution Protocol (NHRP).
<i>AutoSecure</i>	Facilitates rapid implementation of firewall and security policies to optimize network security with a single command.
<i>Cisco Easy VPN Remote and Server</i>	Eases administration and management of point-to-point VPNs by actively pushing new security policies from a single headend to remote sites. Cisco Easy VPN Server terminates remote access clients to support secure connections to branch networks.
<i>Network Admission Control (NAC)</i>	Ensures client devices are using the most up-to-date antivirus application and data files and protects the network from harmful threats by prohibiting network access if outdated versions are used.
Wireless Networking	
<i>Integrated IEEE 802.11 a/b/g Access Point (optional)</i>	<ul style="list-style-type: none"> • Provides secure wireless LAN and routing in a single solution with simultaneous operation at 2.4 GHz and 5 GHz frequencies • Supports Cisco Aironet®, Wi-Fi Certified and Cisco Compatible client devices

Feature	Benefit
<i>Wireless VLAN</i>	Provides support for multiple wireless VLANs that can be configured to provide additional security, segmentation, and separation of user groups.
<i>Multiple Antenna Options</i>	Removable antennae provide flexibility to add multiband wall-mount and ceiling-mount antennas.
<i>Multiple Broadcast Service Set Identifications (SSIDs)</i>	Provide separation of a wireless network into several VLANs.
<i>Wi-Fi Protected Access (WPA)</i>	Wi-Fi Certified for WPA-Personal and WPA-Enterprise for enterprise-class security for WLANs.
Network Management and Ease of Use	
<i>Integrated Auxiliary Port</i>	Allows remote configuration and management.
<i>Cisco Router and Security Device Manager (SDM)</i>	<ul style="list-style-type: none"> • An intuitive, easy-to-use, Web-based device-management tool embedded within the Cisco 1800 Series routers can be accessed remotely for faster and easier deployment of Cisco routers for both WAN access and security features. • Cisco SDM helps resellers and customers to quickly and easily deploy, configure, and monitor a Cisco access router without requiring knowledge of the Cisco IOS Software command-line interface.
<i>Enhanced Setup</i>	Optional setup wizard with context-sensitive questions guides the user through the router configuration process, allowing faster deployment.
<i>CiscoWorks, CiscoWorks VPN/Security Management Solution (VMS), and Cisco IP Solution Center (ISC) Support</i>	Enterprise advanced management and configuration capabilities are offered through a Web-based GUI.
<i>Cisco AutoInstall</i>	Configures remote routers automatically across a WAN connection to save the cost of sending technical staff to remote sites

SUMMARY

As companies increase their security requirements and their need for integrated services, more intelligent branch-network solutions are required. The best-in-class Cisco 1800 Series architecture has been specifically designed to meet these requirements for secure concurrent services with high performance. The Cisco 1800 Series integrated services routers, consisting of the Cisco 1801, 1802, 1803, 1811, 1812, and 1841 routers, offer the opportunity to consolidate the functions of separate devices into a single, compact solution that can be remotely managed. By providing integrated services and high performance, the Cisco 1800 Series routers deliver security, versatility, scalability, and flexibility to deploy multiple applications in the small to medium-sized office and small enterprise branch office, and the service provider customer edge. The Cisco 1800 Series easily accommodates a wide variety of network applications, such as secure branch-office data access with broadband and Ethernet access including NAC for antivirus defense, VPN access and firewall protection, PoE support, inter-VLAN routing and support deployment of secure, enterprise-class WLANs. These routers give customers the industry's most flexible, secure, and adaptable infrastructure to meet both today's and tomorrow's business requirements for maximum investment protection.

PRODUCT SPECIFICATIONS

Table 3 lists the product specifications for the Cisco 1801, 1802, 1803, 1811, and 1812 routers.

Table 3. Product Specifications

Cisco 1800 Series Fixed-Configuration Routers		
Chassis		
<i>Form Factor</i>	Desktop, 1-rack-unit (1-RU) high (4.75-cm high with rubber feet)	
<i>Chassis</i>	Metal	
<i>Wall-Mountable</i>	Yes	
<i>Rack-Mountable</i>	Yes (optional 19-in. rack-mount kit required)	
<i>Dimensions (W x D)</i>	<ul style="list-style-type: none"> • 12.5 x 9.5 in. (34.3 x 27.4 cm) • Height without rubber feet: 1.73 in. (4.39 cm) • Height with rubber feet: 1.87 in. (4.75 cm) 	
<i>Weight</i>	Maximum: 6.1 lb (2.8 kg)	
Architecture		
<i>Flash Memory</i>	External removable Compact Flash	
<i>Flash Memory Capacity</i>	<ul style="list-style-type: none"> • Default: 32 MB • Maximum: 128 MB 	
<i>DRAM</i>	Synchronous dual in-line memory module (DIMM) SDRAM (1 DIMM slot)	
<i>DRAM Capacity</i>	<ul style="list-style-type: none"> • Default: 128 MB • Maximum: 384 MB 	
<i>ADSL Port</i>	One ADSL over POTS on Cisco 1801. One ADSL over ISDN on Cisco 1802. The Cisco 1801 supports ADSL over POTS standards G.992.1 G.DMT and ANSI T1.413 DMT Issue 2. The Cisco 1802 supports ADS L over ISDN standards ETSI 101-388, U-R2, and G.992.1 G.DMT	
<i>ADSL Digital Subscriber Line Access Multiplexer (DSLAM) Interoperability</i>	<p>The Cisco 1801 is interoperable with the following DSLAMs:</p> <ul style="list-style-type: none"> • Cisco 6130 and Cisco 6260 IP DSL switches • Alcatel (ASAM 1000 and 7300) • Lucent Stinger (24- and 72-port line cards) • ECI HiFocus (16- and 32-port line cards [Anaconda support]) 	<p>The Cisco 1802 is interoperable with the following DSLAMs:</p> <ul style="list-style-type: none"> • Cisco 6260 • Alcatel (ASAM 1000 and 7300) • Siemens (XpressLink 2.0 and XpressLink 2.1) • Lucent Stinger (48-port line cards) • ECI HiFocus (16- and 32-port line cards [Anaconda support])
<i>G.SHDSL Port</i>	One G.SHDSL port on Cisco 1803 supports either 2-wire mode or 4-wire mode. The Cisco 1803 supports the same standards as the Cisco G.SHDSL WIC and is based on ITU Recommendation G.991.2 (accepted worldwide).	

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<i>G.SHDSL DSLAM Interoperability</i>	<p>The Cisco 1803 in 2-wire mode is interoperable with the following DSLAMs:</p> <ul style="list-style-type: none"> • Cisco 6000 Series IP DSL switches • Alcatel ASAM 7300 (12- and 24-port line cards) • ECI HiFocus SAM 2401 (16-port Metalink-based line cards) • Lucent Stinger FS (32- and 48-port line cards) • CopperEdge 200 DSLAM (24-port line cards) 	<p>The Cisco 1803 in 4-wire mode is interoperable with the following DSLAMs:</p> <ul style="list-style-type: none"> • Alcatel ASAM 7300 (12- and 24-port line cards) • CopperEdge 200 DSLAM (24-port line cards)
<i>G.SHDSL Performance</i>	4 Mbps symmetric (2 Mbps bidirectional) throughput (IMIX traffic)	[CAN WE REMOVE IMIX ???]
<i>10/100 WAN Ports</i>	10/100BASE-T ports for WAN connection supporting DSL and cable modems and Ethernet access services. (One port is available on Cisco 1801, 1802, and 1803. Two ports are available on Cisco 1811 and 1812.)	
<i>10/100 LAN Switch</i>	Eight 10/100BASE-T fully managed switch ports with optional IEEE 802.3af PoE support.	
<i>USB Ports</i>	Two USB 2.0 ports on Cisco 1811 and 1812 models. The Cisco 1801, 1802, and 1803 do not offer USB support.	
<i>ISDN S/T BRI Port</i>	One ISDN S/T BRI port on Cisco 1801, 1802, 1803, and 1812.	
<i>V.92 Analog Modem Port</i>	One analog modem port on Cisco 1811.	
<i>Console Port</i>	One—up to 115.2 kbps.	
<i>Auxiliary Port</i>	One—up to 115.2 kbps.	
IPSec and VPN		
<i>Hardware-Based Encryption</i>	<ul style="list-style-type: none"> • Integrated on the motherboard • DES, 3DES, AES 128, AES 192, AES 256. 	
<i>IPSec Tunnels Supported</i>	50	
<i>IPSec Performance</i>	50 Mbps 3DES @ 1400 byte packets	
Wireless		
<i>Wireless Access Point</i>	<ul style="list-style-type: none"> • IEEE 802.11a/b/g simultaneous operation • Automatic rate selection for 11a/11b/11g • Field-replaceable antennae • External diversity antenna • Wi-Fi Certified for WPA-Personal and WPA-Enterprise • Default antenna gain—2.2 dBi 	
<i>Data Rates Supported</i>	<ul style="list-style-type: none"> • 802.11a: 6, 9, 12, 18, 24, 36, 48, and 54 Mbps • 802.11g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, and 54 Mbps 	
<i>Range</i>	Range—Indoor 1 Mbps at 320 ft	
<i>Wireless LAN Software</i>	<ul style="list-style-type: none"> • Maximize throughput or maximize range option 	

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<i>Features</i>	<ul style="list-style-type: none"> • Software-configurable transmit power • Support for Wi-Fi Multimedia (WMM) • Quality of Service (QoS) for WLANs
<i>Wireless LAN Security Features</i>	<ul style="list-style-type: none"> • IEEE 802.1X per-user, per-session mutual authentication with a variety of extensible authentication protocol (EAP) types including Cisco LEAP, Protected Extensible Authentication Protocol (PEAP) and EAP-Transport Layer Security (EAP-TLS) • Pre-shared key (PSK) authentication • MAC authentication/filter Encryption • WPA Temporal Key Integrity Protocol (TKIP) with support for per-packet key hashing, message integrity check (MIC), initialization vector (IV) changes, and broadcast key rotation • Static and dynamic wired equivalent privacy (WEP) keys of 40 bits and 128 bits <p>Additional security features:</p> <ul style="list-style-type: none"> • 4 available broadcast service set identifiers (SSIDs) • IEEE 802.1X local authentication • Configurable limit to the number of wireless clients • Configurable RADIUS accounting for wireless clients
<i>Wireless LAN Management Features</i>	<ul style="list-style-type: none"> • Supported by CiscoWorks 2000, CiscoView and Router and Security Device Management (SDM) • GUI based Network Management for Wireless Interface is provided
Software Support	
<i>Cisco IOS Software Release</i>	12.3(8)YI
<i>Cisco IOS Software Default Image</i>	Advanced IP Services (without voice services) except Cisco 1801 which is loaded with IOS IP Broadband feature set
Cisco IOS Software Feature Set Option Advanced Enterprise Services	
<i>Number of Users</i>	
User Support	50 users on switch ports
<i>Routing</i>	
Routing Protocols	BGP, EIGRP, OSPF, RIPv1, RIPv2
Routed Protocols	IPv4, IPv6 unicast only (Internetwork Packet Exchange [IPX], IBM SNA, AppleTalk supported with optional Advanced Enterprise Services Feature Set)

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QoS

QoS Protocols	Weighted Fair Queuing (WFQ), Class-Based WFQ (CBWFQ), Weighted Random Early Detection (WRED), Committed Access Rate (CAR), Resource Reservation Protocol (RSVP), Network-Based Application Recognition (NBAR), Differentiated Services (DIFFSERV), link fragmentation and interleaving (LFI), Low-Latency Queuing (LLQ)
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VLAN

VLAN Support	IEEE 802.1Q VLAN supported on all 10/100BASE-T ports
VLAN Configured	Maximum 8 VLANs

PoE

PoE Support	Supported on 10/100 Ethernet switch ports with optional POE kit
POE Standards	IEEE 802.3af, Cisco Pre-standard PoE
External Power Supply	80W external power supply

Power Supply Specifications

Internal Power Supply	Yes
Redundant Power Supply	No
DC Power Support	No
AC Input Voltage	100 to 240 VAC
Frequency	50 to 60 Hz
AC Input Current	1A maximum
Output Power	50W maximum
System Power Dissipation	153 Btu per hour

Environmental

Operating Temperature	32 to 104°F (0 to 40°C)
Operating Humidity	10 to 85% noncondensing operating; 5 to 95% noncondensing, nonoperating
Nonoperating Temperature	-4 to 149°F (-25 to 65°C)
Operating Altitude	10,000 ft (3000m) at 77°F (25°C)

Cisco 1800 Series Fixed-Configuration Routers

Noise Level	<p>Normal operating temperature:</p> <ul style="list-style-type: none"> • <80° F (27°C): 34 dBA • >80°F (27°C) through <104°F (40°C): 36 dBA • >104°F (40°C): 42 dBA
<i>Regulatory Compliance</i>	
Safety	<ul style="list-style-type: none"> • UL 60950 • CAN/CSA C22.2 No. 60950 • IEC 60950-1 • EN 60950-1 • AS/NZS 60950
EMC Immunity	<ul style="list-style-type: none"> • EN300386 • EN55024(CISPR24) • EN61000-4-2 • EN61000-4-3 • EN41000-4-4 • EN41000-4-5 • EN41000-4-6 • EN41000-4-8 • EN41000-4-11 • EN50082-1 • EN61000-6-2 • ITU-T K.21
EMC Emissions	<ul style="list-style-type: none"> • CFR 47 Part 15, Class A • ICES-003 Class A • EN55022 Class A • CISPR22 Class A • AS/NZS 3548 Class A • VCCI Class A • EN 300386 • EN61000-3-2 • EN61000-3-3
TELECOM	<p>Telecom compliance standards depend upon country and interface type. Interfaces comply with FCC Part 68, CS-03, JATE Technical Conditions, European Directive 99/5/EC, and relevant Technical Basis for Regulation (TBRs). For specific information, refer to the data sheet for the specific interface card.</p> <p>Homologation requirements vary by country and interface type. For specific country information, refer to the online approvals data base: http://tools.cisco.com/cse/prdapp/jsp/externalsearch.do?action=externalsearch&page=EXTERNAL_SEARCH&module=EXTERNAL_SEARCH</p> <p>Cisco 1801, 1802, 1803 and 1812 ISDN BRI S/T:</p> <ul style="list-style-type: none"> • TIA-968-A • IC CS-03 Part VI • JATE Technical Requirements • TBR3 • S031

ORDERING INFORMATION

To place an order, visit the [Cisco Ordering Home Page](#).

For more information about the Cisco 1800 Series, including Cisco 1700 Series to Cisco 1800 Series migration guides, visit <http://www.cisco.com/go/1800>. Table 4 lists the ordering information for the Cisco 1801, 1802, 1803, 1811 and 1812 routers and other available options.

Table 4. Ordering Information

Product Part Number	Product Description
Integrated Services Routers	
CISCO1801	ADSL over POTS router with 8-port 10/100BASE-T switch, ISDN S/T backup, Cisco IOS IP broadband, 32-MB Flash, and 128-MB DRAM
CISCO1801/K9	ADSL over POTS router with 8-port 10/100BASE-T switch, ISDN S/T backup, Cisco IOS Advanced IP Services, 32-MB Flash, and 128-MB DRAM
CISCO1802/K9	ADSL over ISDN router with 8-port 10/100BASE-T switch, ISDN S/T backup, Cisco IOS Advanced IP Services, 32-MB Flash, and 128-MB DRAM
CISCO1803/K9	G.SHDSL router with 8-port 10/100BASE-T switch, ISDN S/T backup, Cisco IOS Advanced IP Services, 32-MB Flash, and 128-MB DRAM
CISCO1811/K9	Security router with dual 10/100 WAN ports, 8-port 10/100BASE-T switch, V.92 analog modem backup, Cisco IOS Advanced IP Services, 32-MB Flash, and 128-MB DRAM
CISCO1812/K9	Security router with dual 10/100 WAN ports, 8-port 10/100BASE-T switch, ISDN S/T backup, Cisco IOS Advanced IP Services, 32-MB Flash, and 128-MB DRAM
CISCO1801W-AG-E/K9	ADSL over POTS router with 8-port 10/100BASE-T switch, ISDN S/T backup, Cisco IOS Advanced IP Services, 32-MB Flash, 128-MB DRAM, and integrated ETSI-compliant 802.11a,b,g wireless access point
CISCO1802W-AG-E/K9	ADSL over ISDN router with 8-port 10/100BASE-T switch, ISDN S/T backup, Cisco IOS Advanced IP Services, 32-MB Flash, 128-MB DRAM, and integrated ETSI-compliant 802.11a,b,g wireless access point
CISCO1803W-AG-A/K9	G.SHDSL router with 8-port 10/100BASE-T switch, ISDN S/T backup, Cisco IOS Advanced IP Services, 32-MB Flash, 128-MB DRAM, and integrated FCC-compliant 802.11a,b,g wireless access point
CISCO1803W-AG-E/K9	G.SHDSL router with 8-port 10/100BASE-T switch, ISDN S/T backup, Cisco IOS Advanced IP Services, 32-MB Flash, 128-MB DRAM, and integrated ETSI-compliant 802.11a,b,g wireless access point
CISCO1811W-AG-A/K9	Security router with dual 10/100 WAN ports, 8-port 10/100BASE-T switch, V.92 analog modem backup, Cisco IOS Advanced IP Services, 32-MB Flash, 128-MB DRAM, and integrated FCC-compliant 802.11a,b,g wireless access point
CISCO1812 W-AG-E /K9	Security router with dual 10/100 WAN ports, 8-port 10/100BASE-T switch, ISDN S/T backup, Cisco IOS Advanced IP Services, 32-MB Flash, 128-MB DRAM, and integrated ETSI-compliant 802.11a,b,g wireless access point

Product Part Number	Product Description
Memory Options	
MEM180X-128U256D	128- to 256-MB small-outline dual-inline memory module (SODIMM) DRAM factory upgrade for the Cisco 180X routers
MEM180X-128U384D	128- to 384-MB SODIMM DRAM factory upgrade for the Cisco 180X routers
MEM180X-128D=	128-MB SODIMM DRAM for the Cisco 180X routers
MEM180X-256D=	256-MB SODIMM DRAM for the Cisco 180X routers
MEM181X-128U256D	128- to 256-MB SODIMM DRAM factory upgrade for the Cisco 181X routers
MEM181X-128U384D	128- to 384-MB SODIMM DRAM factory upgrade for the Cisco 181X routers
MEM181X-128D=	128-MB SODIMM DRAM for the Cisco 181X routers
MEM181X-256D=	256-MB SODIMM DRAM for the Cisco 181X routers
MEM1800-32U64CF	32- to 64-MB Cisco 1800 Series Compact Flash factory upgrade
MEM1800-32U128CF	32- to 128 -MB Cisco 1800 Series Compact Flash factory upgrade
MEM1800-32CF=	32-MB Cisco 1800 Series Compact Flash Memory
MEM1800-64CF=	64-MB Cisco 1800 Series Compact Flash Memory
MEM1800-128CF=	128-MB Cisco 1800 Series Compact Flash Memory
Power over Ethernet Options	
POE-180X	IEEE 802.3af PoE module, 80W power supply, and cable factory upgrade
POE-180X=	IEEE 802.3af PoE module, 80W power supply, and cable
Other Options	
ACS-1800-RM-19=	19-in. rack-mount kit for Cisco 180X and 181X routers
ACS-180X=	Accessory kit for Cisco 180X routers [MISSING KIT for 181X routers????????]

For more information regarding Cisco 1800 Series routers and options, contact your Cisco representative or go to <http://www.cisco.com/go/1800>.

To upgrade the Cisco IOS Software for the Cisco 1800 Series, visit the Cisco Software Center.

Table 5 lists the Cisco IOS Software images for the Cisco 1801, 1802, 1803, 1811 and 1812 routers.

Table 5. Cisco IOS Software Images for the Cisco 1801, 1802, 1803, 1811 and 1812 Routers

Cisco 1801, 1802, and 1803	Images	First Cisco IOS Software Release
Image Name		
c180X-ipbroadband-mz	IP BROADBAND (default for Cisco 1801)	12.3(8)YI
c180X-advipservicesk9-mz	ADVANCED IP SERVICES (default for Cisco 1801/K9, 1802/K9, 1803/K9)	12.3(8)YI
c180X-adventerprisek9-mz	ADVANCED ENTERPRISE SERVICES	12.3(8)YI
c181x-advipservicesk9-mz	ADVANCED IP SERVICES (default for Cisco 1811/K9, 1812/K9)	12.3(8)YI
c181x-adventerprisek9-mz	ADVANCED ENTERPRISE SERVICES	12.3(8)YI

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Cisco SMARTnet® technical support for the Cisco 1800 Series is available on a one-time or annual contract basis. Support options range from help-desk assistance to proactive, onsite consultation.

All support contracts include:

- Major Cisco IOS Software updates in protocol, security, bandwidth, and feature improvements
- Full access rights to Cisco.com technical libraries for technical assistance, electronic commerce, and product information
- 24-hour-a-day access to the industry's largest dedicated technical support staff

For more information about Cisco services, refer to Cisco Technical Support Services or Cisco Advanced Services.

FOR MORE INFORMATION

For more information about the Cisco 1800 Series Integrated Services Router, visit <http://www.cisco.com/go/1800d> or contact your local account representative.

For more information about Cisco products, contact:

- United States and Canada: 800 553-NETS (6387)
- Europe: 32 2 778 4242
- Australia: 612 9935 4107
- Other: 408 526-7209
- Web: <http://www.cisco.com>

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