

Cisco 3800 Series Integrated Services Routers

Cisco 3825 and Cisco 3845

Cisco redefines branch-office routing with a portfolio of integrated services routers optimized for secure, wire-speed delivery of concurrent data, voice, video, and wireless services. Founded on 20 years of innovation, the Cisco® 3800 Series Integrated Services Routers offer exceptional network agility, performance, and intelligence. These routers transparently integrate advanced technologies, adaptive services, and secure enterprise communications into a single, resilient system. They ease deployment and management, lower network cost and complexity, and provide excellent investment protection (Figure 1).

The Cisco 3800 Series Routers feature embedded security processing, generous performance and high memory capacity, and high-density interfaces that deliver the performance, availability, and reliability required for scaling mission-critical security, IP telephony, business video, network analysis, and web applications in the most demanding enterprise environments. Built for performance, these routers deliver multiple concurrent services up to wire-speed T3/E3 rates.

Figure 1. Cisco 3825 and 3845 Integrated Services Routers



Product Overview

The integrated services routing architecture of the Cisco 3800 Series is designed to embed and integrate security and voice processing with advanced wired and wireless services for rapid deployment of new applications, including application layer functions, intelligent network services, and converged communications. These routers support the bandwidth requirements for multiple Fast Ethernet interfaces per slot, time-division multiplexing (TDM) interconnections, and fully integrated power distribution to modules supporting 802.3af Power over Ethernet (PoE). And at the same time they still support the existing portfolio of modular interfaces, thereby ensuring continued investment protection to accommodate network expansion or changes in technology as new services and applications are deployed. By integrating the functions of multiple separate devices into a single compact unit, the Cisco 3800 Series Routers dramatically reduce the cost and complexity of managing remote networks.

The Cisco 3800 Series includes the Cisco 3825 and Cisco 3845 Series Routers. These routers integrate a comprehensive set of security features such as firewall, IPsec and Secure Sockets Layer (SSL) VPN, intrusion prevention systems (IPSs), and voice call processing with advanced wired and wireless services for rapid deployment of new applications that include application layer functions, intelligent network services, and converged communications. The Cisco 3800 Series is available in three optional configurations:

- AC power
- AC power with integrated inline power support
- DC power

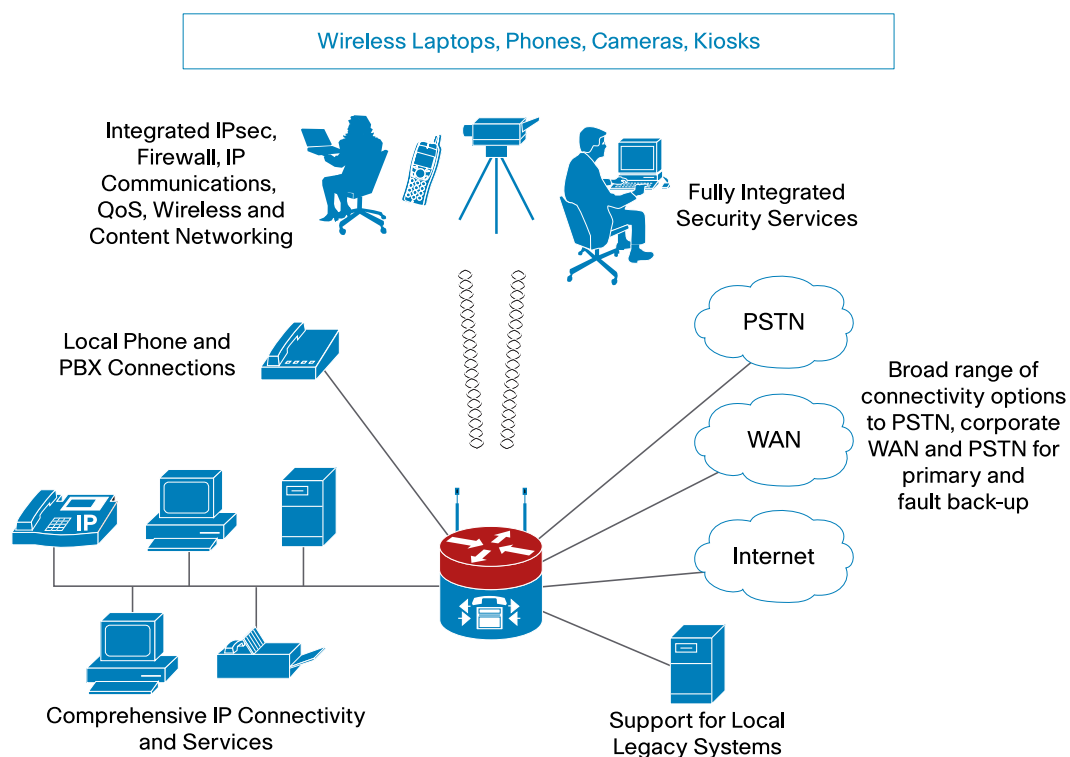
In addition, two new models, C3825-NOVPN and C3845-NOVPN, offer all the features supported by the Cisco 3825 and Cisco 3845 Series with the exception of VPN payload encryption and secure voice features. These two new models provide a limited set of security features, such as firewall, IPSs, and so on, compared to the Cisco 3825 and Cisco 3845 Series Routers.

Secure Network Connectivity for Data, Voice, and Video

An important component of the Cisco Self-Defending Network, the Cisco 3800 Series Routers feature the industry's most comprehensive security services embedded and integrated within the router, offering you a single, resilient platform to rapidly deploy secure networks and applications.

Cisco integrated services routers provide advanced security services and management capabilities such as built-in hardware encryption acceleration, IP Security (IPsec), VPN (Advanced Encryption Standard [AES], Triple Digital Encryption Standard [3DES], DES, and Multiprotocol Label Switching [MPLS]), stateful firewall protection, dynamic intrusion prevention (IPS), and URL filtering support. Cisco IOS[®] Software security feature sets enable all of these rich security features, as well as applications such as Cisco Network Admission Control (NAC), Dynamic Multipoint VPN (DMVPN), and Voice and Video Enabled VPN (V3PN).

For ease of management and configuration, the Cisco 3800 Series also features the intuitive, web-based Cisco Router and Security Device Manager (SDM) and Cisco Configuration Professional. For secure services management, every Cisco integrated services router supports Secure Shell Protocol Version 2 (SSHv2) and Simple Network Management Protocol Version 3 (SNMPv3) to encrypt the management session.

Figure 2. Secure Network Connectivity with Converged IP Communications

Converged IP Communications

As shown in Figure 2, the Cisco 3800 Series meets the IP communications needs of midsize to large enterprise branch offices, while delivering industry-leading security within a single routing platform. With embedded voice services inside the router, you have maximum deployment flexibility, plus higher densities for stations, trunks, and conferencing.

The Cisco 3800 Series Routers offer the award-winning Cisco IP Telephony solution for wired and cordless wireless LAN (WLAN) phones, with Cisco Unified Communications Manager Express (CME), as an optional feature set embedded within Cisco IOS Software and the Cisco Unified Border Element (UBE) for connecting to service provider Session Initiation Protocol (SIP) trunk solutions or across various unified communications solutions. This solution is ideal for decreasing costs and complexity by converging voice and data networks. Small offices and branch offices can take advantage of a complete, all-in-one data, voice-processing, voicemail, and Automated-Attendant system by adding a Cisco Unity[®] Express advanced integration module (AIM) or network module to this solution.

For larger, centralized IP communications deployments, you can deploy Cisco Unified Survivable Remote Site Telephony (SRST) in your Cisco 3800 Series Routers with a central Cisco Unified Communications Manager for highly scalable, highly available enterprise IP communications. SRST is an important component of the Cisco end-to-end IP telephony offering, providing feature-rich call-processing redundancy while taking advantage of the existing infrastructure at the branch office.

Cisco 3800 Series Routers also feature the widest range of voice-gateway interfaces, scaling to meet the requirements of all sizes of branch offices for voice termination densities using a combination of SIP trunk software, network modules, extension voice modules (EVMs), voice interface cards (VICs), voice/WAN interface cards (VWICs), and onboard packet voice DSP modules (PVDMs). These routers offer scalability to support up to 24 T1/E1 trunks and 88 foreign-exchange-station (FXS) ports for analog phones, fax machines, key systems, and conference stations.

Wireless LAN and WAN Services

The Cisco 3800 Series can provide a complete wireless solution for branch offices, companies of all sizes, and Wi-Fi hotspots. Wireless services enable greater mobility for employees, partners, and customers, resulting in increased productivity. The Cisco 3800 Series supports an integrated access point for WLAN connectivity, Wi-Fi hotspot services for public access, wireless infrastructure services for cordless WLAN telephony and for larger sites, and land mobile radio over IP (LMRoIP) for radio users.

The Cisco 3G WWAN High-Speed WAN Interface Cards (HWICs) are tightly integrated with the services provided on the award-winning Cisco 3800 Series Integrated Services Routers, which deliver secure data, voice, video, and mobility services. When coupled with a service provider wireless data plan, the Cisco 3G WWAN HWICs provide a cost-effective, rapidly deployable, reliable, and secure backup solution for remote sites and branch offices. With data rates exceeding T1 speeds, third-generation (3G) networks provide an alternative to wireline backup solutions such as ISDN, cable, and DSL. If a network failure occurs, the Cisco integrated services router routes mission-critical data to the Cisco 3G WWAN HWIC for transmission across the wireless infrastructure. In addition, the router can distinguish different types of traffic and allow only mission-critical traffic to flow over the backup interface.

Video Surveillance

The Cisco Integrated Video Surveillance solution enables you to rapidly deploy highly distributed IP-enabled video surveillance at your offices while migrating traditional analog surveillance equipment to IP. Based on Cisco 2800 and 3800 Series Routers, the solution offers the lowest total cost of ownership (TCO) for the branch office, ease of integration through network transparency, reliable data interoperability, and maximized overall security. It allows you to consolidate costly branch-office servers and deploy new applications centrally while still offering real-time access to physical security video and data.

Integrated Services

Figure 2 also highlights the fact that with the unique integrated services architecture of the Cisco 3800 Series, you can securely deploy IP communications with traditional IP routing and still leave the network-module slots available for additional advanced services. With the optional integration of a wide array of services modules, the Cisco 3800 offers the ability to easily integrate the functions of standalone network appliances and components into the Cisco 3800 Series chassis itself. Many of these network modules, such as the Cisco Network Analysis Module (NAM), the Cisco Intrusion Prevention System (IPS), and Cisco Wide Area Application Services (WAAS) Network Modules, have embedded processors and hard drives that allow them to run largely independently of the router, while allowing their management from a single management interface. This flexibility greatly expands the potential applications of the Cisco 3800 Series beyond

traditional routing while still maintaining the benefits of integration: ease of management, lower solution costs, and increased speed of deployment.

Primary Features and Benefits

The global economy is increasingly reliant on networked enterprise applications and the Internet as indispensable tools for addressing urgent business challenges. Successful companies require secure, high-performance networks that can quickly adapt to support volatile business conditions while helping boost competitive advantage and increasing network efficiencies. They must invest in network infrastructure that uses essential technologies and easily enables improved models of communication without disruption to core business functions. The Cisco 3800 Series can help your company operate securely in a networked economy and easily implement network services that will improve your business without affecting existing operations or degrading network performance.

Table 1 gives the features and benefits of the Cisco 3800 Series.

Table 1. Features and Benefits of Cisco 3800 Series

Feature	Benefit
Architecture optimized for services growth	<ul style="list-style-type: none"> • This high-performance architecture is optimized for concurrent service deployment. • This architecture offers increased default and maximum memory for future services growth. • PVDM slots accommodate digital-signal-processor (DSP) modules for packet voice processing. • Enhanced chassis interfaces help enable exceptional performance and service densities. • Advanced service interfaces integrate applications directly into the router, without the need for separate appliances: <ul style="list-style-type: none"> ◦ NAM: Integrated traffic monitoring enables application-level visibility into network traffic for remote troubleshooting and traffic analysis. ◦ CiscoIPS Module: The Cisco IPS Module provides the ability to inspect all traffic traversing router interfaces (both inline and promiscuous mode); to identify unauthorized or malicious activity such as hacker attacks, worms, or denial-of-service attacks; and to terminate illegitimate traffic to suppress or contain threats. ◦ The Cisco WAAS Network Module delivers an application acceleration and WAN optimization solution that accelerates the performance of any TCP-based application delivered across a WAN.
Embedded security processing and best-in-class security feature support*	<ul style="list-style-type: none"> • Integrated hardware for offload of encryption services processing supports IPsec, 3DES, and AES 128, AES 192, and AES 256 encryption modes without the need for separate modules. • Cisco IOS Software features offer support for identifying, preventing, and adapting to security threats and maintaining a self-defending network. Features include Cisco IOS Firewall, Content Filtering, Flexible Packet Matching (FPM), Dynamic Multipoint VPN, Group Encrypted Transport VPN, and SSL VPN.
Ideal platform for integrated IP telephony	<ul style="list-style-type: none"> • Onboard DSPs: Integrated PVDMs support analog voice, digital voice, conferencing, transcoding, and Secure Real-Time Transport Protocol (SRTP) media while enabling network-module or AIM slots for switching, concurrent applications, content, and voicemail. The DSPs enable packet voice technologies, including voice-over-IP (VoIP) protocols such as H.323, Media Gateway Control Protocol (MGCP), and SIP; voice over Frame Relay (VoFR); and voice over ATM (VoATM, including ATM Adaption Layer 5 [AAL5] and AAL2 adaptation layers). • The platform offers scalability for centralized and distributed call processing: <ul style="list-style-type: none"> ◦ SRST with centralized Cisco Unified Communications Manager: Up to 730 phones ◦ Cisco Unity Express [[cannot use this acronym for legal reasons]] voicemail: Up to 250 mail boxes ◦ Cisco Unified Communications Manager Express IP Phones: Up to 250 IP phones ◦ Small to large branch-office connectivity: Up to 24 T1/E1 trunks ◦ Analog phones, fax machines, key systems, and conference stations: Up to 88 FXS ports ◦ Local or long-distance calling with the EVM module: Up to 48 foreign-exchange-office (FXO) or 32 Basic Rate Interface (BRI) ports • Cisco IOS Software delivers customized features and applications, such as Tool Command Language (TCL) and VoiceXML support. • Secure calls are possible with Cisco Unified Communications Manager and Cisco IP Phones using the Cisco 3800: <ul style="list-style-type: none"> ◦ Offers standards-based, secure media and signaling authentication and encryption from IP phone to IP phone, IP phone to analog phone or public-switched-telephone-network (PSTN) gateway using IPsec, Transport Layer Security (TLS), and SRTP

	<ul style="list-style-type: none"> ◦ Maintains channel capacity for medium- and high-complexity codecs
Integrated wireless support	<ul style="list-style-type: none"> • WWAN connectivity: <ul style="list-style-type: none"> ◦ Cisco 3G Wireless WAN HWICs, when coupled with a service provider wireless data plan, provide a cost-effective, rapidly deployable, reliable, and secure backup solution for remote sites and branch offices. ◦ Two types of Cisco 3G Wireless WAN HWICs are available: Code Division Multiple Access (CDMA; part number HWIC-3G-CDMA-x [where x reflects the wireless carrier]) and Global System for Mobile Communications (GSM; part number HWIC-3G-GSM). • WLAN connectivity: <ul style="list-style-type: none"> ◦ You can use the 802.11b/g or 802.11a/b/g HWIC access-point interface card to provide integrated WLAN connectivity to mobile clients at sites requiring a single access point, resulting in mobility and enhanced productivity for your employees. ◦ Dual RP-TNC connectors enable diversity and allow for optimum coverage through the use of external antennas. • Wireless infrastructure services: <ul style="list-style-type: none"> ◦ Telephony support for wired and WLAN IP phones is delivered by Cisco Unified Communications Manager Express (CME) or by Cisco Unified SRST with Cisco Unified Communications Manager. Cordless WLAN IP phones allow you to be mobile and more productive. ◦ Integrated switch modules with PoE enable support for 802.3af-compliant devices such as wireless access points and wired IP phones. ◦ Mobility for clients from WLAN to cellular networks is enabled by mobile IP home agent support. ◦ IEEE 802.1x local authentication using Lightweight Extensible Authentication Protocol (LEAP) provides enhanced reliability through survivable authentication for WLAN clients during WAN failures. ◦ Customizable guest access is enabled with the service-selection-gateway features, along with the Cisco Subscriber Edge Services Manager. • LMRoIP: <ul style="list-style-type: none"> ◦ LMRoIP support allows radio users (for example, security personnel, maintenance personnel, police officers, etc.) to communicate over IP with phone and PC users, delivering improved communications and productivity. • Wi-Fi hotspot services: <ul style="list-style-type: none"> ◦ You can use the access-zone router and service-selection-gateway services features to deploy secure public WLAN access services with an integrated HWIC access point for small sites or with Cisco access points for larger sites. You can offer Wi-Fi hotspot services for additional revenue for public locations (for example, restaurants, hotels, airports, etc.) or a value-added service for customer satisfaction.
Investment protection	Field-upgradable, modular components are supported on the Cisco 3800 Series, allowing you to easily change network interfaces without upgrading your entire branch-office network. The Cisco 3800 Series takes advantage of the existing portfolio of WICs, VICs, network modules, and AIMs to reduce sparring, training, configuration, installation, and maintenance costs.
Availability	The Cisco 3800 Series minimizes downtime with availability features, including optional redundant power, error checking and correcting (ECC) memory for improved fault isolation and correction, USB flash memory for ease of image recovery, advanced temperature monitoring and variable-speed cooling fans, Cisco IOS Software Warm Reboot for improved bootup times, network-module online insertion and removal (OIR), and field-replaceable components such as fan tray, motherboard, and power supplies (Cisco 3845 only).

* Payload encryption is not supported on models with part number C3825-NOVPN and C3845-NOVPN.

Product Architecture

Table 2 lists the features of the Cisco 3825 and 3845 Integrated Services Routers.

Table 2. Features of Cisco 3825 and Cisco 3845 Models

Cisco 3800 Series Features	Cisco 3825/3825-NOVPN	Cisco 3845/3845-NOVPN
Network-module slots: These slots can accommodate a standard network module, enhanced network module (NME), enhanced extended network module (NME-X), and high-density extension module (EVM-HD). The NME-X, when available, will have a wider form factor than the NME. You can combine two side-by-side NME slots to accommodate one double-wide network module (NMD) or when available, a double-wide enhanced extended network module (NME-XD).	<ul style="list-style-type: none"> • NM • NME • NME-X • NMD • NME-XD • EVM-HD 	<ul style="list-style-type: none"> • NM • NME • NME-X • NMD • NME-XD • EVM-HD
Maximum number of network modules, NMEs, and NME-Xs supported	2	4

Maximum number of NMD/NME-XDs supported	1	2
Maximum number of EVM-HDs supported	1	2
Number of HWIC slots (These HWIC slots also support VICs, VWICs, and WICs.)	4	4
Number of fixed LAN ports (fixed RJ-45 port for 10/100/1000 connectivity)	2 Gigabit Ethernet (10/100/1000)	2 Gigabit Ethernet (10/100/1000)
Number of fixed Small Form-Factor Pluggable (SFP) ports (for SFP Gigabit Ethernet connectivity)	1	1
Number of AIM slots (for optional AIMS for offloading compute-intensive features)	2	2
Number of PVDM slots (for optional PVDM2s)	4	4
Number of USB 1.1 ports (for future use with USB flash memory, security tokens for secure Cisco IOS Software configuration distribution, and off-platform storage of VPN credentials)	2	2
Embedded VPN (hardware-based VPN encryption acceleration)	Yes*	Yes*
Number of console ports (up to 115.2 kbps)	1	1
Number of auxiliary ports (up to 115.2 kbps)	1	1
Memory: External Compact Flash and internal double-data-rate (DDR) synchronous dynamic RAM (SDRAM) with ECC	<ul style="list-style-type: none"> • Default: 64-MB Compact Flash; 256-MB DDR SDRAM • Maximum: 512-MB Compact Flash; 1-GB DDR SDRAM 	<ul style="list-style-type: none"> • Default: 64-MB Compact Flash; 256-MB DDR SDRAM • Maximum: 512-MB Compact Flash; 1-GB DDR SDRAM

* Part numbers C3825-NOVPN and C3845-NOVPN do not support embedded VPN.

Summary

The Cisco 3800 Series introduces best-in-class routing, security, and voice technologies embedded into the router fabric, making it possible for your enterprise to securely deliver concurrent, mission-critical services and applications at wire-speed performance. The Cisco 3800 Series extends network capabilities and productivity from the corporate headquarters to the branch offices for increased operational efficiencies and end-user productivity. The advanced adaptability and modularity of the Cisco 3800 Series Routers offers you a wide variety of network interfaces and services, including VPN IPsec, intrusion detection, IP communications, WLAN services, integrated switching, business video, URL filtering, application optimization, DSL, ATM access, and serial device aggregation. By consolidating the functions of multiple, separate services into a single, resilient platform you can easily manage and deploy, Cisco offers your business the industry's leading routing platforms for growth and investment protection.

Product Specifications

Table 3 gives the specifications of the Cisco 3825 and 3845 Series Integrated Services Routers.

Table 3. Specifications of Cisco 3825 and 3845

Cisco 3800 Series Features	Cisco 3825/3825-NOVPN	Cisco 3845/3845-NOVPN
Physical Specifications		
Dimensions (H x W x D)	<ul style="list-style-type: none"> • 3.5 x 17.1 x 14.7 in. • 2 rack units (2RU) 	<ul style="list-style-type: none"> • 5.25 x 17.25 x 16 in. • 3RU
Weight (minimum)	23 lb	35 lb
Rack-mounting	Yes, 19- and 23-in. options	Yes, 19- and 23-in. options
Wall-mounting	No	No
Power Specifications		
AC input voltage	100–240 VAC, autoranging	100–240 VAC, autoranging

AC input frequency	47–63 Hz	47–63 Hz
AC input current	<ul style="list-style-type: none"> • 3A (110V) • 2A (230V) • Startup current 50A maximum (one cycle) 	<ul style="list-style-type: none"> • 4A (110V) • 2A (230V) • Startup current 50A maximum (one cycle)
AC IP input current	<ul style="list-style-type: none"> • 8A (110V) • 4A (230V) • Startup current 50A maximum (one cycle) 	<ul style="list-style-type: none"> • 8A (110V) • 4A (230V) • Startup current 50A maximum (one cycle)
DC input voltage	24–60 VDC, autoranging positive or negative	24–60 VDC, autoranging positive or negative
DC input current	<ul style="list-style-type: none"> • 12A (24V) • 5A (60V) • Startup current 50A<10 ms 	<ul style="list-style-type: none"> • 18A (24V) • 7A (60V) • Startup current 50A<10 ms
Output	<ul style="list-style-type: none"> • AC or DC power supply: <ul style="list-style-type: none"> ◦ 210W for system • AC IP power supply: <ul style="list-style-type: none"> ◦ 210W for system ◦ 360W for IP phones (–48V) 	<ul style="list-style-type: none"> • AC or DC power supply: <ul style="list-style-type: none"> ◦ 300W for system • AC IP power supply: <ul style="list-style-type: none"> ◦ 300W for system ◦ 360W for IP Phones (–48V)
Redundant power supply (RPS)	External only (Cisco RPS 675 Redundant Power System)	Internal AC, AC IP, or DC RPS
Recommended RPS unit	Cisco RPS 2300 (recommended) and RPS 675 Redundant Power System	--
Power Dissipations		
Typical power dissipation (no modules)	52W (177 BTU/hr)	79W (269 BTU/hr)
AC without IP phone support	300W (1025 BTU/hr)	435W (1485 BTU/hr)
AC with IP phone support: System only	370W (1262 BTU/hr)	555W (1890 BTU/hr)
AC with IP phone support: IP phones	360W (1128 BTU/hr)	360W (1128 BTU/hr)
DC	325W (1100 BTU/hr)	460W (1570 BTU/hr)
Environmental Specifications		
Operating temperature	32 to 104°F (0 to 40°C)	32 to 104°F (0 to 40°C)
Nonoperating temperature	–40 to 158°F (–40 to 70°C)	–40 to 158°F (–40 to 70° C)
Relative humidity (noncondensing)	5–95% noncondensing	5–95% noncondensing
Maximum operating temperature at altitude	40°C at sea level 40°C at 6,000 ft (1,800m) 30°C at 13,000 ft (4,000m) 27.2°C at 15,000 ft (4,600m) Note: Derate 1.4°C per 1,000 ft above 6,000 ft	40°C at sea level 40°C at 6,000 ft (1,800m) 30°C at 13,000 ft (4,000m) 27.2°C at 15,000 ft (4,600m) Note: Derate 1.4°C per 1,000 ft above 6,000 ft
Noise level (minimum)	50 dBa typical, 53 dBa maximum	56 dBa typical, 58 dBa maximum
Regulatory Compliance		
Safety	<ul style="list-style-type: none"> • UL 60950 • CAN/CSA C22.2 No. 60950 • EN 60950 • AS/NZS 60950 	<ul style="list-style-type: none"> • UL 60950 • CAN/CSA C22.2 No. 60950 • EN 60950 • AS/NZS 60950
EMC	<ul style="list-style-type: none"> • 47 CFR, Part 15 • ICES-003 Class A • EN55022 Class A • CISPR22 Class A • AS/NZS 3548 Class A • VCCI V-3 • EN 300386 • EN 61000 	<ul style="list-style-type: none"> • 47 CFR, Part 15 • ICES-003 Class A • EN55022 Class A • CISPR22 Class A • AS/NZS 3548 Class A • VCCI V-3 • EN 300386 • EN 61000

Telcom	<ul style="list-style-type: none"> • 47 CFR, Part 68 • TIA/EIA/IS-968 • CS-03 • RTTE Directive 	<ul style="list-style-type: none"> • 47 CFR, Part 68 • TIA/EIA/IS-968 • CS-03 • RTTE Directive
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Supported Modules

Table 4 lists the modules supported by the Cisco 3800 Series.

Table 4. Modules Supported by Cisco 3800 Series

Part Number	Description
SFP Optics for Gigabit Ethernet Port	
GLC-LH-SM	Gigabit Ethernet SFP, LC connector LX/LH transceiver
GLC-SX-MM	Gigabit Ethernet SFP, LC connector SX transceiver
GLC-ZX-SM	Gigabit Ethernet 1000BaseASE-ZX SFP
Ethernet Switching Network Modules	
NME-16ES-1G	One 16-port 10/100 Cisco EtherSwitch [®] service module, 1 10/100/1000 port and IP Base
NM-X-23ES-1G	One 23-port 10/100 Cisco EtherSwitch service module, 1 10/100/1000 port and IP Base
NME-16ES-1G-P	One 16-port 10/100 Cisco EtherSwitch service module w/802.3af, 1 10/100/1000 port, and IP Base
NME-X-23ES-1G-P	One 23-port 10/100 Cisco EtherSwitch service module w/802.3af, 1 10/100/1000 port w/ 802.3af, and IP Base
NME-XD-24ES-1S-P	One 24-port 10/100 Cisco EtherSwitch service module w/802.3af, 1 SFP, Cisco StackWise [®] connectors, and IP Base
NME-XD-48ES-2S-P	One 48-port 10/100 Cisco EtherSwitch service module w/ 802.3af, 2 SFPs, and IP Base
NM-16ESW	16-port 10/100 Cisco EtherSwitch network module
NM-16ESW-1GIG	16-port 10/100 Cisco EtherSwitch network module with 1 Gigabit Ethernet (1000BASE-T) port
NM-16ESW-PWR*	16-port 10/100 Cisco EtherSwitch network module with inline power support
NM-16ESW-PWR-1GIG*	16-port 10/100 Cisco EtherSwitch network module with inline power and 1 Gigabit Ethernet port
NMD-36ESW*	36-port 10/100 Cisco EtherSwitch high-density services module (HDSM)
NMD-36ESW-2GIG*	36-port 10/100 Cisco EtherSwitch HDSM with 1 Gigabit Ethernet (1000BASE-T) port
NMD-36ESW-PWR*	36-port 10/100 Cisco EtherSwitch HDSM with inline power support
NMD-36ESW-PWR-2GIG*	36-port 10/100 Cisco EtherSwitch HDSM with inline power and 1 Gigabit Ethernet port
Routed Port Modules (LAN or WAN)	
NM-1FE-FX-V2	1-port Fast Ethernet, revision 2 (100BASE-FX interface)
NM-1FE2W-V2	1-port 10/100 Ethernet 2-WIC-slot network module, version 2
NM-2FE2W-V2	2-port 10/100 Ethernet 2-WIC-slot network module, version 2
NM-1GE	1-port Cisco Gigabit Ethernet network module
NM-2W	2-WIC-slot network module (no LAN)
NM-1FE1R2W	1-port 10/100 Ethernet 1-port 4/16 Token Ring 2-WIC-slot network module
NM-1FE2W*	1-port 10/100 Ethernet 2-WIC-slot network module
NM-2FE2W*	2-port 10/100 Ethernet 2-WIC-slot network module
Routed Port Modules (LAN or WAN)	
NM-1FE-FX-V2	1-port Fast Ethernet, revision 2 (100BASE-FX interface)
NM-1FE2W-V2	1-port 10/100 Ethernet 2-WIC-slot network module, version 2
NM-2FE2W-V2	2-port 10/100 Ethernet 2-WIC-slot network module, version 2
NM-1GE	1-port Cisco Gigabit Ethernet network module
NM-2W	2-WIC-slot network module (no LAN)
NM-1FE1R2W	1-port 10/100 Ethernet 1-port 4/16 Token Ring 2-WIC-slot network module

NM-1FE2W*	1-port 10/100 Ethernet 2-WIC-slot network module	
NM-2FE2W*	2-port 10/100 Ethernet 2-WIC-slot network module	
Serial Connectivity Network Modules		
NM-1T3/E3	1-port clear-channel T3/E3 network module	
NM-1HSSI*	1-port High-Speed Serial Interface (HSSI) network module	
NM-4T	4-port serial network module	
NM-4A/S*	4-port asynchronous/synchronous serial network module	
NM-8A/S*	8-port asynchronous/synchronous serial network module	
NM-16A/S	16-port asynchronous/synchronous serial network module	
NM-16A	16-port asynchronous serial network module	
NM-32A	32-port asynchronous serial network module	
Channelized T1/E1 and ISDN High Speed WAN Interface Cards and Network Modules		
HWIC-1CE1T1-PRI HWIC	1-port channelized T1/E1 and ISDN PRI HWIC	
HWIC-2CE1T1-PRI HWIC	2-port Channelized T1/E1 and ISDN PRI HWIC	
NM-8CE1T1-PRI	8-port Channelized T1/E1 and ISDN-PRI	
NM-1CE1T1-PRI*	1-port Channelized E1/T1/ISDN-PRI network module	
NM-2CE1T1-PRI*	2-port Channelized E1/T1/ISDN-PRI network module	
NM-4B-S/T*	4-port ISDN BRI network module (S/T interface)	
NM-4B-U*	4-port ISDN BRI network module with integrated Network Termination 1 (NT1) (U interface)	
NM-8B-S/T*	8-port ISDN BRI network module (S/T interface)	
NM-8B-U*	8-port ISDN BRI network module with integrated NT1 (U interface)	
Channelized T1/E1 and ISDN High Speed WAN Interface Cards and Network Modules		
HWIC-1CE1T1-PRI HWIC	1-port channelized T1/E1 and ISDN PRI HWIC	
HWIC-2CE1T1-PRI HWIC	2-port Channelized T1/E1 and ISDN PRI HWIC	
NM-8CE1T1-PRI	8-port Channelized T1/E1 and ISDN-PRI	
NM-1CE1T1-PRI*	1-port Channelized E1/T1/ISDN-PRI network module	
NM-2CE1T1-PRI*	2-port Channelized E1/T1/ISDN-PRI network module	
NM-4B-S/T*	4-port ISDN BRI network module (S/T interface)	
NM-4B-U*	4-port ISDN BRI network module with integrated Network Termination 1 (NT1) (U interface)	
NM-8B-S/T*	8-port ISDN BRI network module (S/T interface)	
NM-8B-U*	8-port ISDN BRI network module with integrated NT1 (U interface)	
ATM Network Modules		
NM-1A-OC3-POM	1-port ATM OC-3 module with single pluggable optical module (Small Form Pluggable) slot. Requires one of the following SFPs to provide the optical interface.	
	SFP-OC3-MM	OC3/STM1 SFP, Multi-mode fiber
	SFP-OC3-IR1	OC3/STM1 SFP, Single-mode fiber, Intermediate Reach
	SFP-OC3-LR1	OC3/STM1 SFP, Single-mode fiber, Long Reach (40km)
NM-1A-T3/E3	1-port T3/E3 ATM network module	
NM-1A-T3*	1-port DS-3 ATM network module	
NM-1A-E3*	1-port E3 ATM network module	
NM-4T1-IMA*	4-port T1 ATM network module with Inverse Multiplexing over ATM (IMA)	
NM-4E1-IMA*	4-port E1 ATM network module with IMA	
NM-8T1-IMA*	8-port T1 ATM network module with IMA	
NM-8E1-IMA*	8-port E1 ATM network module with IMA	
Digital Dialup and Remote-Access Network Modules		
PVDM2-12DM	12-port digital modem module	
PVDM2-24DM	24-port digital modem module	

PVDM2-36DM	36-port digital modem module
NM-6DM*	6-digital-modem network module
NM-12DM*	12-digital-modem network module
NM-18DM*	18-digital-modem network module
NM-24DM*	24-digital-modem network module
NM-30DM*	30-digital-modem network module
Analog Dialup and Remote-Access Network Modules	
NM-8AM-V2	8-port analog modem network module with v.92
NM-16AM-V2	16-port analog modem network module with v.92
Analog and ISDN Basic Rate Voice Network Modules and Accessories	
NM-HD-1V	1-slot IP communications voice/fax network module
NM-HD-2V	2-slot IP communications voice/fax network module
NM-HD-2VE	2-slot IP communications enhanced voice/fax network module
NM-HDA-4FXS	High-density analog voice/fax network module with 4-port FXS
EM-HDA-8FXS	8-port FXS voice/fax expansion module
EM-HDA-4FXO	4-port FXO voice/fax expansion module
EVM-HD-8FXS/DID	High-density analog (FXS/FXO/DID) and digital (BRI S/T) voice network module
EM-HDA-3FXS/4FXO	7-port voice/fax expansion module-3FXS/4FXO
EM-HDA-6FXO	6-port voice/fax expansion module-FXO
EM-4BRI-NT/TE	4-port voice/fax expansion module-BRI
High-Density Voice Network Modules and Accessories	
NM-HDV2	IP communications high-density voice/fax network module
NM-HDV2-1T1/E1	1-port T1/E1 IP communications high-density voice/fax network module
NM-HDV2-2T1/E1	2-port T1/E1 IP communications high-density voice/fax network module
Application Network Modules	
NME-APPRE-302-K9	Application Runtime Engine - (512 MB RAM 80GB HDD)
NME-APPRE-502-K9	Application Runtime Engine - (1GB RAM and 120 GB HDD)
NME-APPRE-522-K9	Application Runtime Engine - 3800 Only (2GB RAM 160GB HDD)
NME-VMSS-16	Cisco Video Management and Storage System NME16 Ports
NME-VMSS-HP16	Cisco Video Management and Storage System HP NME16 Ports
NME-VMSS-HP32	Cisco Video Management and Storage System HP NME32 Ports
EVM-IPVS-16A	16 Port Analog Video Gateway
NME-WAE-302-K9	Cisco Wide Area Application Services (WAAS) Network Module with 80 GB hard disk and 512 MB memory
NME-WAE-502-K9	Cisco Wide Area Application Services (WAAS) Network Module with 120 GB hard disk and 1 GB memory
NME-WAE-522-K9	Cisco Wide Area Application Services (WAAS) Network Module with 160 GB hard disk and 2 GB memory
NME-TPO	Network Capacity Expansion for Cisco 3800 ISRs
NME-AIR-WLC6-K9*	6-AP WLAN Controller NM for Cisco 2800/3800 Series
NME-AIR-WLC8-K9	8-AP WLAN Controller NM for Cisco 2800/3800 Series
NME-AIR-WLC12-K9	12-AP WLAN Controller NM for Cisco 2800/3800 Series
NME-AIR-WLC25-K9	25-AP WLAN Controller NM for Cisco 2800/3800 Series
NM-CE-BP-40G-K9*	Cisco Content Engine network module, basic performance, 40-GB IDE hard disk
NM-CE-BP-80G-K9*	Cisco Content Engine network module, basic performance, 80-GB IDE hard disk
NME-IPS-K9	Cisco Intrusion Prevention System Network Module Enhanced for Cisco 2811, 2821, 2851, and 3800 Series Integrated Services Routers
NM-CIDS-K9*	Cisco Intrusion Detection System network module

NM-CUE-EC*	Cisco Unity Express voice mail network module with enhanced capacity
NME-CUE	Cisco Unity Express voice mail network module with enhanced capacity
NM-CUE*	Cisco Unity Express voice mail network module
NME-UMG	Cisco Unified Messaging Gateway
NME-UMG-EC	Cisco Unified Messaging Gateway - Enhanced Gateway
NM-NAM*	Cisco 2600/3660/3700 series network analysis module
NME-NAM-80S	Cisco Branch Routers Series Network Analysis Module
NME-NAC-K9	Cisco NAC Network Module for Integrated Services Routers
NME-APA-E3	Application Performance Assurance Module for 3800-series ISR
NME-AON-K9	Application-Oriented Networking Module
Alarm Monitoring and Control Network Modules and Accessories	
NM-AIC-64*	Alarm monitoring and control network module
Circuit Emulation over IP (CEoIP) Network Modules	
NM-CEM-4SER	4 Port Serial Circuit Emulation over IP network module
NM-CEM-T1E1	4 Port T1/E1 Circuit Emulation over IP network module
Wireless HWICs	
HWIC-AP-G-A HWIC-AP-G-E HWIC-AP-G-J	802.11b/g HWIC access point interface card (A-Americas; E-Europe; J-Japan)
HWIC-AP-AG-B HWIC-AP-AG-E HWIC-AP-AG-N	802.11a/b/g HWIC access point interface card (B-Americas; E-Europe; P-Japan; N-Australia/New Zealand)
Serial WAN Interface Cards (WIC) and High-Speed WAN Interfaced Cards (HWIC)	
HWIC-4T	4-Port Serial HWIC
HWIC-4A/S	4-Port Async/Sync Serial HWIC
HWIC-8A/S-232	8-Port Async/Sync Serial HWIC, EIA-232
HWIC-8A	8-Port Async HWIC
HWIC-16A	16-Port Async HWIC
HWIC-1T	1-port high-speed serial HWIC
HWIC-2T	2-port high-speed serial H WIC
HWIC-2A/S	2-port asynchronous/synchronous serial HWIC
WIC-1T	1-port high-speed serial WIC
WIC-2T	2-port high-speed serial WIC
WIC-2A/S	2-port asynchronous/synchronous serial WIC
Channel Service Unit/Data Service Unit (CSU/DSU) WAN Interface Cards	
HWIC-4T1/E1	4 Port Clear Channel T1/E1 HWIC
WIC-1DSU-T1-V2	1-port T1/Fractional-T1 DSU/CSU WIC
HWIC-1DSU-T1	1-Port T1/Fractional T1 DSU/CSU High-Speed WAN Interface Card
WIC-1DSU-56K4	1-port 4-wire 56-/64-kbps CSU/DSU WIC
ISDN BRI WAN Interface Cards	
HWIC-4B-S/T	4-port ISDN BRI High-Speed WAN Interface Card
HWIC-1B-U	1-port ISDN BRI U High-Speed WAN Interface Card
WIC-1B-U-V2	1-port ISDN BRI with integrated NT1 (U interface)
WIC-1B-S/T-V3	1-port ISDN BRI Wan Interface card for Dial and Lease Line

DSL WAN Interface Cards and High-Speed WAN Interfaced Cards (HWIC)	
WIC-1ADSL*	1-port asymmetric DSL (ADSL) over basic telephone service WIC
WIC-1ADSL-DG*	1-port ADSL over basic telephone service with dying-gasp WIC
WIC-1ADSL-I-DG*	1-port ADSL over ISDN with dying-gasp WIC
WIC-1SHDSL*	1-port G.shdsl WIC (two wire only)
WIC-1SHDSL-V2*	1-port G.shdsl WIC (two or four wire)
WIC-1SHDSL-V3*	1-port G.shdsl WIC (two or four wire)
HWIC-1ADSL	1-port ADSL over POTS HWIC
HWIC-1ADSLI	1-port ADSL over ISDN HWIC
HWIC-1ADSL-B/ST	1-port ADSL over POTS and 1-port ISDN BRI S/T HWIC
HWIC-1ADSLI-B/ST	1-port ADSL over ISDN and 1-port ISDN BRI S/T HWIC
HWIC-2SHDSL	2-port G.SHDSL HWIC with 2-wire and 4-wire support
HWIC-4SHDSL	4-port G.SHDSL HWIC with 2-wire, 4-wire, and 8-wire support
Cable (DOCSIS-based) HWICs	
HWIC-CABLE-D-2	1-port DOCSIS 2.0 qualified cable HWIC
HWIC-CABLE-E/J-2	1-port Euro/J-DOCSIS 2.0 qualified cable HWIC
Analog Modem WAN Interface Cards	
WIC-1AM-V2	1-port analog modem WIC
WIC-2AM-V2	2-port analog modem WIC
T1, E1, and G.703 Multiflex Trunk Voice and WAN Interface Cards	
VWIC2-1MFT-T1/E1	1-Port T1/E1 Voice / WAN w/ Drop & Insert
VWIC2-2MFT-T1/E1	2-Port T1/E1 Voice / WAN w/ Drop & Insert
VWIC2-1MFT-G703	1-Port T1/E1 Voice / WAN w/ D&I & unstructured E1 (G703)
VWIC2-2MFT-G703	2-Port T1/E1 Voice / WAN w/ D&I & unstructured E1 (G703)
VWIC-1MFT-T1*	1-port RJ-48 multiflex trunk-T1
VWIC-2MFT-T1*	2-port RJ-48 multiflex trunk-T1
VWIC-2MFT-T1-DI*	2-port RJ-48 multiflex trunk-T1 with drop and insert
VWIC-1MFT-E1*	1-port RJ-48 multiflex trunk-E1
VWIC-1MFT-G703*	1-port RJ-48 multiflex trunk-G.703
VWIC-2MFT-E1*	2-port RJ-48 multiflex trunk-E1
VWIC-2MFT-E1-DI*	2-port RJ-48 multiflex trunk-E1 with drop and insert
VWIC-2MFT-G703*	2-port RJ-48 multiflex trunk-G.703
Voice Interface Cards	
VIC3-2FXS/DID	Two-port Voice Interface Card - FXS and DID
VIC3-2FXS-E/DID	Two-port Voice Interface Card - FXS and DID (OPX Lite FXS)
VIC3-4XS/DID	Four-Port Voice Interface Card - FXS and DID
VIC3-2E/M	Two-port Voice Interface Card - E and M
VIC-2DID	2-port DID voice and fax interface card
VIC-4FXS/DID	4-port FXS or DID VIC
VIC2-2FXS	2-port VIC-FXS
VIC2-2FXO	2-port VIC-FXO (universal)
VIC2-4FXO	4-port VIC-FXO (universal)
VIC2-2E/M	2-port VIC-ear and mouth (E&M)
VIC2-2BRI-NT/TE	2-port VIC-BRI (NT and TE)

Ethernet Switching High-Speed WAN Interface Cards	
HWIC-4ESW	4-port 10/100 Ethernet switch interface card
HWIC-4ESW-POE	4-port Ethernet switch HWIC with PoE
HWIC-D-9ESW	9-port 10/100 Ethernet switch interface card
HWIC-D-9ESW -POE	9-port Ethernet switch HWIC with PoE
Ethernet High-Speed WAN Interface Card	
HWIC-1FE	1-port Fast Ethernet HWIC
HWIC-2FE	2-port Fast Ethernet HWIC
HWIC-1GE-SFP	Cisco Gigabit Ethernet High-Speed Interface Card
3G Wireless WAN Interface Card	
HWIC-3G-CDMA-S	3G WWAN HWIC-EVDO Rev A/Rel 0/1xRTT - 800/1900MHz
HWIC-3G-CDMA-V	3G WWAN HWIC-EVDO Rev A/Rel 0/1xRTT - 800/1900MHz
HWIC-3G-CDMA-GSM	3G WWAN HWIC-HSDPA/UMTS/EDGE/GPRS - 850/900/1800/1900/2100MHz
Advanced Integration Modules	
AIM-IPS-K9	Cisco Intrusion Prevention System Advanced Integration Module
AIM-APPRE-102-K9	Application Runtime Engine AIM
AIM-TPO-1	Network Capacity Expansion for Cisco 1800/2800/3800 ISRs
AIM-TPO-2	Network Capacity Expansion for Cisco 1800/2800/3800 ISRs
AIM-ATM	High-performance ATM segmentation and reassembly (SAR) advanced integration module
AIM-ATM-1T1/E1	T1/E1 ATM bundle includes 1 VWIC2-1MFT-T1/E1 and 1 AIM-ATM
AIM-ATM-4T1/E1	T1/E1 ATM bundle includes 2 VWIC2-2MFT-T1/E1s and 1 AIM-ATM
AIM-ATM-4T1*	4 port ATM IMA bundle
AIM-ATM-4E1*	4 port ATM IMA bundle
AIM-ATM-1E1*	High Performance ATM AIM/E1 Bundle, AIM-ATM with VWIC-1MFT-E1
AIM-ATM-1T1*	High Performance ATM AIM/T1 Bundle, AIM-ATM with VWIC-1MFT-T1
AIM-COMPR4*	Data compression advanced integration module
AIM-CUE	Cisco Unity Express voice mail advanced integration module
AIM-VPN/SSL-3€	DES/3DES/AES/SSL VPN Encryption/Compression Advanced Integration Module (AIM) with IPv6 encryption
AIM-VPN/EPII-PLUS*€	Enhanced-performance DES/3DES/AES and compression VPN encryption advanced integration module
AIM-VPN/HPII-PLUS*€	High-performance DES/3DES/AES and compression VPN encryption advanced integration module
Packet Voice Data Modules	
PVDM2-8	8-channel fax and voice DSP module
PVDM2-16	16-channel fax and voice DSP module
PVDM2-32	32-channel fax and voice DSP module
PVDM2-48	48-channel fax and voice DSP module
PVDM2-64	64-channel fax and voice DSP module
Digital Modem Modules	
PVDM2-12DM	12 Port Digital Modem Module
PVDM2-24DM	24 Port Digital Modem Module
PVDM2-36DM	36 Port Digital Modem Module
USB Flash Storage	
MEMUSB-64FT	64MB USB Flash
MEMUSB-128FT	128MB USB Flash
MEMUSB-256FT	256MB USB Flash

Compact Flash	
MEM3800-64CF	64MB Compact Flash
MEM3800-128CF	128MB Compact Flash
MEM3800-256CF	256MB Compact Flash
MEM3800-512CF	512MB Compact Flash
Fan Accessories	
ACS-3825-FANS=	3825 Fan assembly
CISCO3845FANASSY=	Cisco 3845 Fan Assembly and Bezel

* These modules have completed or are undergoing end-of-sale process. Please check the Cisco Configuration Tool and Cisco Price List for updated information about orderable modules.

* €AIM-VPN modules are not supported on the C3825-NOVPN and C3845-NOVPN platforms.

Ordering Information

To place an order, visit the [Cisco Ordering Home Page](#). Table 5 gives further ordering information for the Cisco 3800 Series.

Table 5. Ordering Information for Cisco 3800 Series*

Cisco 3800 Series Features	Configuration
CISCO3825	Cisco 3825 integrated services router with two Gigabit Ethernet fixed LAN ports, one Small Form-Factor Pluggable (SFP) slot, two enhanced network modules (NMEs), four high-speed WAN interface cards (HWICs), two Advanced Integration Module (AIM) slots, four PVDM slots, Cisco IP Base software, and AC power
CISCO3825-AC-IP	Cisco 3825 integrated services router with two Gigabit Ethernet fixed LAN ports, one SFP slot, two NMEs, four HWICs, two AIM slots, four PVDM slots, Cisco IP Base software, and Inline Power
CISCO3825-DC	Cisco 3825 integrated services router with two Gigabit Ethernet fixed LAN ports, one SFP slot, two NMEs, four HWICs, two AIM slots, four PVDM slots, Cisco IP Base software, and DC power
CISCO3845	Cisco 3845 integrated services router with two Gigabit Ethernet fixed LAN ports, one SFP slot, four NMEs, four HWICs, two AIM slots, 4 PVDM slots Cisco IP Base software, and AC power
CISCO3845-AC-IP	Cisco 3845 integrated services router with two Gigabit Ethernet fixed LAN ports, one SFP slot, four NMEs, four HWICs, two AIM slots, four PVDM slots, Cisco IP Base software, and Inline Power
CISCO3845-DC	Cisco 3845 integrated services router with two Gigabit Ethernet fixed LAN ports, one SFP slot, four NMEs, four HWICs, two AIM slots, four PVDM slots, Cisco IP Base software, and DC power
C3825-NOVPN	Cisco 3825 integrated services router with two Gigabit Ethernet fixed LAN ports, one SFP slot, two NMEs, four HWICs, two AIM slots, four PVDM slots, Cisco IP Base software, and AC power
C3845-NOVPN	Cisco 3845 integrated services router with two Gigabit Ethernet fixed LAN ports, one SFP slot, four NMEs, four HWICs, two AIM slots, 4 PVDM slots Cisco IP Base software, and AC power
Voice Bundles	
CISCO3825-V/K9	3825 Voice Bundle, PVDM2-64, SP Serv,64 MB Flash, 256 MB DRAM
CISCO3825-SRST/K9	3825 Voice Bundle with PVDM2-64, FL-SRST-175, SP Serv, 128 MB Flash, 512 MB DRAM
CISCO3825-CCME/K9	3825 Voice Bundle with PVDM2-64, FL-CCME-175, SP Serv, 128 MB Flash, 512 MB DRAM
CISCO3845-V/K9	3845 Voice Bundle, PVDM2-64, SP Serv, 64 MB Flash, 256 MB DRAM
CISCO3845-SRST/K9	3845 Voice Bundle with PVDM2-64, FL-SRST-250, SP Serv, 128 MB Flash, 512 MB DRAM
CISCO3845-CCME/K9	3845 Voice Bundle with PVDM2-64, FL-CCME-250, SP Serv, 128 MB Flash, 512MB DRAM

Secure Voice Bundles	
CISCO3825-V3PN/K9	3825 V3PN bundle with AIMVPN, PVDM2-64, CCME-175, AdvIPSvc, 64 MB Flash, 256 MB DRAM
CISCO3845-V3PN/K9	3845 V3PN bundle, AIM-VPN, PVDM2-64, CCME-250, AdvIPServ, 64 MB Flash, 256 MB DRAM
C3825-VSEC/K9	3825 Voice Security Bundle, PVDM2-64, Adv IP Serv, 128 MB Flash, 512 MB DRAM
C3825-VSEC-CCME/K9	3825 VSEC Bundle with PVDM2-64, FL-CCME-175, Adv IP Serv, 128 MB Flash, 512 MB DRAM
C3825-VSEC-SRST/K9	3825 VSEC Bundle with PVDM2-64, FL-SRST-175, Adv IP Serv, 128 MB Flash, 512 MB DRAM
C3845-VSEC/K9	3845 Voice Security Bundle, PVDM2-64, Adv IP Serv, 128 MB Flash, 512 MB DRAM
C3845-VSEC-CCME/K9	3845 VSEC Bundle with PVDM2-64, FL-CCME-250, Adv IP Serv, 128 MB Flash, 512 MB DRAM
C3845-VSEC-SRST/K9	3845 VSEC Bundle with PVDM2-64, FL-SRST-250, Adv IP Serv, 128 MB Flash, 512 MB DRAM
C3825-VSEC-CUBE/K9	3825 CUBE VSEC Bundle w/PVDM2-64,FL-CUBE-300,IVS,128F/512D
C3845-VSEC-CUBE/K9	3845 CUBE VSEC Bundle w/PVDM2-64,FL-CUBE-400,IVS,128F/512D
Security Bundles	
CISCO3825-SEC/K9	3825 Security Bundle, Advanced Security, 64 MB Flash, 256 MB DRAM
CISCO3845-SEC/K9	3845 Security Bundle, Advanced Security, 64 MB Flash, 256 MB DRAM
CISCO3825-HSEC/K9	3825 Security Bundle, AIM-VPN/SSL-3, Adv. IP Serv, 128 MB Flash, 512 MB DRAM
CISCO3845-HSEC/K9	3845 Security Bundle, AIM-VPN/SSL-3, Adv. IP Serv, 128 MB Flash, 512 MB DRAM
CISCO-FIPS-KIT=	Tamper Proof for 80/18/28/38/72/73 Routers and ASA
Unified Communications Bundles	
C3845-35UC/K9	Cisco 3845 Unified Communications Bundle with IOS SP Services, PVDM2-64, NME-CUE, 35 User Licenses (CCME, CUE and Phone User licenses), 10 Unified CallConnector Personal Licenses, 128MB Flash/512MB DRAM
C3825-35UC/K9	Cisco 3825 Unified Communications Bundle with IOS SP Services, PVDM2-64, NME-CUE, 35 User Licenses (CCME, CUE and Phone User licenses), 10 Unified CallConnector Personal Licenses, 128MB Flash/512MB DRAM
C3845-35UC-VSEC/K9	Cisco 3845 Unified Communications Bundle with IOS Advanced IP Serv, PVDM2-64, NME-CUE, 35 User Licenses (CCME, CUE and Phone User licenses), 10 Unified CallConnector Personal Licenses, 128MB Flash/512MB DRAM
C3825-35UC-VSEC/K9	Cisco 3825 Unified Communications Bundle with IOS Advanced IP Serv, PVDM2-64, NME-CUE, 35 User Licenses (CCME, CUE and Phone User licenses), 10 Unified CallConnector Personal Licenses, 128MB Flash/512MB DRAM
WAN Optimization Bundles	
CISCO3845-WAE/K9	3845, NME-WAE-502/K9,WAAS Trans,AdvSec,128F/512D
CISCO3825-WAE/K9	3825, NME-WAE-502/K9,WAAS Trans,AdvSec,128F/512D

* Cisco 3800 Integrated Services Router bundle configurations are subject to change. Please check the Cisco Configuration Tool and Cisco Price List for updated information about bundle part numbers and contents.

Table 6 lists the Cisco IOS Software feature sets that the Cisco 3825 and the Cisco 3845 support.

Table 6. Cisco IOS Software Feature Sets that Cisco 3825 and Cisco 3845 Support

Cisco IOS Software Feature Sets	Cisco 3825	Cisco 3845	C3825-NOVPN	C3845-NOVPN
IP Base	S382IPBK9	S384IPBK9	S382NIPK9	S384NIPK9
IP Base without encryption	S382IPB	S384IPB	S382NIPB	S384NIPB
IP VOICE	S382IPVK9	S384IPVK9	S382NIPVK9	S384NIPVK9
IP VOICE without encryption	S382IPV	S384IPV	S382NIPV	S384NIPV
ENTERPRISE BASE	S382EBK9	S384EBK9	S382NEBK9	S384NEBK9
ENTERPRISE BASE without encryption	S382EB	S384EB	S382NEB	S384NEB
ADVANCED SECURITY	S382ASK9	S384ASK9	S382NASK9*	S384NASK9*

SP SERVICES	S382SPSK9	S384SPSK9	S382NSPK9	S384NSPK9
ENTERPRISE SERVICES	S382ESK9	S384ESK9	S382NESK9	S384NESK9
ENTERPRISE SERVICES without encryption	S382ES	S384ES	S382NES	S384NES
ADVANCED IP SERVICES	S382AISK9	S384AISK9	S382NAIK9*	S384NAIK9*
ADVANCED ENTERPRISE SERVICES	S382AESK9	S384AESK9	S382NAEK9*	S384NAEK9*
INTEGRATED VOICE/VIDEO: GK, IPIP GW, TDMIP GW	S382IVS	S384IVS	S382NIVS	S384NIVS
INTEGRATED VOICE/VIDEO: GK, IPIP GW, TDMIP GW AES	S382AVSK9	S384AVSK9	S382NAVK9	S384NAVK9
ADVANCED ENTERPRISE SERVICES WITH SNA SWITCHING	S382SNAK9	S34SNAK9	S382NSNK9*	S384NSNK9*

*These images do not support VPN Payload Encryption (IPSEC or SSL).

Table 7 lists the Cisco IOS Software feature licenses available for the Cisco 3800 Series.

Table 7. Cisco IOS Software Feature Licenses for the Cisco 3800 Series

Part Number	Cisco IOS Software Feature License Description
Cisco Unified Communication Manager Express and Survivable Remote Site Telephony Feature Licenses	
FL-CCME-25	Feat Lic. Communications Manager Express Up To 25 Users
FL-CCME-35	Feat Lic. Communications Manager Express Up To 35 Users
FL-CCME-50	Feat Lic. Communications Manager Express Up To 50 Users
FL-CCME-100	Feat Lic. Communications Manager Express Up To 100 Users
FL-CCME-175	Feat Lic. Communications Manager Express Up To 175 Users
FL-CCME-250	Feat Lic. Communications Manager Express Up To 250 Users
FL-SRST-25	Feat Lic Survivable Remote Site Telephony up to 25 Users
FL-SRST-35	Feat Lic Survivable Remote Site Telephony up to 35 Users
FL-SRST-50	Feat Lic Survivable Remote Site Telephony up to 50 Users
FL-SRST-100	Feat Lic Survivable Remote Site Telephony up to 100 Users
FL-SRST-175	Feat Lic Survivable Remote Site Telephony up to 175 Users
FL-SRST-250	Feat Lic Survivable Remote Site Telephony up to 250 Users
FL-SRST-480	Feat Lic Survivable Remote Site Telephony up to 480 Users
Land Mobile Radio Feature License	
FL-LMR	Land Mobile Radio Feature License (2600XM, 2691, 2811, 2821, 2851, 3700, 3800)
Voice XML Feature Licenses	
FL-VXML-1	VoiceXML Feature License For 1 Session
FL-VXML-12	VoiceXML Feature License Up To 12 Sessions
IP Mobility Gateway Feature Licenses	
FL-IPMOBGW-100=	IP Mobility Gateway Feature Set-up to 100 Users
FL-IPMOBGW-500=	IP Mobility Gateway Feature Set-up to 500 Users
FL-IPMOBGW-1000=	IP Mobility Gateway Feature Set-up to 1000 Users
Cisco Unified Border Element Licenses	
FL-CUBE-4	Cisco Unified Border Element Up to 4 Concurrent SIP Trunk or CUBE calls
FL-CUBE-25	Cisco Unified Border Element Up to 25 Concurrent SIP Trunk or CUBE calls
FL-CUBE-100	Cisco Unified Border Element Up to 100 Concurrent SIP Trunk or CUBE calls

Service and Support

Leading-edge technology deserves leading-edge support. Cisco SMARTnet® technical support for the Cisco 3800 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
- Access to the industry's largest dedicated technical support staff 24 hours a day

Services from Cisco and our certified partners can help you reduce the cost and complexity of branch deployments. We have the depth and breadth of experience across technologies to architect a blueprint for a branch solution to meet your company's needs. Planning and design services align technology with business goals and can increase the accuracy, speed, and efficiency of deployment. Technical services help maintain operational health, strengthen software application functionality, solve performance issues, and lower expenses. Optimization services are designed to continually improve performance and help your team succeed with new technologies. For more information about [Cisco services](#), refer to [Cisco Technical Support Services](#) or [Cisco Advanced Services](#).

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- Europe: 32 2 778 4242
- Australia: 612 9935 4107
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