Data Sheet

Cisco 2600 Series Modular Access Router Family including the 261x, 262x, 265x, and 2691

Now includes the Cisco 2600XM and 2691 models

The Cisco 2600 series is an award-winning family of modular multiservice access routers, providing flexible LAN and WAN configurations, multiple security options, voice/data integration, and a range of high performance processors. This range of features make the Cisco 2600 family the ideal branch-office router for today's and tomorrow's customer requirements.

The latest additions to the Cisco 2600 Series family of Modular Routers include the Cisco 2600XM models and the Cisco 2691. These new models deliver extended performance, higher density, enhanced security performance and increased concurrent application support to meet the growing demands of branch offices.

Figure 1
Cisco 2600 Series Modular Access Routers

New Models in Cisco 2600 Family: 2600XM and 2691

The new Cisco 2600XM models are based on the current Cisco 2600 platform architecture, and extend the performance by as much as 33%. The new models also increase default platform memory and provide increases in memory capacity at the same price points when compared to the current Cisco 2600 models. The new XM functionality provides the same proven technology of the current Cisco 2600 Series platforms, including Cisco IOS® software mainline feature support and the modularity of Network Modules (NMs), WAN Interface Cards (WICs) and Advanced Integration Modules (AIMs). Enterprises considering the Cisco 2600 for branch office applications should now regard the Cisco 2600XM as the preferential platform for delivering high performing, flexible solutions to branch and remote offices.

Another addition to the Cisco 2600 Series family is the Cisco 2691. The highest performing router in the Cisco 2600 family that extends the density of emerging branch office applications, the Cisco 2691 offers almost twice the performance of the Cisco 2650XM platform while leveraging the same modules from other Cisco 2600, Cisco 3600 and Cisco 3700 Series routers. Driven by the need to push increased numbers of applications from Enterprise

headquarters to the remote office, this platform provides a higher level of performance for a broadened range of concurrent remote office applications, including unparalleled voice/data integration, Virtual Private Network (VPN) performance, increased bandwidth to support voice and video applications, and the delivery of Web-based applications. Compared to the Cisco 2600XM models, the new Cisco 2691 is designed to offer a higher degree of versatility, providing greater throughput for higher density WAN applications, support for high speed interfaces and increased performance to handle new services.

Cisco 2600 Series Modular Access Router Family: Introduction

As companies grow, the diversity of protocols, increased performance, LAN media, WAN services, and networking equipment required to support mission-critical network services expand dramatically. With extensive support for multiprotocol data routing, voice/data integration, DSL access, ATM, dial access services, and integrated switching, the Cisco 2600 Series provides a flexible, scalable integrated solution that simplifies the process of deploying and managing the branch office network solutions.

The Cisco 2600 Series offers a comprehensive feature set ideal for solutions requiring the following support:

- Multiservice voice/data integration
- VPN access with Firewall and Encryption options
- Analog dial access services
- Routing with bandwidth management
- Inter-VLAN routing
- Delivery of high-speed business class DSL access
- Cost effective ATM access
- Integration of flexible routing and low density switching

The foundations of these solutions are the Cisco IOS elements of security, availability, Quality of Service (QoS), manageability, and integration. Combined, these features support the delivery of distributed intelligence that extends to the branch office. By delivering powerful business tools and applications to the branch, enterprises can realize the business benefits of increased productivity, cost reductions and scalable exchange of information.

The modular architecture of the Cisco 2600 Series allows interfaces to be upgraded to accommodate network expansion or changes in technology as new services and applications are deployed. Modular interfaces are shared with the Cisco 1700, 3600 and 3700 Series, providing unrivaled investment protection and reducing the complexity of managing the remote network solution by integrating the functions of multiple separate devices into a single, compact unit. NMs available for the Cisco 2600, 3600, and 3700 Series support a broad range of applications, including multiservice voice/data integration, integrated switching, analog and ISDN dial access, and serial device concentration.

The integration of the field-installable AIMs enhances the performance of the Cisco 2600 Series by off-loading processor-intensive functions onto a dedicated coprocessor while preserving external interface slots for other applications. A variety of AIMs that are currently supported on all Cisco 2600, Cisco 3660 and Cisco 3700 Series models provide high-performance hardware-assisted data compression, data encryption (ideal for VPNs), ATM and new DSP functionality for up to 30 digital voice channels

Cisco Systems continues to deliver enterprise and provider-class versatility, integration, and power to branch offices with new members of the Cisco 2600 Series Modular Router Family. The Cisco 2600XM models and Cisco 2691, the latest additions to the Cisco 2600 Series routers, provide increased performance, higher service density and greater flexibility for service options to address evolving branch office requirements.

Cisco 2600 Series Modular Access Router Family: Overview

Driven by a powerful CPU processor along with high-performance DSPs and auxiliary processors on various interfaces, the Cisco 2600 Series supports the advanced QoS, security, and network integration features required in today's evolving branch offices.

Each of the Cisco 2610 through Cisco 2651 and XM versions supports one Network Module (NM) slot, two WAN Interface Card slots, and one AIM slot. These slots share more than 50 different modules across four Cisco product lines—the Cisco 1700 Series, the Cisco 2600 Series, the Cisco 3600 Series and the Cisco 3700 Series.

One NM slot is provided on the Cisco 2691, offering the same format as the current Cisco 2600 family series of routers, but includes one additional WIC and AIM slot for applications that require increased service requirements.

Table 1 Platform Overview

Platform	NMs	AIMs	WICs	Fixed LAN Ports	Performance (Kpps)	DRAM (Default MB/ Max MB)	FLASH (Default MB/ Max MB)
CISCO2610/11	1	1	2	1 E/2E	15	32/64	8/16
CISCO2610XM/11XM	1	1	2	1 FE/2FE	20	32/128	16/48
CISCO2612	1	1	2	1TR/1E	15	32/64	8/16
CISCO2620/21	1	1	2	1 FE/2FE	25	32/64	8/32
CISCO2620XM/21XM	1	1	2	1 FE/2FE	30	32/128	16/48
CISCO2650/51	1	1	2	1 FE/2FE	37	32	8/32
CISCO2650XM/51XM	1	1	2	1 FE/2FE	40	64/128	16/48
CISCO2691	1	2	3	2 FE	70	64/256	32/128

Key Benefits

The Cisco 2600 Series adds a greater range of performance and scalability for end-to-end networking solutions, allowing businesses to extend a cost-effective, seamless network infrastructure to the branch office with the following benefits:

- *Investment protection*—Support for field-upgradeable modular components on the Cisco 2600 Series allows customers to easily change network interfaces without a "forklift upgrade" of the entire branch office network. The AIM slot(s) further protect investments by offering the expandability to support advanced services such as hardware-assisted data compression, data encryption, ATM data/voice access, or DSP digital voice applications. Compared to other models in the Cisco 2600 series, the Cisco 2691 provides an additional WIC and AIM slot, offering greater support for advanced services.

- *Lower cost of ownership*—By integrating the functions of switches, CSU/DSUs, ISDN Network Termination (NT1) devices, firewall, modems, compression or encryption devices, and other equipment found in branch office wiring closets in a single, compact unit, the Cisco 2600 Series provides a space-saving solution that can be managed remotely using network management applications.
- *Integrated Flexible Routing and Low Density Switching*—With support of an optional 16-port 10/100 EtherSwitch network module, branch offices can take advantage of the flexibility of integrated routing and switching functions in one unit for low port densities. This offers high-speed connections between individual desktops, servers, and other network resources in a single unit for Layer 2 and allows WAN connection at Layer 3 through the router. An optional external power chassis provides power to IP Phones and to Aironet 802.11 Base Stations.
- *Voice/Data integration*—Cisco offers the industry's broadest, most scalable multiservice voice/data integration solution set. The Cisco 2600 Series allows network managers to provide scalable analog and digital telephony without investing in a one-time solution, allowing enterprises greater control of their converged telephony needs. Using the Voice/Fax modules, the Cisco 2600 Series may be deployed in both Voice over IP (VoIP) and Voice over Frame Relay (VoFR) networks. The packet voice trunk network module supports up to 60 simultaneous voice calls as well as supporting routing and other services. When used with the ATM-AIM, VoATM using AAL2 or AAL5 can be deployed.
- *Enterprise/Provider class solution*—Meets the requirements of multiservice enterprises and their managed service CPE providers with high reliability features, multiple WAN connections, and the ability to migrate from data-only to time-division multiplexing (TDM) voice and data to packetized voice and data infrastructure.
- *Business-Class DSL Connectivity*—The introduction of the WIC-ADSL and WIC-1SHDSL, offers business-class broadband service with scalable performance, flexibility, and security for branch and regional offices. The Cisco 2600 Series provides an ideal solution for a variety of businesses requiring high-speed business-class DSL connectivity on a secure, high-performance modular platform.

Key Features and Benefits

The Cisco 2600 Series brings a cost-effective combination of versatility, integration, and increased performance to remote branch offices with the key features listed in Table 2.

Table 2 Cisco 2600 Series Key Features and Benefits

Feature	Benefit
Versatility and Investment Protection	
Modular Architecture which shares interfaces with Cisco 1700, 3600, and 3700 Series Routers	• Network interfaces are field-upgradeable to accommodate future technologies • Additional services can be added on an "integrate as you grow" basis • Leverages the large existing portfolio of WICs, VICs, NMs and AIMs shared across platforms to reduce sparing, training, configuration and installation and maintenance costs

Table 2 Cisco 2600 Series Key Features and Benefits

Feature	Benefit
LAN/WAN connectivity integrated into chassis	• Voice/WAN Interface Card support can be used for WAN (data-only) connectivity then re-deployed to support channelized voice and data or packet voice applications • Integrated 10/100 Ethernet ports on most platforms • Combination of AIMs and WICs along with NMs provides greater flexibility to create new configurations as requirements change
Flexible voice gateway and IP Telephony configurations	• Enables incremental migration from legacy infrastructure to IP Telephony • Compatibility with over 90% of the world's legacy PBXs • Configuration options for higher density and mixed analog/digital gateway configurations
Advanced Integration Module slot	• Expandability for integration of advanced services such as hardware-assisted data compression, encryption, Voice and ATM • Maximizes performance by off-loading processor intensive applications to a coprocessor • Provides expanded services, freeing the NM slot for other applications
DC power supply option platforms	• Allows deployment in DC power environments such as telecommunications carrier central offices (not 2691)
Enterprise/Managed Service CPE-Class Performance	
High-Performance architecture	• Support for advanced QoS features such as the Resource Reservation Protocol (RSVP), Weighted Fair Queuing (WFQ), and IP Precedence to reduce recurring WAN costs • Enables security features such as data encryption, tunneling, and user authentication and authorization for VPN access • ICSA-certified Cisco IOS Firewall feature sets provide support for advanced security features such as Context-Based Access Control (CBAC), Java blocking, denial of service protection, intrusion detection, and audit trails • Support for cost-effective, software-based data compression and data encryption • Integration of legacy networks via data link switching plus (DLSW+) and Advanced Peer-to-Peer Networking (APPN) • High-speed routing performance of up to 70,000 packets per second for maximum scalability to support more concurrent functions (Cisco 2691)

Table 2 Cisco 2600 Series Key Features and Benefits

Feature	Benefit
Cisco IOS software	• Supports common Cisco IOS feature sets as used on the Cisco 2600, 3600 and 3700 routers • New releases of Cisco IOS software add support for new services and applications • Enables end to end solution support for Cisco IOS-based QoS and Security mechanisms • Full range of VoIP and Security/Routing features
Reliability	
Support for optional redundant power	• Accommodates optional RPS and minimizes network downtime • RPS can be shared with other network components such as the Cisco Catalyst 1900 Series to protect the network from downtime due to power failures
Survivable Remote Site Telephony	• Enables branch offices to leverage centralized voice applications while cost-effectively providing backup redundancy
Dial-on-Demand routing	• Allows automatic backup of WAN connection in case of a primary link failure
QoS	
Full support for Cisco IOS-based QoS mechanisms	• Enhanced utilization of network resources and guarantees quality, reliability and efficiency in voice and data service delivery
Ergonomic Design	
LED status Indicators	• Provide at-a-glance indications for power, RPS status, network activity, and interface status
All network interfaces located on back of unit	• Simplifies installation and cable management for maximum uptime
Easy-to-Open chassis design	• Allows fast and easy access for installation of memory or AIMs
Simplified Management	
Integrated CSU/DSU, add/drop multiplexers, Analog Modems and NT1 options	• Enables remote management of all Customer Premise Equipment (CPE) elements for higher network availability and lower operational costs
Enhanced setup feature	• Context-sensitive questions guide the user through the router configuration process, allowing faster deployment
Support for Cisco AutoInstall	• Configures remote routers automatically across a WAN connection to save cost of sending technical staff to the remote site
VLAN support	• Enables inter-VLAN routing via the Cisco Inter-Switch Link (ISL) protocol and 802.1Q (Requires a Cisco IOS “Plus” feature set)

Cisco 2600 Series Hardware/Software Options

Cisco 2600 Series routers offer a choice of Ethernet, Token Ring, and autosensing 10/100 Ethernet LAN interfaces. In addition, depending on the model, one Network Module slot, two or three WAN Interface Card slots, and one or two AIM slots as well as one 115.2 Kbps console port and one 115.2Kbps auxiliary asynchronous port.

Network Module Options

NMs enable the Cisco 2600 Series to be customized to meet the needs of virtually any branch office. These modules support a broad range of applications, including multiservice voice/data integration, analog and ISDN dial access, ATM access, integration of low density switching, and serial device concentration (*refer to Appendix B for the complete list of supported modules for the Cisco 2600 Series*).

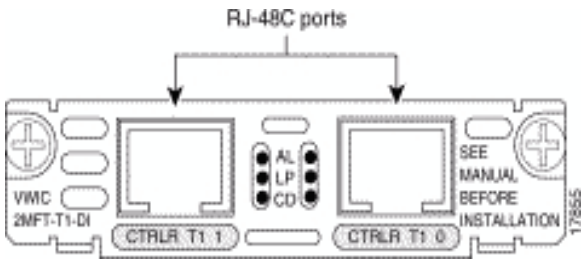
Multiflex Voice/WAN Interface Card and WAN Interface Card Options

The Cisco 2600 Series WIC slots now support 19 interface cards with the introduction of the 1-port G.shdsl and 1 or 2-port analog modem WICs. Most of these interface cards are available for the Cisco 1700, 3600 and 3700 Series, including the new single and dual port Multiflex VWICs and dual port serial WICs to maximize interface density and slot efficiency.

The Cisco 2600 Series of modular routers support both ADSL and the G.shdsl WICs. These offerings bring high-speed business class broadband service to the award winning Cisco 2600 Series of multiservice routers. Now small- to medium-businesses, enterprise branch offices, and service provider managed service users can take advantage of a highly flexible and scalable solution for data only or voice and data integration, with secure VPN options.

The single and dual port Multiflex VWICs combine WAN Interface Card and VIC functionality to provide unparalleled flexibility, versatility, and investment protection from its many uses. Supporting up to T1 and E1 rates with integrated T1 CSU/DSUs or E1 DSUs, the Multiflex VWICs can be used in data-only, channelized (drop and insert) voice/data integration applications as well as packet voice/data connections to a PBX or the PSTN (packet voice requires the use of the high density voice trunk network module). Unlike legacy multibox voice and data components, when used in a Cisco 2600 or 3600, the T1/E1 Multiflex VWICs deliver a single-box voice and data platform providing a graceful migration from data only, to channelized voice and data, to packet voice and data (Refer to Appendix B for the complete list of supported modules for the Cisco 2600 Series).

Figure 2
Dual-Port Multiflex T1 VWIC with Drop and Insert



The dual-port serial WICs feature the Cisco new, compact, high-density Smart Serial connector to support a wide variety of electrical interfaces when used with the appropriate transition cables. Ports on each card can be configured individually to support a variety of synchronous or asynchronous protocols.

Figure 3
Dual-Port High-Speed Serial WAN Interface Card (up to 8 Mbps/card)

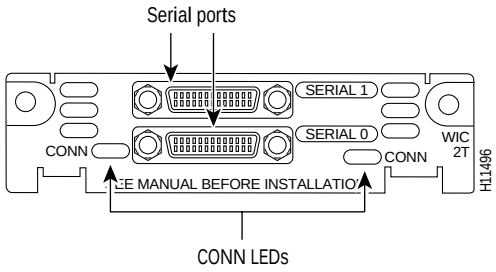
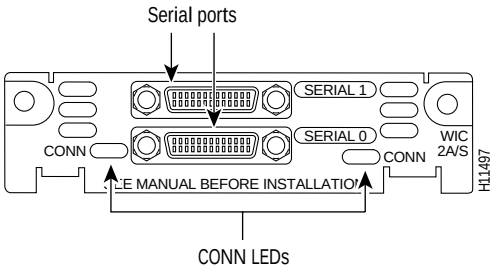


Figure 4
Dual-Port Async/Sync Serial WAN Interface Card (up to 128 Kbps/port)



Advanced Integration Module Options

All Cisco 2600 Series are equipped with an internal slot to support one or two field-installable AIMs. AIMs use function-specific hardware to off-load the main router CPU and accelerate processor- or resource-intensive services, yielding dramatically higher throughput and higher performance than a software-only implementation. The AIM slot has access to virtually all of the router's resources, including the main system bus. The TDM bus and the serial communications controllers make this a very flexible and powerful feature. Since the AIM is internally mounted, external slots remain available for integration of other modular components such as CSU/DSUs, WAN interfaces, or other devices such as modems, or packetized voice/fax processors.

The Data Compression AIM provides a cost-effective option for reducing recurring WAN costs and maximizes the benefit of the advanced bandwidth management features of the Cisco IOS software. With compression ratios of up to 4:1, the Data Compression AIM supports 8Mbps of compressed data throughput without imposing additional traffic latency—enough to keep two T1 or E1 circuits full of compressed data in both directions simultaneously. The Data Compression AIM supports industry standard LZS and Microsoft Point-to-Point Compression (MPPC) algorithms and ensures compatibility with all Cisco products supporting hardware- or software-based compression.

The Data Encryption AIM offloads encryption processing from the Cisco 2600 Series CPU, providing 10 times the performance over software-only encryption. The AIM-VPN/BP supports a maximum number of 300 remote access tunnels and a maximum of 800 remote access tunnels when using the Cisco 2600XM models. In comparison, the

AIM-VPN/EP provides support for a maximum number of 800 remote access tunnels, but also provides greater triple Data Encryption Standard (3DES) performance when compared to the AIM-VPN/BP. The AIM-VPN/EP is designed to take advantage of the performance power of the Cisco 265x, Cisco 265xXM and Cisco 2691 and is recommended with these models only.

The new AIM-ATM provides a high-performance hardware-based ATM access solution for one to four T1 or E1 connections supported by the T1 or E1 VWICs (for example, VWIC-IMFT-T1). This frees the network module slot to support other functions. When used in combination with a high density voice network module (NM-HDV-xxx), the ATM AIM supports ATM adaptation layer (AAL) 2 and AAL5 VoATM. In addition, the new ATM-VOICE-30 and ATM-ATM-VOICE-30 AIMs provides a cost effective solution for supporting voice services or digital voice over ATM (AAL2 and AAL5) support, without the use of a network module (*refer to Appendix C for the complete list of supported modules for the Cisco 2600 Series*).

Cisco IOS Software

The Cisco 2600 Series supports over fifteen different Cisco IOS feature sets, from a wide range of Cisco IOS features. This includes a variety of intranet, multiprotocol, QoS, and Security applications in use today. The Cisco 2600 Series offers four base protocol feature sets and a combination of premium feature options including the Plus, encryption and firewall feature sets.

The base feature sets are:

- IP
- IP/IPX/AppleTalk
- Enterprise
- Enterprise SNA Switch

The Base feature sets support popular protocols and standards such as NAT, OSPF, Border Gateway Protocol (BGP), Remote Access Dial-In User Service (RADIUS), IP Multicast, RMON, and WAN optimization features (such as Bandwidth on Demand; Custom, Priority and Weighted Fair Queuing, Dial Back-up and RSVP).

The following Premium feature sets are offered in combination with the above base feature sets:

- Plus
- Plus with IPSec Encryption (56-bit and 168-bit with 3DES)
- Firewall
- Plus Firewall
- Plus with Encryption and Firewall

The Plus feature sets contain an additional number of value-added features such as legacy mainframe protocols, DLSw, L2TP, L2F, Voice/Data integration, Asynchronous Transfer Mode (ATM), VLANs, Netflow, etc. Additional feature sets include IPSec, and 3DES encryption, as well as Firewall capabilities with intrusion detection.

The Remote Access Services feature set includes various management, multicast, security (excluding encryption), protocol translation, remote node and terminal services and some LAN and WAN service and optimization protocols but excludes some of the above base feature set standards.

The Cisco 2691 also supports the Cisco IOS IP/H.323 Gatekeeper feature set, providing the H.323 industry standard gatekeeper functionality needed for scalable multiservice networks. As a H.323 gatekeeper, the Cisco 2600 is dedicated to supporting voice and video conferencing call-setup, proxy, directory maintenance among other responsibilities; it does not support multi-protocol routing.

A more detailed list of features and memory requirements for specific feature sets by version can be found in the Cisco IOS release notes for the Cisco 2600 series.

Technical Specifications

The Cisco 2600 Series provides unparalleled flexibility and port density options for branch offices. The following table highlights a few of the Cisco 2600 configuration possibilities:

Table 3 Maximum Cisco 2600 Port Densities

Application	Max. # Cisco 261x–265x	Supported CiscoXM	Cisco 2691
Simultaneous Voice Calls (digital/analog)	60/16	60/16	60/16
T1/E1 Connections (including ATM)	8	8	10
Integrated Analog Modems	16	16	22
ISDN PRI (B channels)	64	64	64
ISDN BRI	12	12	14
Asynchronous Serial	36	36	38
Synchronous Serial	12	12	14
DSL Connections	4	4	5
EtherSwitch ports	16	16	16

Table 4 Cisco 2600 Series System Specifications

Cisco 2600 Series Models	2610-12	2620/21	2650/51	2610/ 11XM	2620/ 21XM	2650/ 51XM	2691
Processor Type	40MHz CPU	50MHz CPU	80MHz CPU	40MHz CPU	50MHz CPU	80MHz CPU	160MHz CPU
Performance	15Kpps	25Kpps	37Kpps	20Kpps	30Kpps	40Kpps	70Kpps
Flash Memory (Default/Max)	8MB/16MB	8MB/32MB	8MB/32MB	16MB/ 48MB	16MB/ 48MB	16MB/ 48MB	32MB/ 128MB (Compact Flash)
System Memory (Default/Max)	32MB/ 64MB	32MB/ 64MB	32MB/ 128MB	32MB/ 128MB	32MB/ 128MB	64MB/ 128MB	64MB/ 256MB
Integrated WIC Slots	2	2	2	2	2	2	3

Table 4 Cisco 2600 Series System Specifications

Cisco 2600 Series Models	2610-12	2620/21	2650/51	2610/ 11XM	2620/ 21XM	2650/ 51XM	2691
Onboard AIM (Internal) Slot	1	1	1	1	1	1	2
Console Port (up to 115.2 kbps)	1	1	1	1	1	1	1
Aux Port (up to 115.2 kbps)	1	1	1	1	1	1	1
Minimum Cisco IOS Release	11.3T or later and 12.0.1 mainline	12.0(3)T or later and 12.1.1 mainline	12.1(3)T or later and 12.2.1 mainline	12.1(14) mainline, 12.2(x) mainline (future), 12.2(8)T1or later	12.1(14) mainline, 12.2(x) mainline (future), 12.2(8)T1or later	12.1(14) mainline, 12.2(x) mainline (future), 12.2(8)T1or later	12.2(8)T1 or later
Onboard LAN Ports	1 to 2 Ethernet ports	1 to 2 10/100 FE ports	1 to 2 10/100 FE ports	1 to 2 10/100 FE ports	1 to 2 10/100 FE ports	1 to 2 10/100 FE ports	2 10/100 FE ports
Redundant Power Supply	External only	External only	External only	External only	External only	External only	External only (future)
Rack Mounting	Yes, 19’ and 23” options	Yes, 19’ and 23” options	Yes, 19’ and 23” options	Yes, 19’ and 23” options	Yes, 19’ and 23” options	Yes, 19’ and 23” options	Yes, 19’ and 23” options
Wall Mounting	Yes	Yes	Yes	Yes	Yes	Yes	No
Power Requirements							
Power Supply	50W Maximum (+5V,+12V, -12V) AC power supply	50W Maximum (+5V,+12V, -12V) AC power supply	50W Maximum (+5V,+12V, -12V) AC power supply	50W Maximum (+5V,+12V, -12V) AC power supply	50W Maximum (+5V,+12V, -12V) AC power supply	50W Maximum (+5V,+12V, -12V) AC power supply	105W Maximum (+5V,+3.3V, +12V,-12V) AC power supply
Power Output	5V@9.5A, 12V@1.20A, -12V@0.5A	5V@9.5A, 12V@1.20A, -12V@0.5A	5V@9.5A, 12V@1.20A, -12V@0.5A	5V@9.5A, 12V@1.20A, -12V@0.5A	5V@9.5A, 12V@1.20A, -12V@0.5A	5V@9.5A, 12V@1.20A, -12V@0.5A	5V@15A, 3.3V@12A, 12V@5A, -12V@2A
AC Power Dissipation	170W (max.)	170W (max.)	170W (max.)	170W (max.)	170W (max.)	170W (max.)	170W (max.)
AC input voltage	100 to 240VAC	100 to 240VAC	100 to 240VAC	100 to 240VAC	100 to 240VAC	100 to 240VAC	100 to 240VAC
DC Input Voltage	-38 to -75VDC	-38 to -75VDC	-38 to -75VDC	-38 to -75VDC	-38 to -75VDC	-38 to -75VDC	N/A
DC Input Current	Current: 2.0 amps	Current: 2.0 amps	Current: 2.0 amps	Current: 2.0 amps	Current: 2.0 amps	Current: 2.0 amps	N/A

Table 4 Cisco 2600 Series System Specifications

Cisco 2600 Series Models	2610-12	2620/21	2650/51	2610/ 11XM	2620/ 21XM	2650/ 51XM	2691
DC Power Dissipation	75W (maximum)	75W (maximum)	75W (maximum)	75W (maximum)	75W (maximum)	75W (maximum)	N/A
Frequency	47-63Hz	47-63Hz	47-63Hz	47-63Hz	47-63Hz	47-63Hz	47-63Hz
AC input current	1.5 amps	1.5 amps	1.5 amps	1.5 amps	1.5 amps	1.5 amps	2A max @ 100VAC; 1A max @ 240VAC (215W Maximum)
Environmental Specifications							
Operating temperature	-32 to 104 F (0 to 40 C)	-32 to 104 F (0 to 40 C)	-32 to 104 F (0 to 40 C)	-32 to 104 F (0 to 40 C)	-32 to 104 F (0 to 40 C)	-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)	-40 to 158 F (-40 to 70 C)	-40 to 158 F (-40 to 70 C)	-40 to 158 F (-40 to 70 C)	-40 to 158 F (-40 to 70 C)	-40 to 158 F (-40 to 70 C)
Relative Humidity Noncondensing	5-95%	5-95%	5-95%	5-95%	5-95%	5-95%	5-95%
Operation altitude (derate 1C per 1,000 ft.)	Up to 6500 ft (2000m) @ 40 C	Up to 6500 ft (2000m) @ 40 C	Up to 6500 ft (2000m) @ 40 C	Up to 6500 ft (2000m) @ 40 C	Up to 6500 ft (2000m) @ 40 C	Up to 6500 ft (2000m) @ 40 C	Up to 6500 ft (2000m) @ 40 C
Dimensions (HxWxD)	1.69" (4.3 cm) x 17.5" (44.5 cm) x 11.8" (30 cm)	1.69" (4.3 cm) x 17.5" (44.5 cm) x 11.8" (30 cm)	1.69" (4.3 cm) x 17.5" (44.5 cm) x 11.8" (30 cm)	1.69" (4.3 cm) x 17.5" (44.5 cm) x 11.8" (30 cm)	1.69" (4.3 cm) x 17.5" (44.5 cm) x 11.8" (30 cm)	1.69" (4.3 cm) x 17.5" (44.5 cm) x 11.8" (30 cm)	3.46" x 17.0" x 11.20" (8.78 x 45.36 x 28.45 cm)
Rack Height	1RU	1RU	1RU	1RU	1RU	1RU	2RU
Weight (min.)	8.85 lb (4.66 kg)	8.85 lb (4.66 kg)	8.85 lb (4.66 kg)	8.85 lb (4.66 kg)	8.85 lb (4.66 kg)	8.85 lb (4.66 kg)	15 lb (6.80 kg)
Noise Level (min.)	38-dbA	38-dbA	38-dbA	38-dbA	38-dbA	38-dbA	45-dbA
Regulatory Compliance							
Safety	All Platforms—UL 60950:2000, NOM019:1998, EN 60950:1992+A1+A2+A3+A4, ACATS 001: 1993 ACA AS3260:1997						
Regulatory Compliance	All Platforms—FCC Class A and Canadian DOC Class A, EN55022:1998, CISPR22:1997, EN61000-3-2:1995, EN61000-3-3:1995, EN300386:2000, EN55024/EN55082-1, AS/NZS3548:1998, 47-CFR-15:1997, VCCI:V-3/2000, VCCI Class A, CNS 13438						

The Cisco 2600 Series conforms to a number of safety, EMI, immunity, and network homologation standards. Additional details can be obtained through your Cisco reseller or account manager.

Summary

The Cisco 2600 Series Modular Routers extends the versatility, integration, and power to corporate branch offices, by providing more performance and increased density for multiple applications. Companies can consolidate the functions of multiple separate devices into a single, compact package that can be managed remotely. Because the Cisco 2600 Series is modular, interface configurations are easily customized to accommodate a wide variety of network applications, such as branch office data access, integrated switching, multiservice voice/data integration, dial access services, VPN access and firewall protection, inter-VLAN routing and serial device concentration. The Cisco 2600 Series is ideal for sites and solutions requiring the highest levels of integration at the edge for Branch Office IP Telephony, voice gateway, and integrated flexible routing with low-density switching solutions.

Cisco Service and Support

Leading-edge technology deserves leading-edge support. SMARTnet™ technical support for the Cisco 2600 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

Contact your local sales office for further information.

For More Information on Cisco Products, Contact:

U.S. and Canada: 800 553-NETS (6387)
Europe: 32 2 778 4242
Australia: 612 9935 4107
Other: 408 526-7209
Web: www.cisco.com

Appendix A: Cisco 2600 Series NMs

Serial and ATM NMs (requires IOS release 11.3 (3)T or later)

Product Number	Description	Cisco 261x–265x	Cisco 2600XM	Cisco 2691
NM-4T1-ATM[1,2]	4-port T1 ATM with IMA NM	X	X	X
NM-4E1-ATM[1,2]	4-port E1 ATM with IMA NM	X	X	X
NM-8T1-ATM[1,2]	8-port T1 ATM with IMA NM	X	X	X
NM-8E1-ATM[1,2]	8-port E1 ATM with IMA NM	X	X	X
NM-1A-T3[1,4]	1-Port DS3 ATM NM	X	X	X
NM-1A-E3[1,4]	1-Port E3 ATM NM	X	X	X
NM-16A	16-port high density async NM	X	X	X
NM-32A	32-port high density async NM	X	X	X
NM-4A/S	4-port low speed (128 Kbps max) async/sync serial NM	X	X	X
NM-8A/S	8-port low speed (128 Kbps max) async/sync serial NM	X	X	X

LAN/LAN/WAN NMs

Product Number	Description	Cisco 261x–265x	Cisco 2600XM	Cisco 2691
NM-2FE2W	2 10/100 Ethernet 2 WAN Card Slot network module			X
NM-1FE2W	1 10/100 Ethernet 2 WAN Card Slot network module			X
NM-1FE1R2W	1 10/100 Ethernet 14/16 Token-Ring 2 WAN Card Slot network module			X
NM-1FE-FX[8]	One port Fast Ethernet network module, FX Only			X
NM-2W	Two-WAN interface card slot network module, (WAN I/F cards offered separately)	X	X	X
NM-1E	1-port Ethernet network module	X	X	
NM-4E	4-port Ethernet network module	X	X	
NM-1ATM-25	1-port ATM 25Mbps network module	X	X	

Dial, ISDN, Analog Modems & Chan Serial NM (11.3 (4) T or later)

Product Number	Description	Cisco 261x–265x	Cisco 2600XM	Cisco 2691
NM-1CT1	1-port channelized T1/ISDN PRI network module	X	X	X
NM-1CT1-CSU	1-port channelized T1/ISDN PRI with CSU network module	X	X	X
NM-2CT1	2-port channelized T1/ISDN PRI network module	X	X	X
NM-2CT1-CSU	2-port channelized T1/ISDN PRI with CSU network module	X	X	X
NM-1CE1B	1-port channelized E1/ISDN PRI balanced network module	X	X	X
NM-1CE1U	1-port channelized E1/ISDN PRI unbalanced network module	X	X	X
NM-2CE1B	2-port channelized E1/ISDN PRI balanced network module	X	X	X
NM-2CE1U	2-port channelized E1/ISDN PRI unbalanced network module	X	X	X
NM-4B-S/T	4-port ISDN BRI network module (S/T interface)	X	X	X
NM-4B-U	4-port ISDN BRI with NT-1 network module (U interface)	X	X	X
NM-8B-S/T	8-port ISDN BRI network module (S/T interface)	X	X	X
NM-8B-U	8-port ISDN BRI with NT-1 network module (U interface)	X	X	X
NM-8AM	8 analog modem network module	X	X	X
NM-16AM	16 analog modem network module	X	X	X
NM-1HSSI	1-port HSSI network module			X

Voice/Fax NMs

Product Number	Description	Cisco 261x–265x	Cisco 2600XM	Cisco 2691
NM-HDV-1T1-12[1,2]	12-channel T1 high density voice/fax network module	X	X	X
NM-HDV-1E1-12[1,3]	12-channel E1 high density voice/fax network module	X	X	X
NM-HDV-1T1-24[1,2]	24-channel T1 high density voice/fax network module	X	X	X

Voice/Fax NMs

Product Number	Description	Cisco 261x–265x	Cisco 2600XM	Cisco 2691
NM-HDV-1T1-24E[1,2]	24-channel T1 enhanced high density voice/ fax network module	X	X	X
NM-HDV-1E1-30[1,3]	30-channel E1 high density voice/fax network module	X	X	X
NM-HDV-1E1-30E[1,3]	30-channel enhanced E1 high density voice/ fax network module	X	X	X
NM-HDV-2T1-48[1,2]	48-channel T1 high density voice/fax network module	X	X	X
NM-HDV-2E1-60[1,3]	60-channel E1 high density voice/fax network module	X	X	X
NM-1V[1]	1-slot voice/fax network module	X	X	X
NM-2V[1]	2-slot voice/fax network module	X	X	X
NM-16ESW-PWR[5]	16Port 10/100 Etherswitch NM with Power card	X	X	X
NM-16ESW[5]	16Port 10/100 Etherswitch NM	X	X	X
EM-HDA-8FXS[5]	8 port voice/fax expansion module FXS	X	X	X
NM-HDA-4FXS[5]	High Density analog voice/fax network module with 4 FXS	X	X	X
EM-HDA-4FXO[5]	4 port voice/fax expansion module FXO	X	X	X
NM-HDV-1J1-30 [7, 8]	1-Port 30-Channel J1 High-Density Voice Network Module	X	X	X
NM-HDV-1J1-30E [7, 8]	1-Port 30-Enhanced Channel J1 High-Density Voice Network	X	X	X

Alarm Interface Controller (AIC) Network Module

Product Number	Description	Cisco 261x–265x	Cisco 2600XM	Cisco 2691
NM-AIC-64[6]	Alarm monitoring and control NM; 64 contact points and 16 control points	X	X	

1 The voice/fax and ATM NMs require a Cisco IOS Plus feature set.
2 Requires Cisco IOS Version 12.05XK, 12.07T, 12.1, 12.1T, 12.2, 12.2T or later.
3 Requires Cisco IOS Version 12.07XK, 12.12T, 12.2, 12.2T or later.
4 Requires Cisco IOS Version 12.1.2T or later.
5 Requires Cisco IOS Version 12.2(2)XT, 12.2(8)T or later
6 Requires Cisco IOS Version 12.2(2)XG and 12.2(7)T or later
7 Requires Cisco IOS Version 12.2(8)T or later
8 Scheduled for future support on the Cisco 2691

Appendix B: Cisco 2600 Series Voice Interface Cards

Voice Interface Cards supported for use with the Voice/Fax NMs

Product Number	Description	Cisco 261x–265x	Cisco 2600XM	Cisco 2691
VIC-2BRI-S/T-TE[1]	2-port BRI S/T terminal equipment voice/fax interface card for voice/fax NM	X	X	X
VIC-2BRI-NT/TE3	2-port BRI (NT and TE) Voice Interface module	X	X	X
VIC-2FXS	2-port FXS voice/fax interface card for voice/ fax NM	X	X	X
VIC-2FXO-M1[2]	2-port FXO voice/fax interface card for voice/ fax NM w/ Caller ID & supervisory disconnect (North American version and other countries)	X	X	X
VIC-2FXO	2-port FXO voice/fax interface card for voice/ fax network module (North American version and other countries)	X	X	X
VIC-2FXO-M2[2]	2-port FXO voice/fax interface card with Caller ID and supervisory disconnect (Europe version)	X	X	X
VIC-2FXO-EU	2-port FXO voice/fax interface card (Europe version)	X	X	X
VIC-2FXO-M3	2-port FXO voice/fax interface card for Australia	X	X	X
VIC-2E/M	2-port E&M voice/fax interface card for voice/ fax network module	X	X	X
VIC-2DID	2-port DID (Direct Inward Dial) voice/fax interface card	X	X	X

1 Supported with Cisco IOS 12.0(3)T or later
2 Supported with Cisco IOS 12.1(2)XH or later
3 Scheduled for future support on the Cisco 2691

Cisco 2600 Series Multiflex Voice/WAN and WICs

Product Number	Description	Cisco 261x–265x	Cisco 2600XM	Cisco 2691
VWIC-1MFT-T1[1]	1-port T1/Fractional T1 Multiflex Trunk with CSU/DSU	X	X	X
VWIC-2MFT-T1[1]	2-port T1/Fractional T1 Multiflex Trunk with CSU/DSU	X	X	X
VWIC-2MFT-T1-DI[1]	2-port T1/Fractional T1 Multiflex Trunk with CSU/DSU and Drop & Insert	X	X	X
VWIC-1MFT-E1[1]	1-port E1/Fractional E1 Multiflex Trunk with DSU	X	X	X

Cisco 2600 Series Multiflex Voice/WAN and WICs

Product Number	Description	Cisco 261x–265x	Cisco 2600XM	Cisco 2691
VWIC-2MFT-E1[1]	2-port E1/Fractional E1 Multiflex Trunk with DSU	X	X	X
VWIC-2MFT-E1-DI[1]	2-port E1/Fractional E1 Multiflex Trunk with DSU and Drop & Insert	X	X	X
VWIC-1MFT-G703[2]	1-port G.703 Multiflex Trunk	X	X	X
VWIC-2MFT-G703[2]	2-port G703 Multiflex Trunk	X	X	X
WIC-1DSU-T1[1,6]	T1/Fractional T1 CSU/DSU	X	X	X
WIC-1DSU-56K[4]	1-port four-wire 56/64 Kbps CSU/DSU	X	X	X
WIC-1T	1-port high speed serial	X	X	
WIC-2T	2-port high speed serial	X	X	X
WIC-2A/S	2-port async/sync serial	X	X	X
WIC-1B-S/T	1-port ISDN BRI	X	X	X
WIC-1B-U	1-port ISDN BRI with NT1	X	X	X
WIC-1AM[5]	1-port Analog Modem interface card	X	X	X
WIC-2AM[5]	2-port Analog Modem interface card	X	X	X
WIC-ADSL[3]	1-port ADSL WAN Interface	X	X	X
WIC-1SHDSL[4,6]	1-port G.SHDSL WAN Interface	X	X	X

1 Requires Cisco IOS 12.0(5)XK or later.
2 Requires Cisco IOS 12.1(1)T or later.
3 Requires Cisco IOS 12.1(5)YB, 12.2(2)XK, 12.2(4)T or later.
4 Requires Cisco IOS 12.2(4)XL or later.
5 Requires Cisco IOS 12.2(2)XB or later and IOS IP Plus feature set
6 Scheduled for future support on the Cisco 2691

Appendix C: Cisco 2600 Series AIMs

Product Number	Description	Cisco 261x–265x	Cisco 2600XM	Cisco 2691
AIM-COMPR2	Data Compression AIM for the Cisco 2600 Series (requires IOS software release 12.02T or later)	X	X	
AIM-COMPR4[2]	Data Compression AIM for the Cisco 2691, 3660 and 3700 Series			X
AIM-VPN/BP	Data Encryption AIM for the Cisco 2600 series—Base Performance	X	X	
AIM-VPN/EP[1]	Data Encryption AIM for the Cisco 2600 series—Enhanced Performance	X	X	X
AIM-ATM[2]	High Performance ATM Advanced Integration Module	X	X	X
AIM-VOICE-30[2]	30 Channel T1/E1 Digital Voice Module (requires IOS software release IOS 12.2(2)XB or later)	X	X	X
AIM-ATM-VOICE-30[2]	ATM SAR and 30 Channel T1/E1 Digital Voice Module (requires IOS software release IOS 12.2(2)XB or later)	X	X	X

1 Recommended with the Cisco 265x, 265xXM, and 2691 only.
2 Scheduled for future support on the Cisco 2691

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