

Cisco 3700 Series Multiservice Access Routers

Access Platform Optimized for the Modular Integration of Branch Office Applications and Services

Introduction

The Cisco® 3700 Series Multiservice Access Routers are a family of modular routers that enable flexible and scalable deployment of new e-business applications for the Full Service Branch (FSB) office. The Cisco 3700 Series routers optimize the branch office with high performance routing, integrated low density switching, Security, Voice, IP Telephony, voice mail, Video and Content Networking in a single integrated solution. This unique integrated design enables enterprise customers to incrementally adapt to evolving business needs by enabling important services delivered by Cisco IOS®, such as Quality of Service (QoS), IP Multicast, VPN, Firewall, and Intrusion Detection, with the performance required for tomorrows' business challenges. The Cisco 3700 Multiservice Access Routers are based on the same modular concepts as the Cisco 3600 Series but enable dramatically higher levels of performance and service integration for the branch office.

The Cisco 3725 and Cisco 3745 provide on-board LAN/WAN connectivity, new high-density service modules (HDSM), and support for multiple Advanced Integration Modules (AIMs) to deliver the highest levels of service density for the enterprise branch office today. Improving on the success of the Cisco 3600 Series' modular architecture, these highly integrated platforms deliver a compelling value proposition with by integrating components previously purchased separately, such as two fixed 10/100 LAN ports and additional memory. With the options of two or four network module slots—which can be adjusted to accept the HDSM modules—three WAN Interface Card (WIC) slots, and two on-board AIM slots, the Cisco 3700 offers many flexible options to enable high densities of services. Providing support for the majority of LAN and WAN interfaces available today on the Cisco 3600 Series platforms reinforces Cisco investment protection promise and maximizes the flexibility of these platforms for the future.

Figure 1
 The Cisco 3700 Series
 Multiservice Access Routers





Cisco 3700 Multiservice Access Router Overview

The modular Cisco 3700 Series Multiservice Access Routers leverage network modules (NMs), WAN Interface Cards (WICs), and Advanced Integration Modules (AIMs) from the Cisco 1700, 2600, and 3600 Series Routers for WAN Access, Voice Gateway, Security, Content, and Dial applications. In addition, the Cisco 3725 and Cisco 3745 introduce a new, doublewide form factor, that provides support for the high density services modules (HDSM's). The Cisco 3745 with four network module slots can accept up to two HDSM's by removing the center guides between each pair of adjacent NM slots. The Cisco 3725, with two network module slots can accept a single HDSM in the upper network module slot by removing the blank panel and still have an available network module slot. By utilizing the new HDSM capability the Cisco 3700 Series routers are able to integrate higher port density and new, high performance services.

Figure 2
Cisco 3745 Multiservice Access Router (shown with optional interfaces)

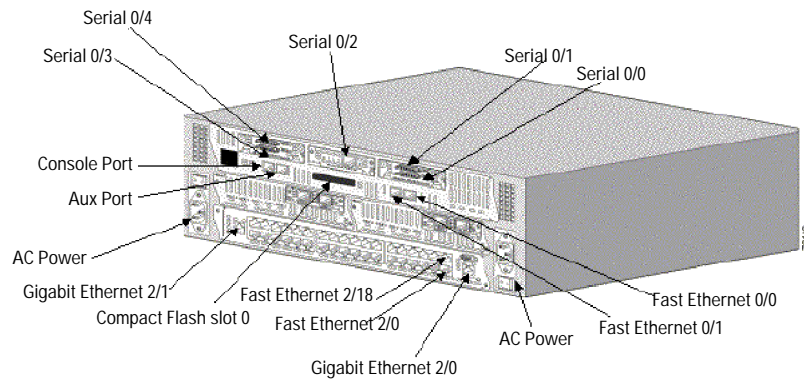
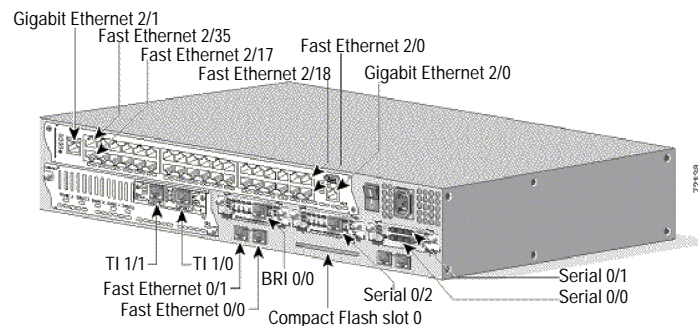


Figure 3
Cisco 3725 Multiservice Access Router (shown with optional interfaces)



Also new in the Cisco 3700 Series is the ability to support integrated In-Line Power on optional 10/100 switching modules for IP Telephony and/or Aironet Wireless LAN applications. By integrating the connectivity slots and ports on the base chassis, the Cisco 3700 Series enables the NM slots to integrate additional services in a small footprint. Both Cisco 3700 platforms offer increased Flash and DRAM default memory to accelerate and simplify future service and feature additions. In addition, the Cisco 3745 router offers additional availability features that may be required in high density, multiple services configurations.



Key features for the Cisco 3725 and 3745:

- Two Integrated 10/100 LAN ports
- Two Integrated Advanced Integration Modules (AIM) slots
- Three Integrated WAN Interface Card (WIC) slots
- Two (Cisco 3725) or four (Cisco 3745) Network Module (NM) slots
- One (Cisco 3725) or two (Cisco 3745) High Density Service Module (HDSM)-capable slots
- 32MB Compact Flash/ 128MB DRAM (default, single 128MB DIMM/SODIMM)
- Both Cisco 3725 and 3745 have a single 128MB SDRAM DIMM module and a single 32MB Compact Flash module by default
- Optional In-Line Power for 16-port EtherSwitch NM, 36-port EtherSwitch HDSM and wireless access points
- Support for all major WAN protocols and media: LL, FR, ISDN, X.25, ATM, fractional T1/E1, T1/E1, xDSL, T3/E3, HSSI
- Support for selected NMs, WICs and AIMS from the Cisco 1700, 2600 and 3600 Series
- 2 RU (Cisco 3725) or 3 RU (Cisco 3745) Rack-mountable chassis
- -24V DC power supply
- NEBS Level 3 compliance

Additional Key Features for the Cisco 3745:

- Field-replaceable motherboard, I/O board and fan tray
- Passive backplane
- Optional internal redundant power supplies (RPS—AC, DC and inline power)
- Online Insertion and Removal (OIR) of NMs and RPSs

Table 1 Cisco 3700 Series Key Features and Benefits

Feature	Benefit
Investment Protection	
Modular platform which shares interfaces with Cisco 1700, 2600, 3600	<ul style="list-style-type: none"> • Network interfaces are field-upgradable to accommodate future technologies <ul style="list-style-type: none"> – Additional services can be added on an “integrate as you grow” basis – Leverages the large existing portfolio of WICs, VICs, NMs and AIMS to reduce sparing, training, configuration and installation and maintenance costs
LAN/WAN Connectivity integrated into chassis	<ul style="list-style-type: none"> • More NM and HDSM slots available to add services in the future <ul style="list-style-type: none"> – Combination of AIMS and WICs along with NMs/HDSMs gives greater flexibility to create new configurations as requirements change
VPN and Security configurations	<ul style="list-style-type: none"> • Add security intrusion detection (IDS) and VPN connectivity to the router through Cisco IOS software and optional performance-enhancing data encryption AIMS. <ul style="list-style-type: none"> – Provides secure connectivity and perimeter security throughout the network.



Table 1 Cisco 3700 Series Key Features and Benefits (Continued)

Feature	Benefit
Flexible voice gateway and IP Telephony configurations	<ul style="list-style-type: none"> • Incremental or full scale migration from legacy infrastructure to IP Telephony <p>An extensive set of business class IP Telephony features for the small and medium business or branch office are provided through inherent support for Cisco CallManager Express.</p> <ul style="list-style-type: none"> – Cisco Unity Express voice mail support complements Cisco CallManager Express – Supports numerous standards-based analog and digital interfaces to PBXs and the PSTN – Sliding scale options for higher density mixed analog and digital voice gateway configurations
Cisco IOS Software	<ul style="list-style-type: none"> • Supports Cisco IOS feature sets common with the Cisco 2600 and 3600 routers – Enables end to end solutions with full support for Cisco IOS-based QoS, bandwidth management and Security mechanisms
Scalability	
Increased AIM (2) and WIC density (3)	<ul style="list-style-type: none"> • Services and WAN connectivity and backup can be supported without consuming an NM slot – Increased density per RU of voice, switching, WAN connectivity
Increased default memory of 32MB Compact Flash and 128MB DRAM	<ul style="list-style-type: none"> • A greater number of new Cisco IOS releases may be added without the need to purchase/install additional memory
New High Density Service Modules (HDSM)	<ul style="list-style-type: none"> • Enables higher port density and new, high performance services
Availability	
Support for Optional Redundant Power	<ul style="list-style-type: none"> • Accommodates optional RPS (external for Cisco 3725, internal for Cisco 3745) and minimizes network downtime
Survivable Remote Site Telephony	<ul style="list-style-type: none"> • Branch offices can leverage centralized call control while cost-effectively providing local branch backup redundancy for IP Telephony
Online Insertion and Removal-capable (3745 only)	<ul style="list-style-type: none"> • Allows network modules to be swapped or serviced with minimal impact to network availability – Allows servicing of online replacement of RPS – Online replacement of fan tray
Field-replaceable motherboard, I/O board, power supplies and fan tray (3745 only)	<ul style="list-style-type: none"> • High serviceability design – Additional operations and maintenance flexibility

Advanced Integration Module Options

The Cisco 3700 Series are equipped with two internal slots 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, each integrated Data Compression AIM supports 4 T1/E1s of compressed data throughput with one AIM and up to 8 T1/E1 with two AIMs. 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.

Three combination Voice + ATM AIM modules are available on the Cisco 3700 Series. The AIM-ATM provides asynchronous transfer mode (ATM) services to the WAN. The AIM-VOICE-30 provides digital signal processor (DSP) services, which can support up to 30 medium-complexity voice channels. The AIM-ATM-VOICE-30 combines the features from the AIM-ATM and AIM-VOICE-30 modules onto a single AIM module. These AIM modules supplement the broad portfolio of Cisco voice solutions and allow enterprises and service providers the flexibility of implementing ATM and voice solutions on the routers. These three Voice and ATM AIM modules provide a cost-effective option for reducing recurring cost and maximizing the benefits of the advanced bandwidth management features of the Cisco IOS software.

The AIM-ATM offers ATM adaptation layer 2 (AAL2) and ATM adaptation layer 5 (AAL5) support for low-density T1/E1 data and voice connections over ATM networks. It supports the following ATM-IMA capabilities: up to 4 T1/E1 of IMA with a single AIM-ATM, and 8 T1/E1 of IMA with two AIM-ATM's (maximum 4 T1/E1 IMA bundle). This AIM module allows service providers and enterprise customers to take advantage of the reliability and quality of service (QoS) available with ATM connectivity. The AIM-VOICE-30 contains DSPs that can support up to 30 medium-complexity voice channels when used with the Voice/WAN (VWIC-MFT) interface card. When the AIM-VOICE-30 can be used in a Cisco 3700, for voice over IP (VoIP) or voice over Frame Relay (VoFR) connectivity while freeing up the network module slot for other applications. The AIM-ATM-VOICE-30 combines the ATM features of AIM-ATM and voice features of AIM-VOICE-30 in a single AIM

The Data Encryption AIM's available for the Cisco 3700 Series offloads encryption processing from the CPU, providing over 10 times the performance over software-only encryption. The AIM-VPN/EP on the Cisco 3725 supports a maximum of 800 tunnels. On the Cisco 3745, the AIM-VPN/HP supports a maximum of 1,800 tunnels. The recently released AIM-VPN/EPII and AIM-VPN/HPII further extends the encryption performance of the Cisco 3700. These modules offers hardware accelerated DES/3DES and the new AES (Advanced Encryption standard) encryption at speeds up to 90-Mbps on the Cisco 3745 (max based on 1400 byte packet size). In addition the AIM-VPN/EPII and AIM-VPN/HPII support hardware-assisted layer-3 compression services where bandwidth conservation may lower network connection costs. The AIM-VPN/EPII on the Cisco 3725 supports a maximum of 8,000 tunnels, and the Cisco 3745, with the AIM-VPN/HPII supports a maximum of 10,000 tunnels.

Key Applications and Benefits

The Cisco 3700 platforms are designed for the Full Service Branch office that are deploying advanced applications, that require higher performance for voice, security, QoS, content acceleration and delivery, and high availability at the network edge by integrating functions previously addressed by a combination of platforms.



Advanced Security Services and VPN's

The Security and VPN features of the Cisco 3700 offer customers the ability to deploy proven security features such as secure VPNs, Intrusion Detection Systems (IDS), and firewalls, as well as high-speed Internet access and the ability to create extranets or demilitarized zones (DMZs). Cisco access routers deliver a rich, integrated package of routing, firewall, intrusion detection, and VPN functions for multiservice applications.

VPNs help companies reap benefits such as dramatically lowered WAN costs, improved global connectivity, and better reliability, while enabling capabilities such as secure extranet communications. Remote dial, Internet, intranet, and extranet access can all be consolidated over a single WAN connection to the Internet. The Cisco 3700 VPN solution supports the features essential to VPNs—IPSec data encryption, tunneling, broad certificate authority support for public key infrastructure (PKI)—and advanced features such as stateful VPN failover, certificate auto-enrollment, stateful firewall, intrusion detection, and service-level validation. The Cisco 3700 Series works with optional Virtual Private Network Modules (VPN Modules) to optimize the platforms for virtual private networks (VPNs). The Cisco 3700 Series VPN Modules provide up to 10 times the performance over software-only encryption by offloading the encryption processing from the router central processing unit (CPU). The Cisco 3700 series together with the VPN module are the perfect IPSec VPN solution for connecting medium, and large branch offices to other remote locations, corporate headquarters, central-office intranets, or partner extranets.

As network security becomes increasingly critical to securing business transactions, businesses must integrate security into the network design and infrastructure. The Cisco IOS Firewall is a security-specific option for Cisco IOS software which runs on the Cisco 3700 platform. It integrates robust firewall functionality and intrusion detection for every network perimeter and enriches existing Cisco IOS security capabilities. It adds greater depth and flexibility to existing Cisco IOS security solutions—such as authentication, encryption, and failover—by delivering state-of-the-art security features such as stateful, application-based filtering; dynamic per-user authentication and authorization; defense against network attacks; Java blocking; and real-time alerts.

VPN Security Features and Voice and Video-Enabled IPSec VPN

The Cisco 3700 VPN security features are all voice and video-enabled IPSec VPN ready. The Cisco 3700 offers a VPN infrastructure capable of transporting converged voice, video, and data traffic across a secure IPSec network. The Cisco 3700 VPN platforms are able to accommodate the diverse network topologies and traffic types characteristic of multiservice IPSec VPNs, and ensure that the VPN infrastructure does not break multiservice applications deployed now or in the future. The network architecture of the Cisco Voice and Video-Enabled IPSec VPN (V3PN) Solution takes advantage of Cisco VPN routers with Cisco IOS Software, Cisco CallManager, and IP phones. Furthermore, Cisco provides an overall deployment model for these products through Cisco AVVID (Architecture for Voice, Video and Integrated Data) for converged networking and the SAFE Blueprint for VPNs. These deployment models ensure a secure, interoperable, reliable network solution with end-to-end product support.

Content Acceleration and Delivery

Cisco 3700 Series enables key services critical to supporting the needs of today's enterprise networks. By enabling efficient delivery of rich media and web content, content acceleration and delivery services enhance user productivity while optimizing WAN bandwidth. Cisco 3700 supports the integrated Content Engine Network Module, which leverages the advanced content acceleration features of the Cisco Content Engine 5xx Series into the industry's first router-integrated content delivery system.



As enterprises learn to capitalize on the capabilities of web-based applications, HTTP traffic is assuming a larger proportion of WAN bandwidth. The Content Engine Network Module effectively accelerates applications by optimizing the delivery of bandwidth-intensive and frequently accessed content. Caching alone can offer a 40-60% savings in WAN bandwidth usage by a branch site, and the content delivery capabilities of the module enables enterprise services which maximize the productivity and efficiency of a global enterprise. Integration of the application layer services of the Content Engine Network Module with intelligent network services such as QoS, compression and IPsec offer a superior bandwidth optimization solution for the enterprise branch.

Combining intelligent caching, content filtering and content delivery capabilities with robust branch office routing helps users optimize their networks for important branch IP services such as VOIP, while greatly simplifying configuration, deployment, and operation of network services. Running Cisco Application and Content Networking System (ACNS) software, the Content Engine Network Module enables customers to extend the value of their branch router infrastructure to deliver strategic new application services – such as Employee Internet Management, Streaming Media, live and on-demand e-communications and e-learning, with no performance degradation of core routing services. Further, the Content Engine Network Module interoperates with all Cisco devices, and leverages key Cisco IOS features such as multicast and WCCP while supporting key management solutions such as CiscoWorks.

Integration of Flexible Routing and Low Density Switching

The Cisco 3700 Series offers an optional 16-port 10/100 EtherSwitch network module (NM), or an optional 36-port 10/100 EtherSwitch high density service module (HDSM), both of which leverage the proven Cisco Catalyst technology. The EtherSwitch NM/HDSM hardware supports 802.1p Layer 2 prioritization, while Cisco IOS supports Layer 3 Diff-Serv and Class of Service (CoS) markings for critical business data. Coupling Layer 2/3 prioritization techniques, with the QoS for the WAN, the Cisco 3700 Series ensures low latency for critical business applications, enabling the deployment of e-business applications.

The EtherSwitch ports can also be used to power the Cisco Aironet Access Points in the low-density-branch to deliver Wireless LAN (802.11b) access flexibility. The Cisco 3700 Series with the EtherSwitch NM/HDSM integrates Cisco IOS routing and Catalyst switching technologies in a single platform, offering a single point of management for easier configuration, troubleshooting and a lower total cost of ownership.

Key features include:

- Combination of the industry-leading Cisco IOS features with Catalyst switching technologies for wire-rate Layer 2 switching, with rich protocol and feature support.
- Integrated platform, with EtherSwitch ports for LAN, WAN flexibility, and a rich QoS toolkit for e-business applications.
- Enables simple, single point for configuration and troubleshooting, while integrating diverse technologies.
- Modular design enables scaling as business needs evolve with options for 16- or 36-port EtherSwitch module port densities.



Figure 4
Cisco 16- and 36-port EtherSwitch Modules



Single Platform Solution for Branch Office IP Telephony and Voice Gateway

As the migration to converged voice/data networks accelerates, enterprises need to deploy a platform that has the ability to immediately or gradually grow to support a wide range of traditional telephony devices in addition to newer IP telephony solutions. The Cisco 3700 Series delivers on that need by supporting legacy phone systems through a variety of scalable analog telephony connectivity options starting at two analog ports and scaling to 16, 32, 48 or 64 analog ports. Digital telephony connectivity is just as scalable with options beginning at 12 channels and scaling up to up to 240 channels. IP telephony solutions are also supported on the Cisco 3700 Series through a powerful set of features including line powered IP phone connectivity that begins with 16 ports and scales to 36, 52, or 72 ports in a single platform.

The performance-tuning of the Cisco 3700 Series enables customers to apply quality of service, bandwidth optimization and fragmentation services, along with other advanced call admission control, call control and queuing mechanisms, without sacrificing the expected data performance needed for future growth. The Cisco 3700 Series offers resilient IP telephony services, including Survivable Remote Site Telephony (SRST), H.323, SIP and MGCP, and redundant power for the system and IP phones.

With the Cisco 3700 Series, enterprises can deploy this scalable platform to support all of their telephony needs without investing in all connectivity requirements in the initial deployment. The enhanced service density of the Cisco 3700 allows enterprises the opportunity to deploy a base level configuration that will scale to the converged telephony needs of that branch when necessary. This modular telephony format mitigates future technology lockout.

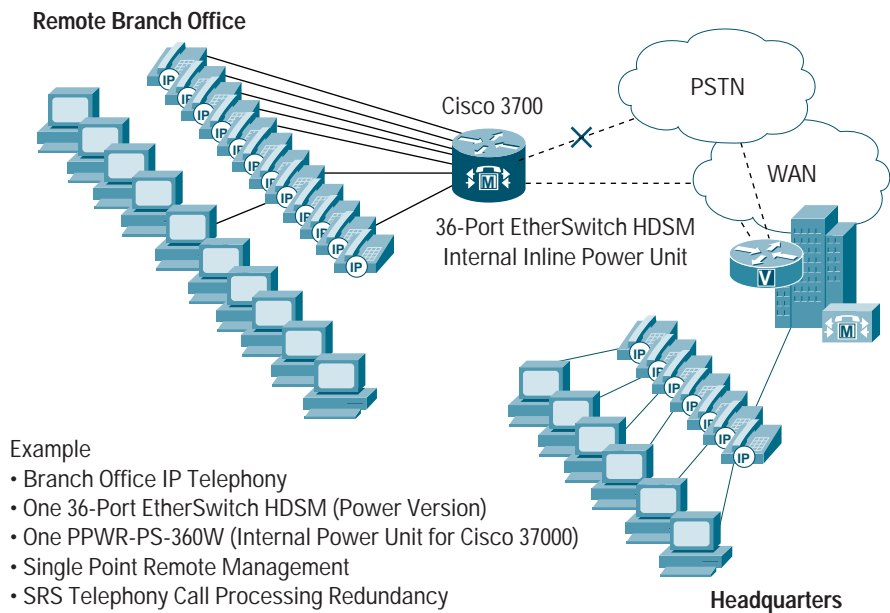
Deployment of IP Telephony infrastructure solutions are facilitated by the following key Cisco 3700 features:

- Optional modular integration of an inline-powered EtherSwitch NM or HDSM, combined with analog and/or digital high-density voice gateway modules and flexible WAN connectivity for a modular, single-platform IP Telephony infrastructure
- Resilient IP Telephony services, including Survivable Remote Site Telephony (SRST), H.323, SIP and MGCP, and redundant power for system and IP phones
- Complete Cisco CallManager support for both H.323 and MGCP call control protocols makes the Cisco 3700 the ideal voice gateway
- Performance-tuned to scale both analog, and digital voice solutions and hybrid solutions
- Modular expandability enables the addition of gateway or phone aggregation ports as needed
- Integrated Time Division Multiplexing (TDM) for full Drop&Insert functionality between all WIC, Network Module and onboard AIM's



The evolution from traditional TDM voice to IP Telephony has created the requirement that branch offices be equipped to deploy IP Telephony solutions without the need to replace the branch office access platforms. The Cisco 3700 series fulfills that need by ensuring complete support for the range of voice gateway densities and IP Telephony features necessary for Enterprises' evolving branch office infrastructures.

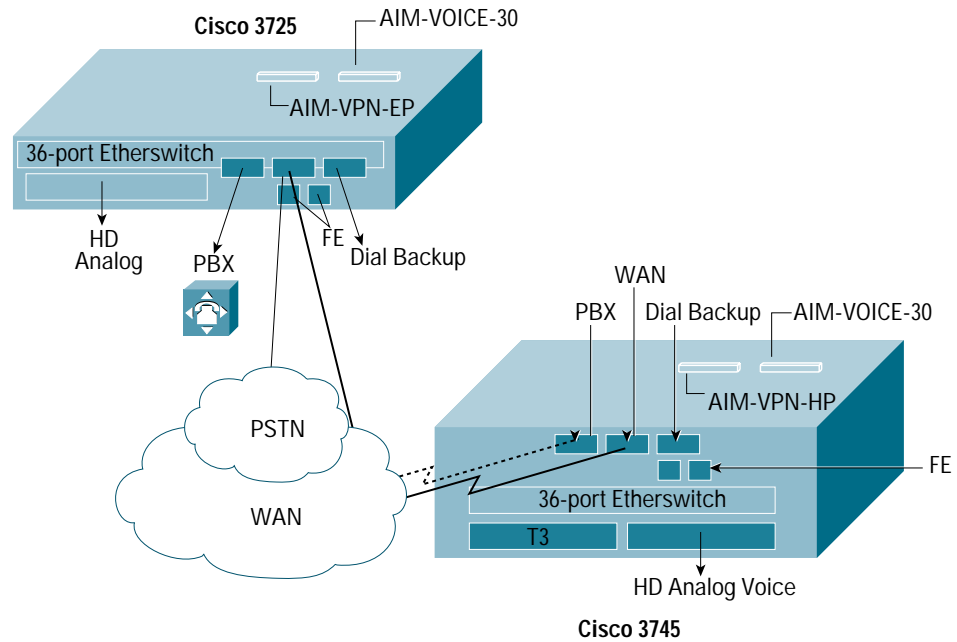
Figure 5
Cisco 3700 Full Service Branch integrated capabilities



- Example
- Branch Office IP Telephony
 - One 36-Port EtherSwitch HDSM (Power Version)
 - One PPWR-PS-360W (Internal Power Unit for Cisco 37000)
 - Single Point Remote Management
 - SRS Telephony Call Processing Redundancy



Figure 6
Full Service Branch scenarios



Cisco 3700 enables higher service densities through a versatile, wider interface form factor (using a HDSM), additional interface options with three WIC slots, CPU offload with two built-in AIM slots, and on-board LAN/WAN connectivity to free up module slots.

Table 2 Supported Interfaces for the Cisco 3700 Series

Interfaces	Description
LAN/WAN	<ul style="list-style-type: none"> • FE Combo NMs (NM-1FE2W, etc.) • 1 port Multimode Fiber FE NM • 1 port Single Mode Fiber FE NM • 1 port Gigabit Ethernet GBIC NM • 1 port ADSL WIC • 1 port G.SHDSL WIC
LAN	<ul style="list-style-type: none"> • 16 & 36 port EtherSwitch NMs
Serial	<ul style="list-style-type: none"> • 2 port Serial WIC • 1 and 2 port T1/E1 CSU/ DSU VWICs • 1 port 56k CSU/DSU WIC • 4 and 8 port Sync/Async Serial NMs • HSSI NM1 port T1 CSU/DSU WIC • 16 & 32 port Async NMs • 1 port serial WIC • 4 port serial NM • 1-port T3/E3 with Integrated DSU



Table 2 Supported Interfaces for the Cisco 3700 Series (Continued)

Interfaces	Description
ISDN/Channel	<ul style="list-style-type: none"> • 1 and 2 port T1/E1 Channelized/ ISDN Pri NMs • 4 and 8 port T1/E1 ISDN BRI NMs/ISDN BRI WICs
Voice	<ul style="list-style-type: none"> • Low Density Analog Voice NMs (all VICs except BRI NT/TE) • High Density Analog Voice NM • High density T/E1 Digital Voice NMs • BRI NT/TE VIC • DSP AIM • Cisco Unity Express Network Module • IP Communications Voice/Fax Network Modules and VICs
ATM	<ul style="list-style-type: none"> • 4 and 8 port T1/E1 NMs • 1 port DS3/E3 NMs • SAR AIM • SAR/DSP AIM
Modem	<ul style="list-style-type: none"> • Digital Modem NMs • 1 and 2 port Analog Modem WICs • 4 and 8 port Analog Modem NMs
Services	
Security, VPN and Compression	<ul style="list-style-type: none"> • EP & HP Encryption AIMS • EP & HP II Encryption AIMS • COMPR4 AIM • Layer 2 Data Compression • Intrusion Detection NM
Content Delivery	<ul style="list-style-type: none"> • Content Engine NM

Specifications

Table 3 Cisco 3700 Series Specifications

Description	Specification
Processor Type	<ul style="list-style-type: none"> • Cisco 3725—MIPS RISC processor • Cisco 3745—MIPS RISC processor
Performance	<ul style="list-style-type: none"> • Cisco 3725—100kpps • Cisco 3745—225kpps
Flash Memory (Compact Flash)	<ul style="list-style-type: none"> • Internal: 32MB (default), expandable to 128MB • External: 32MB, 64MB, 128MB options
System Memory	<ul style="list-style-type: none"> • 128MB (SDRAM default)—expandable to 256MB
Integrated WIC Slots	<ul style="list-style-type: none"> • 3
Onboard AIM (internal)	<ul style="list-style-type: none"> • 2
Console Port	<ul style="list-style-type: none"> • 1 (up to 115.2 kbps)



Table 3 Cisco 3700 Series Specifications (Continued)

Description	Specification
Aux Port	• 1 (up to 115.2kbps)
Minimum Cisco IOS Release	• Cisco IOS 12.2(8) T
Onboard LAN Ports	• 2 10/100 Fast Ethernet ports
Redundant Power Supply Support	<ul style="list-style-type: none"> • Cisco 3725—Universal DC (24VDC to 60VDC), PWR600-AC-RPS External RPS • Cisco 3745—Internal Redundant options for AC and Universal DC (24VDC to 60VDC)
Rack Mounting	• Yes, 19" and 23" options
Power Requirements	
Power Supply	<ul style="list-style-type: none"> • Cisco 3725 <ul style="list-style-type: none"> – 135W Maximum AC to DC power supply – 495W Maximum with optional power supply: -48V @ 360W AC to DC power supply • Cisco 3745 <ul style="list-style-type: none"> – 230W Maximum (AC-DC Power Supply) – 590W Maximum (Per AC Input) with optional power supply -48V @ 360W AC-DC power
Heat Dissipation	<ul style="list-style-type: none"> • Cisco 3725 <ul style="list-style-type: none"> – 135W Maximum 460.661 BTU/hour – 495W Maximum 1689.089 BTU/hour • Cisco 3745 <ul style="list-style-type: none"> – 230W Maximum 784.829 BTU/hour – 590W Maximum 2013.257 BTU/hour
Output	<ul style="list-style-type: none"> • Cisco 3725 <ul style="list-style-type: none"> – (optional -48V @ 7.5A) • Cisco 3745 <ul style="list-style-type: none"> – (optional -48V @ 7.5A)
AC Input Voltage	• 100 to 240VAC
Frequency	• 47-63Hz
AC Input Current	<ul style="list-style-type: none"> • Cisco 3725 <ul style="list-style-type: none"> – 2A max @ 100VAC;1A max @ 240VAC (215W Maximum) with optional power supply: – 7A Max@100VAC;3.5A max @ 240VAC (665W Maximum) • Cisco 3745 <ul style="list-style-type: none"> – 5A max @ 100VAC;2.5A max @ 200VAC (365W Maximum) with optional power supply: – 10A max @100VAC;5A max @ 200VAC (815W Maximum)
Environmental Specifications	
Operating Temperature	• 32 to 104 F (0 to 40 C)
Nonoperating Temperature	• -40 to 185 F (-40 to 85 C)



Table 3 Cisco 3700 Series Specifications (Continued)

Description	Specification
Relative Humidity	<ul style="list-style-type: none"> • 5-95% noncondensing
Operation Altitude	<ul style="list-style-type: none"> • Up to 6500 ft (2000m), derate 1C per 1,000 ft.
Dimensions (HxWxD)	<ul style="list-style-type: none"> • Cisco 3725—3.5 x 17.1 x 14.7 in. • Cisco 3745—5.25 x 17.25 x 16 in.
Weight (without NMs or WICs or additional Power Supplies)	<ul style="list-style-type: none"> • Cisco 3725—14 lbs. • Cisco 3745—32 lbs.
Regulatory Compliance	
Safety	<ul style="list-style-type: none"> • UL 1950 • CAN/CSA-C22.2 No. 950 • EN 60950 • IEC 60950 • TS 001
EMC	<ul style="list-style-type: none"> • FCC Part 15 • ICES-003 Class A • EN55022 Class A • CISPR22 Class A • AS/NZS 3548 Class A • VCCI Class A
Telecom	<ul style="list-style-type: none"> • FCC Part 68 • Canada CS-03 • JATE • RTTE Directive • Interface Support
High Density Service Modules	<ul style="list-style-type: none"> • NMD-36-ESW, NMD-36-ESW-2GIG, NMD-36-ESW-PWR, NMD-36-ESW-PWR-2G
Network Modules	<p>NM-16ESW, NM-16ESW-PWR, NM-16ESW-1GIG, NM-16ESW-PWR-1GIG, NMD-36-ESW, NMD-36-ESW-PWR, NMD-36-ESW-2GIG, NMD-36-ESW-2G, NM-1FE-FX-V2, NM-1FE-SMF, NM-1FE2W, NM-2FE2W, NM-1FE1R2W, NM-2W, NM-1HSSI, NM-4A/S, NM-4B-S/T, NM-4B-U, NM-8A/S, NM-8B-S/T, NM-8B-U, NM-1CT1, NM-1CT1-CSU, NM-2CT1, NM-2CT1-CSU, NM-1CE1B, NM-1CE1U, NM-2CE1U, NM-2CE1B, NM-4E1-IMA, NM-4T1-IMA, NM-8E1-IMA, NM-8T1-IMA, NM-1A-T3, NM-1A-E3, NM-1V, NM-2V, NM-HDA-4FXS, NM-HDV-1T1-12, NM-HDV-1E1-12, NM-HDV-1E1-30, NM-HDV-1E1-30E, NM-HDV-2E1-60, NM-HDV-1T1-24, NM-HDV-2T1-48, NM-HDV-1T1-24E, NM-HDV-2T1-48, NM-6DM, NM-12DM, NM-18DM, NM-24DM, NM-30DM, NM-16A, NM-32A, NM-1A-OC3MM, NM-1A-OC3SMI, NM-1A-OC3SML, NM-1A-OC3MM-EP, NM-1A-OC3SMI-EP, NM-1A-OC3SML-EP, NM-1GE, NM-1T3/E3, NM-CE-BP-SCSI-K9, NM-CE-BP-20G-K9, NM-CE-BP-40G-K9, NM-4T, NM-8AM, NM-16AM, NM-CUE, NM-HD-1V, NM-HD-2V, NM-HD-2VE</p>



Table 3 Cisco 3700 Series Specifications (Continued)

Description	Specification
WICs, VWICs, and VICs	WIC-2T, WIC-2A/S, WIC-1B-S/T, WIC-1B-U, WIC-1DSU-56K4, VWIC-1MFT-T1, VWIC-2MFT-T1, VWIC-2MFT-T1-DI, VWIC-1MFT-E1, VWIC-2MFT-E1, VWIC-2MFT-E1-DI, VWIC-1MFT-G703, VWIC-2MFT-G703, WIC-1ADSL, WIC-1AM, WIC-2AM, VIC-2DID, VIC-2FXS, VIC-2FXO, VIC-2FXO-EU, VIC-2FXO-M1, VIC-2FXO-M2, VIC-2FXO-M3, VIC-2E/M, VIC-2CAMA, VIC-2BRI-S/T-TE, WIC-1T, WIC-1DSU-T1, WIC-1SHDSL, VIC-2BRI-NT/TE, VIC-4FXS/DID, VIC2-2FXS, VIC2-2FXO, VIC2-4FXO, VIC2-2E/M, VIC2-2BRI-NT/TE
AIMs	AIM-VPN-HP, AIM-VPN-EP, AIM-VPN/EPII, AIM-VPN/HPII, AIM-ATM, AIM-VOICE-30, AIM-ATM-VOICE-30, AIM-COMPR4

Ordering Information

The Cisco 3700 Series is orderable through the following part numbers:

Part Number	Description
CISCO3725	3700 Series, 2-Slot, Dual FE, Multiservice Access Router
CISCO3745	3700 Series, 4-Slot, Dual FE, Multiservice Access Router

Summary

The Cisco 3700 Series Multiservice Access Routers enable flexible and scalable deployment of new e-business applications in an integrated branch office access platform. The Cisco 3700 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. In addition, the Cisco 3700 Series provides a consolidated service infrastructure and high service density in a compact form factor that enables the incremental integration of branch applications and services.

Service and Support

The award-winning Cisco Service and Support offerings provide presales network audit planning, design consulting, network implementation, operational support, and network optimization. By including service and support when purchasing Cisco 3700 products, customers can confidently deploy a converged network architecture using Cisco expertise, experience, and resources.

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