Cisco 3600 Series—**Multifunction Solution for Power Branch Offices**

The Internet has opened new vistas for exploration, exchanging ideas, and commerce. What's more, Web browser-based interfaces simplify Internet and Intranet applications—making them so easy to use that many companies now depend upon the network to conduct mission-critical business activities. This browser simplicity drives the adoption of the globally networked business model, which selectively provides secure services and resources to anyone, anywhere, any time via the World Wide Web. Everyone in a globally networked business needs access to vital central resources.

Branch Office Computing Requirements

Branch offices, once autonomous from main offices, now need to connect to centralized hosts and servers, so users can communicate with each other, their customers, suppliers, and partners. The ongoing trend toward faster, more capable desktop computing with ever more powerful multimedia and mission-critical applications drives demand for expanding network infrastructures to support them. It falls to the network administrator to meet this user demand.

As bandwidth requirements increase and network services must support advanced applications, it is clear that today's multiple-device branch office solutions, while adequate for today's requirements, become difficult to manage and expensive as needs change over time. Because specialized devices offer few options for expansion, today's multiple-device solutions usually require a forklift upgrade to meet tomorrow's demand for new services.

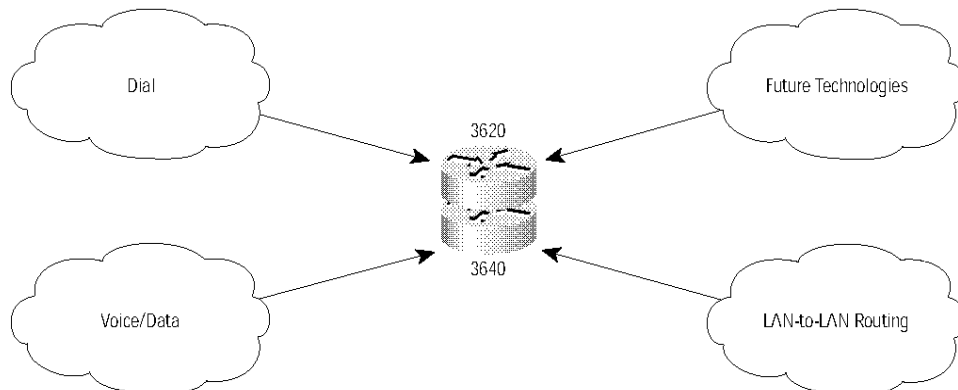## The Multifunction Device Solution for Power Branch Offices

The alternative to the unwieldy, often expensive multiple-device solution is consolidation of network services into a single multifunction device. Such a solution would be much easier to set up and manage—but must also be absolutely reliable. It must demonstrate the horsepower to handle a variety of activities at wire-speed performance while having extreme flexibility in connectivity, bandwidth, and local network services such as security and multimedia application support—and do everything at a lower cost than today's solutions. An office so empowered becomes a power branch office, ready to take on the advanced computing challenges of rapidly growing Internet and Intranet applications.

Today's sophisticated users require dial access, advanced LAN-to-LAN routing services for networked multimedia applications, legacy traffic support, and multiservice consolidation of anticipated future technologies such as digital subscriber lines (xDSL), and integrated voice, video, and data networks. Until now, administrators have had to purchase at least three devices to meet all these needs. The Cisco 3600 series combines all three capabilities into a single platform.

Requirements of a Robust Power Branch Office Network Solution

When Cisco Systems looked at this emerging networking market, it became clear that a reliable, long-lived power branch office solution must contain seven elements:

• Platform modularity and flexibility Supports any WAN service such as leased lines, Integrated Services Digital Network (ISDN), Frame Relay, X.25, Switched 56 and Switched Multimegabit Data Service (SMDS), and emerging services such as xDSL and Asynchronous Transfer Mode (ATM)
• End-to-end security and data privacy Ensures support of corporate security policies in power branch offices
• End-to-end quality of service guarantees Supports current and future multimedia, multicast, voice integration, and other time-sensitive applications
• Enhanced Internet/Intranet access features Reduces cost and increases flexibility in protocol or address management, including Dial Virtual Private Networks (Dial VPNs)
• Easy to set up and use Keeps deployment costs at a minimum
• WAN optimization features Ensures best use of available bandwidth to reduce recurring WAN line costs, including data compression
• Centrally manageable Lowers operations costs with remote management capabilities

Network integration with Cisco's 3600 Series multifunction devices

Shifting to a Single-Device Solution: What Your Network Needs

Particular requirements of a branch office vary widely. Cisco sees three primary usage areas: dial access, routing or LAN-to-LAN services and, more recently, multiservice integration of voice, video, and data on the same infrastructure. Until now, network managers have viewed these as separate requirements and met them with at least three devices. Shifting all branch office network functions to one device requires a reality check. A single-device solution must meet the challenge. Consequently, network managers seek solutions for the power branch office that provide high performance, flexibility, and are cost effective.

High Performance

Platform performance is of primary concern when considering the networking requirements of a power branch office in more detail. If an office shifts all of its activity from several devices to a single multifunction device, the new solution must be up to the challenge of simultaneously directing activities like Internet access, LAN switching, dial access, WAN access to a mainframe, and dial-out faxing—all at full wire speed, with no retransmission or dropped traffic. The device should also provide advanced Layer 3 services such as security, manageability, and multi-media and voice application support.
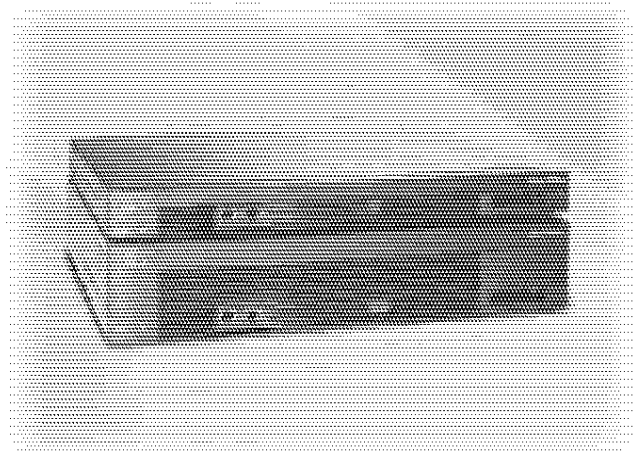
Flexibility

Along with these new application possibilities, wide-area networking options for delivering network services to branch offices also present challenges as network administrators seek to meet today's needs, yet must prepare for future change. For instance, a branch office using ISDN to connect to the main office may require a high-speed, dedicated Frame Relay service in a year's time due to increased traffic on the network—and would like to make the upgrade without bringing a forklift to the wiring closet.

Cost Effective Solutions

Compare the cost of today's multiple device solutions to a single multifunction device. The installation cost of a multiple-device solution is in itself daunting. Add in the extra expense of separate WAN connections for each one—none of which are fully utilized—and multiple devices become quite expensive when compared to a single multifunction device.

The Cisco 3600 single-device solution not only saves you an average of at least 50% the first year, when compared to a multiple-device solution, it protects your investment as well. As connectivity and service needs change, it's easy to change configurations with a simple swap of a network module. This design feature helps you respond quickly to changing service demands with minimal disruption of network service and at a much lower cost than replacing an entire unit.

The savings don't stop there. A Cisco 3600 solution saves management and operations costs, conserves rack space, and eliminates the cable management difficulties of multi-vendor, multi-device solutions.

Cisco 3600 Series

Cisco 3600 Series: High Performance for Power Branch Offices

From the beginning, the Cisco 3600 series was designed with performance, flexibility, and cost effectiveness in mind, making the power branch office possible today. The 100 MHz R4700 RISC processor of the Cisco 3640 server packs all the punch you'll need for a multifunction branch office solution, with 50 to 70 thousand packets per second (kpps) throughput capacity. The Cisco 3620 chassis has the same processor running at 80 MHz for 20 to 40 kpps throughput capacity.
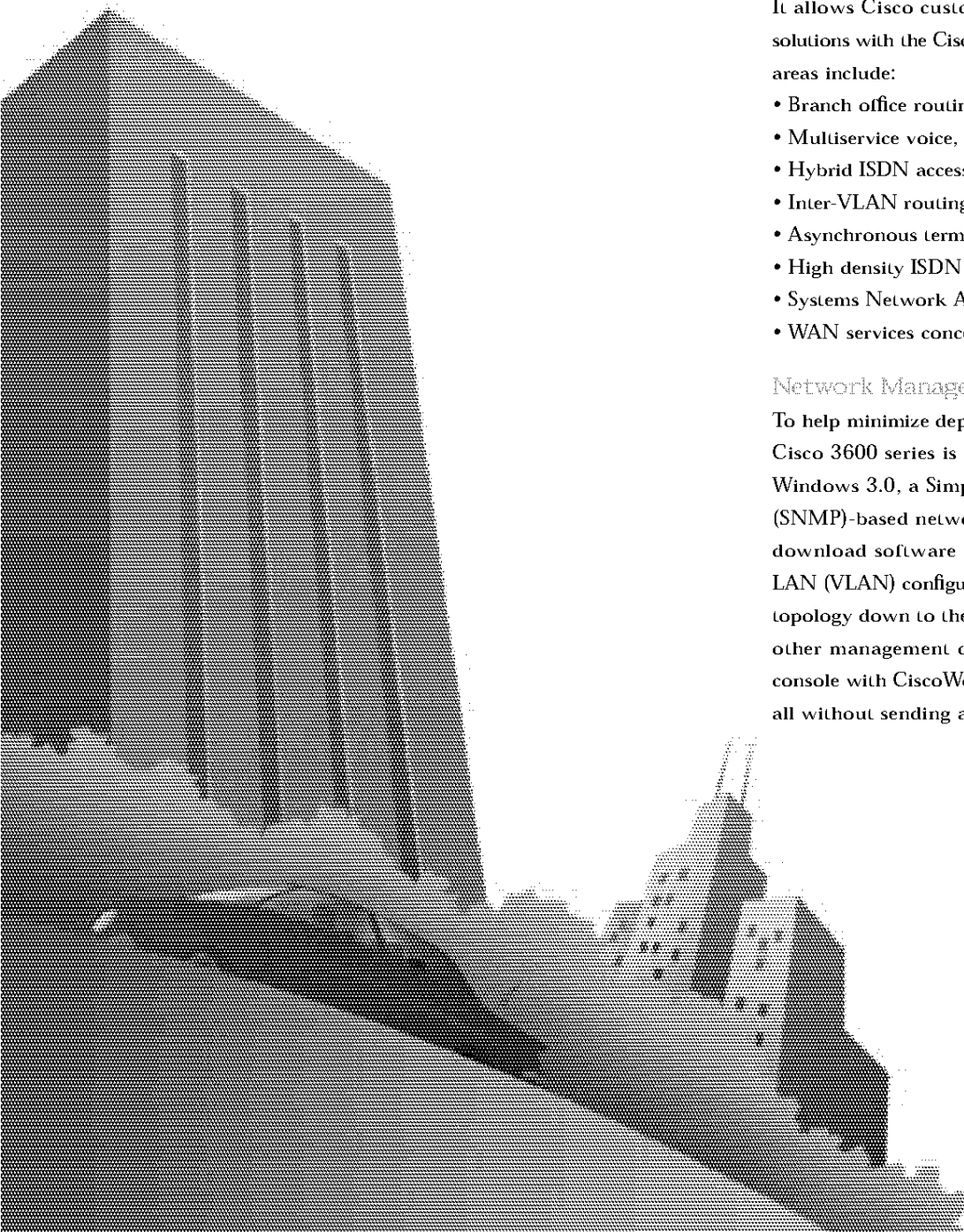
Modular Design

The modular Cisco 3600 series is available as a two- or four-slot chassis. Each chassis supports a wide array of network modules, making the platform highly configurable to meet current and future connectivity requirements. It is sometimes difficult to ascertain just how requirements will change in the future, so the Cisco 3600 platform is designed to shift in any number of directions to meet evolving needs in dial access, routing or LAN-to-LAN, and multiservice voice, video, and data integration.

Such versatility makes the Cisco 3600 series an ideal power branch office solution for several application areas. It allows Cisco customers to build highly customized solutions with the Cisco 3600 platform. These key application areas include:

• Branch office routing
• Multiservice voice, video, and data integration
• Hybrid ISDN access server with integrated digital modems
• Inter-VLAN routing
• Asynchronous terminal services
• High density ISDN or asynchronous dial access
• Systems Network Architecture (SNA) mainframe access
• WAN services concentration

Network Management for Cisco 3600 Series

To help minimize deployment and maintenance costs, the Cisco 3600 series is manageable remotely via CiscoWorks Windows 3.0, a Simple Network Management Protocol (SNMP)-based network management toolkit. You can download software updates, change device and Virtual LAN (VLAN) configurations, collect statistics, map network topology down to the port level, and perform a variety of other management duties from a central management console with CiscoWorks' easy-to-use graphical interface—all without sending a technician to the branch office.

Modularity

For ultimate flexibility, there are multiple levels of modularity available for the Cisco 3600 series. Network modules provide diverse LAN and WAN connectivity and hardware-assisted compression.

Mixed-media network modules have two levels of modularity: built-in LAN ports with two additional slots for WAN interface cards, making it easy to customize your Cisco 3600 solution with the connectivity you need. For simpler logistics management, WAN interface cards are the same as those used in Cisco 1600 access routers.

Cisco IOS Software Links Branch Offices to the World

Cisco IOS™ software is the common element that ties together end-to-end Cisco network solutions, providing smooth communication between power branch offices and central resources at the main office or over the Internet. Cisco 3600 solutions support all Cisco IOS feature sets for complete interoperability. The features and benefits table on page 12 lists some of the features most relevant to power branch office networking solutions that use the Cisco 3600 series.

Connectivity for Cisco 3600 Series	
LAN Network Modules	One-port Fast Ethernet (10/100BaseTX)
	One-port Fast Ethernet (100BaseFX)
	One- and four-port Ethernet (10BaseT)
WAN Network Modules	Four- or eight-port synchronous/asynchronous low-speed serial
	Four-port T1/E1 synchronous serial
	Four- or eight-port ISDN Basic Rate Interface (BRI) with optional integrated Network Termination (NT-1)
	One- or two-port channelized T1 ISDN Primary Rate Interface (PRI) with optional integrated Channel Service Unit (CSU)
	One- or two-port channelized E1 ISDN PRI with balanced and unbalanced connections
	16- or 32-port asynchronous serial
	Hardware-assisted compression (no ports)
Mixed-Media Network Modules	One- or two-port Ethernet plus two WAN interface card slots
	Ethernet, Token Ring plus two WAN interface card slots
Modem Network Modules	6, 12, 18, 24 and 30 digital modem network modules—also field upgradeable
Multiservice Network Modules	Voice module with two slots for voice interface cards
Analog Voice Interface Cards	Two-port foreign exchange office (FXO)
	Two-port foreign exchange station (FXS)
	Two-port E&M
WAN Interface Cards	One-port T-1 synchronous serial
	One-port ISDN BRI with optional integrated NT-1
	One-port synchronous serial 56/64-kbps with integrated CSU/DSU

Cisco 3600 *Series*—**Solutions for Power Branch Offices**

Explore the incredible flexibility of Cisco 3600 series solutions with these examples for the power branch office environment, whether you need dial access, routing or LAN-to-LAN services, or multiservice networking. No matter how much your requirements may vary from place to place, the Cisco 3600 platform has the performance and diversity to meet your needs, at a very cost-effective price.
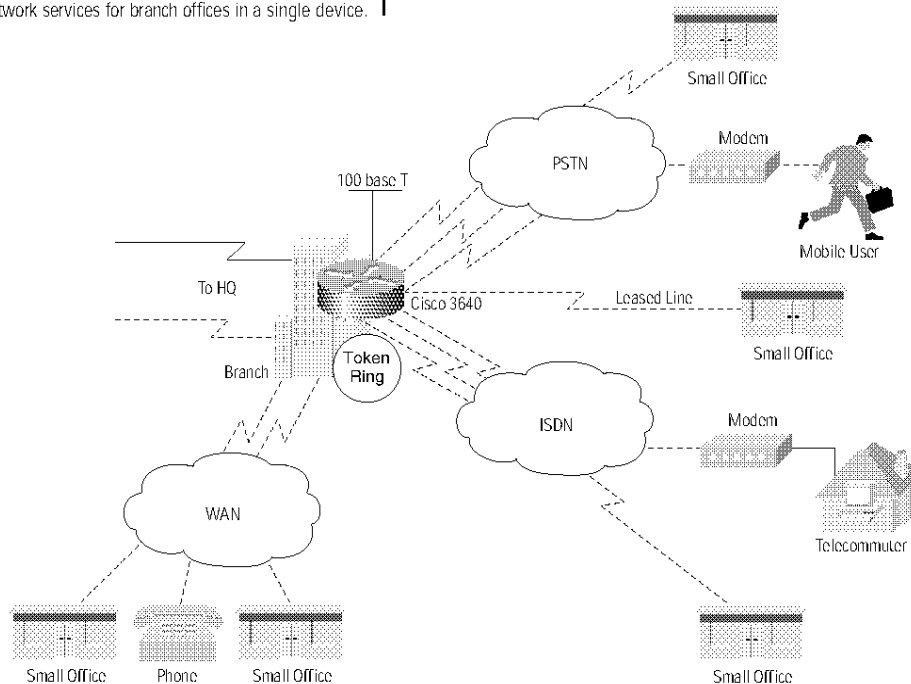
Multifunction Access Server and Router

For branch offices that depend upon a variety of network services, you can consolidate these servies into a solution built upon the Cisco 3600 platform. While many people are thinking of multiservice branch office networks that integrate voice and video with data over the same infrastructure, a Cisco 3600 solution takes this flexibility one step further by adding dial access, routing, and LAN-to-LAN services. Platform modularity comes into play as multifunction networks perform a variety of tasks. Listed on the next page are some possible requirements along with options available to meet those needs.
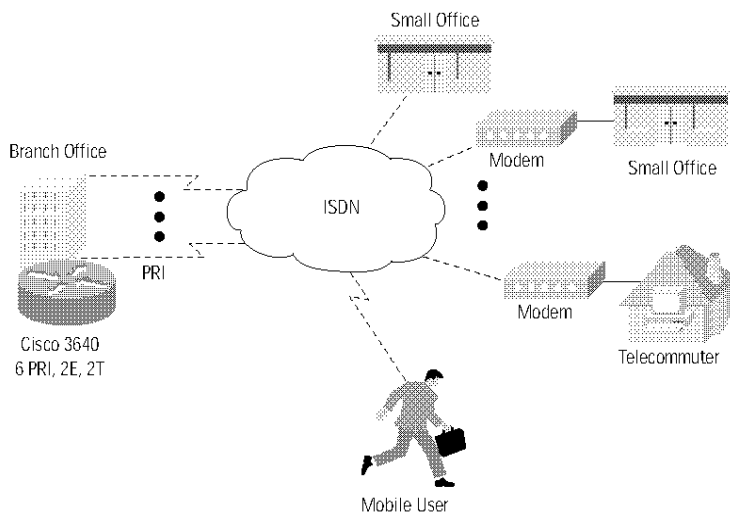
This integrated, all-in-one solution to multiple requirements is extremely cost effective to install and manage. It costs more to purchase multiple devices, and you would sacrifice the flexibility of a Cisco 3600 solution when your requirements change. Remote manageability also saves you money by lowering deployment and management costs. Another cost advantage is consolidation of WAN services into fewer lines. To protect your investment when you must change connectivity or services, just swap a network module at minimal additional cost or service disruption.

As a multifunction solution, you can rely upon the outstanding performance, reliability, security, and flexibility of the Cisco 3600 platform to meet your needs for many years. Cisco IOS software contains many features that provide security, reliability, and WAN optimization.

As a consolidated, multifunction solution, the high-performance Cisco 3600 engine and feature-rich Cisco IOS software deliver the industry's broadest variety of network services for branch offices in a single device.

Small Office

Branch Office

ISDN

Modem

Small Office

PRI

Cisco 3640
6 PRI, 2E, 2T

Modem

Telecommuter

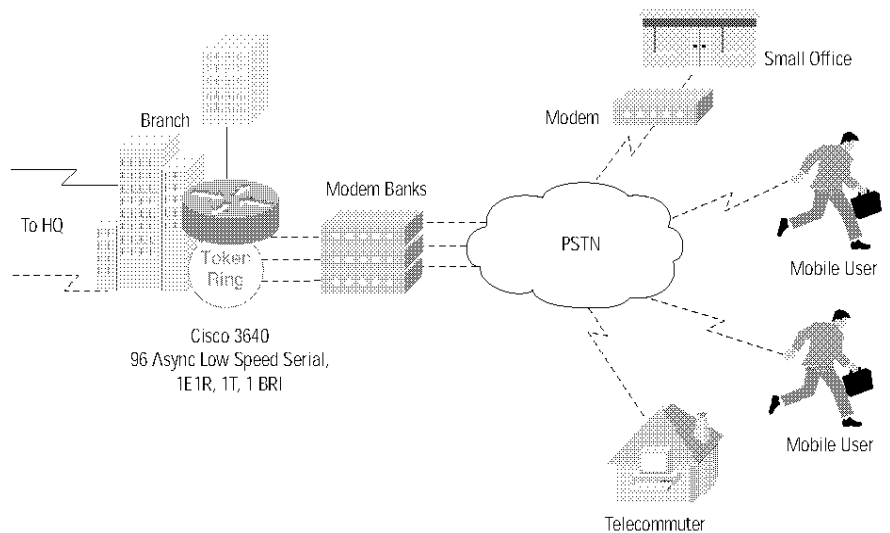Mobile User

High-Density ISDN Access Server

As many businesses look for cost-effective solutions that provide high-performance, high-density ISDN access, the Cisco 3600 solution truly stands out. As a high-density ISDN access server solution with both ISDN BRI and PRI available, the Cisco 3600 platform becomes a cost-effective way to concentrate as many as 180 B-channel connections per chassis. Integrated uplinks to a local Fast Ethernet backbone provide access to network services such as SNA mainframes, client/server applications, Web servers, or electronic mail. Both scalable and cost effective, the Cisco 3600 modular design makes it possible to start small and install additional network modules as demand grows.

You can rely upon the high-performance Cisco 3600 platform to service a full call load at wire speeds. With Multi-chassis Multilink Point-to-Point Protocol (MMP) as part of Cisco IOS software, you can aggregate several Cisco 3600 ISDN access servers into one logical unit with a single telephone number. Other Cisco IOS software features provide security to authenticate users and protect network resources, and WAN optimization to conserve expensive bandwidth.

Requirement	Cisco 3600 Solution
VLAN routing	Ethernet, Fast Ethernet
LAN routing	Ethernet, Token Ring, Fast Ethernet
LAN backbone access	Fast Ethernet uplink
Mobile users	Asynchronous dial access
Telecommuters	ISDN PRI or BRI dial access
Central services:	
SNA mainframe access	Remote high-speed or low-speed WAN
Intranet applications/Web servers	Frame Relay, X.25, leased-line, ISDN PRI
Client/server applications	or BRI plus a backhaul option
Electronic mail access	
Internet access	WAN connection
Voice integration	Voice over IP module
Security: user authentication and firewall protection	Cisco IOS software

High-Density Asynchronous Access Server/Terminal Server

A reliable solution for mobile users, the Cisco 3600 as a high-density asynchronous access server can handle up to 96 134.4-kbps external modems or terminals at a time in a branch office. Mobile users dial a local telephone number to access local services such as electronic mail servers, or link to central services such as order entry systems over the WAN. As with its ISDN solution counterpart, Cisco IOS software supports high-density asynchronous dial-in pools with MMP linking multiple Cisco 3600 chassis, offers several security authentication options, and includes WAN optimization features to control line costs and optimize bandwidth utilization. As a terminal server solution, asynchronous terminals connect with local Ethernet, Fast Ethernet, or Token Ring LANs. This solution delivers consistently high performance under heavy call loads—at a competitive price per port.

To HQ
Branch
Token Ring
Cisco 3640
96 Async Low Speed Serial,
1E1R, 1T, 1 BRI
Modem Banks
PSTN
Modem
Small Office
Mobile User
Mobile User
Telecommuter

The Cisco 3600 high-density access server solution provides up to 96 asynchronous connections per chassis, delivering high performance at a competitive price per port.

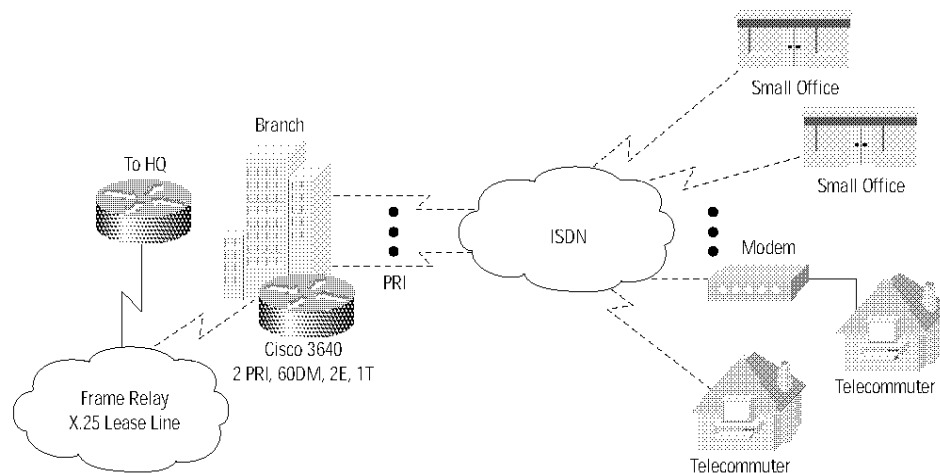## Hybrid ISDN Access Server with Integrated Digital Modems

As a single-chassis, hybrid ISDN access solution, a Cisco 3600 with integrated digital modems is ideal for branch offices with limited rack space. Customers or telecommuters save line costs by dialing a local access number, then are routed to services over the WAN. This scenario is particularly useful for banks, service providers, or other businesses with geographically distributed POPs. A backup T1 serial connection using a mixed-media LAN module with T1 WAN interface cards also provides LAN access. Redundancy provides stability and performance, while LAN connectivity options such as single or dual Ethernet, Fast Ethernet, and Token Ring make a Cisco 3600 solution adaptable to most branch office dial environments. Detailed modem management software is available.

Up to 60 digital modems can be installed in a Cisco 3640 chassis to simplify management, conserve rack space, and ensure interoperability with the rest of your Cisco network.

As part of Cisco IOS software, MMP lets you aggregate several servers into a single logical unit with one telephone number. Cisco IOS software provides security features to authenticate users and protect network resources, WAN optimization features to conserve expensive bandwidth, and reliability features to maintain full-speed performance at maximum call loads.

Inter-VLAN Router

VLANs in a Cisco network enable network managers to group users logically rather than by physical location—easing adds, moves, and changes. The high-performance Cisco 3600 routing engine combined with the feature-rich Fast Ethernet network module makes an ideal solution for a low-density, high-performance inter-VLAN routing. The Cisco 3600 routes between VLANs resident in Cisco Catalyst® series switches with Cisco IOS Inter-Switch Link (ISL) protocol on the Fast Ethernet network module.

With proven performance and robust Cisco IOS WAN optimization features, a Cisco 3600 ISDN access server with integrated digital modems delivers full wire-speed performance under maximum call loads.

Voice Over IP: PBX Consolidation

The Cisco 3600 is Cisco's first router to support voice over IP which will allow voice traffic to be transported over existing WAN infrastructures including ISDN, leased line, ATM, and Frame Relay.
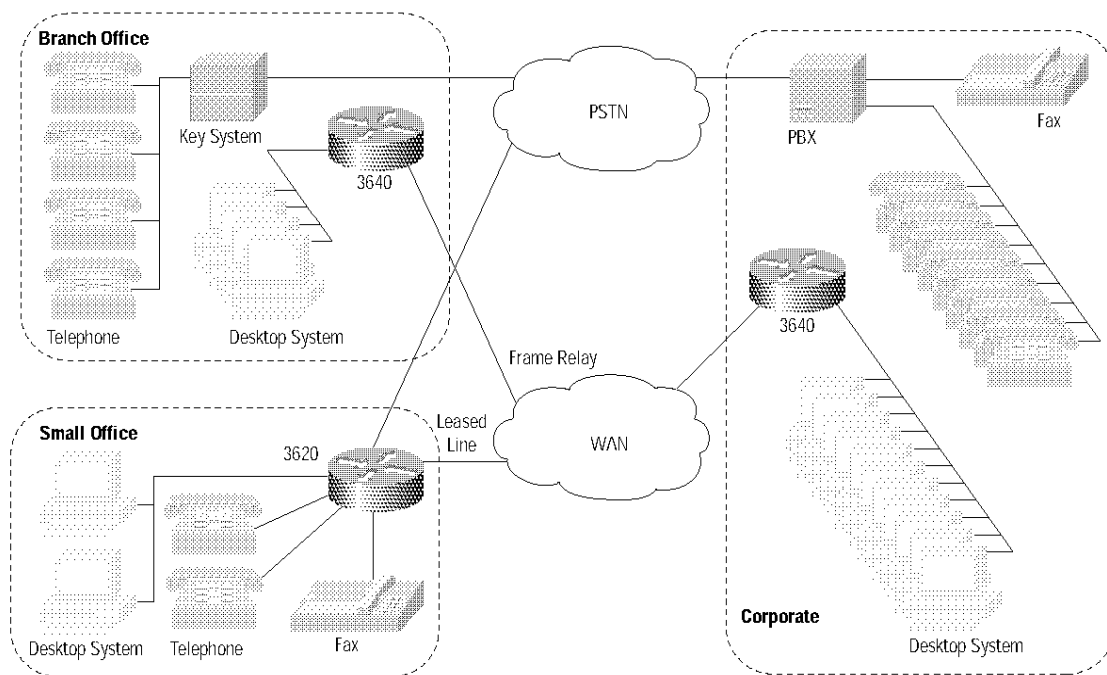
This solution gives you the opportunity to save long-distance tariffs normally incurred using the Public Switched Telephone Network (PSTN) while providing both the quality and reliability you expect from your telephone service. Additional features include support for fax relay and future interoperability with other H.323 applications.
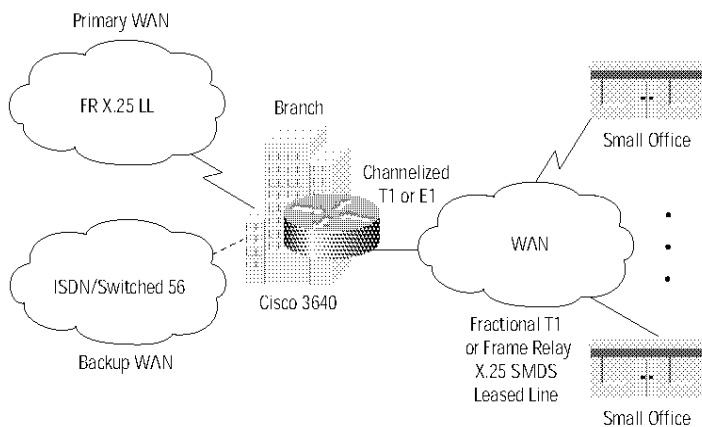
Bandwidth efficiencies include:
- Voice compression using standard compression techniques such as G.729
- Silence suppression
- Resource Reservation Protocol (RSVP), Weighted Fair Queing (WFQ), multilink fragmentation and interleave

WAN Services Concentration

For organizations that need to connect many remote sites over various WAN connections such as Frame Relay, X.25, or leased lines, the Cisco 3600 offers a variety of connectivity options with the reliability and high performance you need. The Cisco 3600 solution supports up to 24 dedicated 128-kbps synchronous connections. Alternatively, it can multiplex up to 144 56/64-kbps (T1) or 180 56/64-kbps (E1) channels via channelized network modules with optional integrated CSUs. The versatility of the Cisco 3600 platform lets you customize your solution to your requirements and increase or change capacity as demand requires.

3600 Multiservice Application with Voice Integration

Primary WAN

FR X.25 LL

Branch

Channelized
T1 or E1

Small Office

WAN

Cisco 3640

ISDN/Switched 56

Backup WAN

Fractional T1
or Frame Relay
X.25 SMDS
Leased Line

Small Office

The Cisco 3600 solution provides the broadest selection of WAN connectivity options in its class. The modular architecture makes it scalable, affordable, and flexible.

Lifecycle Focused Service and Support Solutions for Cisco Access Servers

Cisco's comprehensive support portfolio delivers solutions that enhance the network throughout its lifecycle. From design and installation to preventative and scheduled maintenance and performance optimization, Cisco solutions promote network reliability, efficiency, and flexibility. Designed to function as an integral product component of Cisco access servers, these programs deliver seamless support. Together, they proactively help enterprises and service providers sharpen their competitive edge. Through access to the Cisco Connection Online (CCO) Web site, customers can both use and market expanded functionality and new features as soon as they become available. Moreover, access to Cisco's technical expertise is available around the clock and around the globe. This virtual team of the world's top networking engineers is equipped to address every need from trouble-shooting to network design and planning.

Cisco 3600 Series: Part of a Cisco End-to-End Network Solution

The benefits of a single-vendor, end-to-end networking solution are compelling. As part of a globally networked business, power branch offices must be positioned to take advantage of emerging powerful multimedia applications that define Internet/Intranet networking today and into tomorrow.

The Cisco 3600 series meets the challenge ahead with a comprehensive solution that you can depend upon for performance and flexibility. As increasing computing capabilities change the landscape of the power branch office network, the highly modular Cisco 3600 series protects your investment for years to come. Cisco continues to develop new solutions for the Cisco 3600 series that helps you stay ahead of your competition.

You know you're partnering with a vendor you can trust. Cisco Systems stands behind every product it builds, with outstanding service and support and a proven record for performance, reliability, and standards-setting technology.

Cisco IOS Software Feature	Benefit to Power Branch Office Solutions
Dial Access Features	
MMP	Has the ability to add multiple devices to a dial-up pool, for scalability of core networks
Dialer Profiles	Extends flexibility of current dial-up configurations by allowing separate profiles for each class of user
Dial VPNs	Eliminates requirement for service provider IP addressing by allowing the user home gateway to assign IP addresses; independent of TACACS+ or RADIUS authentication
Layer 2 Forwarding (L2F) Fast Switching	Improves Dial VPN performance by increasing the number of sessions that a home gateway can terminate
Network Address Translation (NAT)	Eliminates readdressing overhead; conserves IP addresses through application port-level multiplexing
Virtual Profiles	Enables user-specific configurations regardless of media used by dial-in caller
Bandwidth Allocation Control Protocol (BACP)	Provides MP peers with ability to govern link utilization
128-KB ISDN Leased Line	Allows combination of two B channels into a single pipe to behave like a leased line
RADIUS Support	Supports Internet Engineering Task Force (IETF) draft standard
ISDN Caller ID Callback	Saves user money by rejecting client calls and initiating callback from the central site to the user
ISDN Non-Facility Associated Signaling (NFAS)	Allows single D channel to control multiple PRI interfaces in the same access server; allows configuration of backup D channel
Dial on Demand and Protocol Spoofing	Saves user money by reducing data transferred over the remote link
LAN-to-LAN Features	
Integrated Bridging and Routing (IRB)	Enables scalable, efficient integration of Layer 2 and Layer 3 domains; allows extension of VLANs while maintaining ability to interconnect them to routed domains through the same router
Encryption	Supports both 40- and 56-bit Data Encryption Standard (DES) packet-level encryption
Hardware Compression	Provides for compression of up to two full-duplex E1 lines using STAC (QIC-122) compression
Software Compression	Supports STAC or Predictor algorithms for slow-speed serial links
AppleTalk Access List Control (AT ALC) Enhancements	Supports AT fast-switched or inbound access lists
IP and IPX Named Access Lists	Allows easier identification of simple and extended access lists; allows ACL modification without deleting and reconfiguring
Frame Relay Traffic Shaping	Provides Committed Information Rate (CIR) enforcement on a per-virtual circuit basis; can throttle traffic-based BECN marked packets from a Frame Relay network
Frame Relay Forum .9 (FRF.9) Software Compression	Provides significantly higher compression ratios with a stream-oriented, multivendor compatibility with the ability to maintain multiple compression and decompression histories on a per-DLCI basis
Frame Relay Switched Virtual Circuits (SVCs)	Provides cost savings over a Permanent Virtual Circuit (PVC) connection via usage-based pricing; allows dynamic modification of network topologies
X.25 over ISDN D-channel	Allows a dialer to initiate X.25-over-D-channel calls; supports static TEIs
X.25 Enhancements	Supports X.25 over TCP (XOT)
Protocol Translation Virtual Templates	Simplifies configuration process for protocol translation to tunnel point-to-point protocol (PPP) across TCP, X.25, and LAT networks; supports dynamic creation of virtual access interface that only lasts as long as a tunnel session is active
Hot Standby Router Protocol (HSRP) over Inter-Switch Link (ISL)	Supports HSRP between standby and active HSRP groups in a VLAN environment
AppleTalk, DECNet, VINES, IPX Encapsulations over ISL	Supports these protocols over ISL
Fast Switches Policy-Based Routing	Improves switching performance; creates more opportunities to utilize policy routing
Multiservice Features	
Resource Reservation Protocol (RSVP)	Allows coexistence of multimedia applications with "bursty" applications on the same infrastructure; enables guaranteed quality of service (QoS) for Voice over IP (VoIP) and other multimedia applications
Random Early Detection (RED)	Provides congestion avoidance mechanism for TCP applications
Routing Table Protocol (RTP) Header Compression	Compresses IP/UDP/RTP header from 40 bytes to five bytes; beneficial when running VoIP over slow links, especially when RTP payload is less than 50 bytes
Generic Traffic Shaping	Limits packet loss by throttling transmission rates at the source to improve service predictability

Cisco 3600 Series

Feature	Cisco 3640	Cisco 3620
Processor Type	100-MHz IDT R4700 RISC	80-MHz IDT R4700 RISC
Flash Memory	4-MB, upgradeable to 32-MB	4-MB, upgradeable to 32-MB
System Memory	16-MB DRAM, upgradeable to 128-MB DRAM	16-MB DRAM, upgradeable to 64-MB DRAM
Network Module Slots	4 Slots	2 Slots
Power	AC, DC or Redundant Power Supply	AC, DC or Redundant Power Supply
Dimensions	17.5"width x 3.44" height x 15.75" depth	17.5" width x 1.69" height x 14.25" depth
Performance	50 - 70 kpps	20 - 40 kpps
Console and Auxiliary Ports (up to 115.2 kbps)	Yes	Yes
Rack and Wall Mounting	Yes	Yes
Dual Type II PCMCIA Slots	Yes	Yes

Cisco 3600 Series Network Modules

Module	Description	LAN-to-LAN Applications	Dial Applications	Legacy Applications	Multiservice
Serial Network Modules					
NM-16A	16-port High-density Async Network Module		•		
NM-32A	32-port High-density Async Network Module		•		
NM-4T	Four-port Serial Network Module	•			
NM-4A/S	Four-port Async/Sync Serial Network Module	•		•	•
NM-8A/S	Eight-port Async/Sync Serial Network Module	•		•	•
LAN Network Modules and Mixed Media LAN/WAN Network Modules					
NM-1FE-TX	One-port Fast Ethernet Network Module (10/100BaseTX only)	•	•	•	•
NM-1FE-FX	One-port Fast Ethernet Network Module (FX only)	•	•	•	•
NM-4E	Four-port Ethernet Network Module	•			
NM-1E	One-port Ethernet Network Module	•	•	•	•
NM-1E2W	One-port Ethernet, 2 WAN Card Slot Network Module	•	•	•	•
NM-2E2W	Two-port Ethernet, 2 WAN Card Slot Network Module	•	•	•	•
NM-1E1R2W	One-port Ethernet, One-port Token Ring, 2 WAN Card Slot Network Module	•	•	•	•
ISDN and Channelized Serial Network Modules					
NM-1CT1	One-port Channelized T1/ISDN PRI Network Module	•	•		
NM-1CT1-CSU	One-port Channelized T1/ISDN PRI with CSU Network Module	•	•		
NM-2CT1	Two-port Channelized T1/ISDN PRI Network Module	•	•		
NM-2CT1-CSU	Two-port Channelized T1/ISDN PRI with CSU Network Module	•	•		
NM-1CE1B	One-port Channelized E1/ISDN PRI Balanced Network Module	•	•		
NM-1CE1U	One-port Channelized E1/ISDN PRI Unbalanced Network Module	•	•		
NM-2CE1B	Two-port Channelized E1/ISDN PRI Balanced Network Module	•	•		
NM-2CE1U	Two-port Channelized E1/ISDN PRI Unbalanced	•	•		
NM-4B-S/T	Four-port ISDN BRI Network Module	•	•		
NM-4B-U	Four-port ISDN BRI with NT-1 Network Module	•	•		
NM-8B-S/T	Eight-port ISDN BRI Network Module (S/T Interface)	•	•		
NM-8B-U	Eight-port ISDN BRI with NT-1 Network Module (U Interface)	•	•		
Modem Modules					
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		•		
MICA-6MOD=	6 Digital Modem Upgrade Card		•		
Other					
NM-COMPR	Compression Network Module	•	•	•	•

Cisco 3600 WAN Interface Cards (WICs)

WAN Interface Card	Description	LAN-to-LAN Applications	Dial Applications	Legacy Applications	Multiservice
Serial WIC					
WIC-1T	One-port Sync Serial	•	•	•	•
WIC-1DSU-56K4	One-port 4-Wire 56 kbps CSU/DSU	•	•	•	•
ISDN WIC					
WIC-1B-S/T	One-port ISDN BRI	•	•	•	•
WIC-1B-U	One-port ISDN BRI with NT1	•	•	•	•

WAN interface cards are available as daughter cards to the mixed media LAN/WAN network modules. Up to two WAN interface cards can be installed on a single mixed media LAN/WAN network module. The WAN interface cards are NOT included in the price of the mixed media network modules.

CISCO SYSTEMS