# **Product Announcement**





CiscoPro 760 Series

## Introduction

Integrated Services Digital Network (ISDN) provides information workers such as lawyers, writers, consultants, and engineers with the ability to access the resources they need quickly and inexpensively. ISDN is now widely deployed throughout North America, Europe, and the Pacific Rim, and it provides the enabling technology for new network applications such as telecommuting, electronic commerce, and high-speed access to on-line services and the Internet. Because ISDN is a digital service, information can be transmitted up to ten times faster than is possible using standard analog modems. And because ISDN uses the same copper wiring as the existing telephone network, most buildings and residences are ISDN-ready today.

ISDN gives information workers the power they need to share resources and exchange data, regardless of their physical location. As businesses strive to improve productivity, control real estate and travel expenses, and facilitate effective communication, high-speed access to information will become increasingly essential to remain competitive.

# CiscoPro 760 Series ISDN Access Routers

The CiscoPro<sup>TM</sup> 760 series ISDN access routers give small and medium businesses everything they need to take advantage of the power of ISDN. The CiscoPro 760 series represents the latest generation of low-cost, easy-to-manage multiprotocol access solutions that provide affordable, high-speed access to office LANs and the Internet for telecommuters home office users, and small professional office users while minimizing the total cost of ownership for remote access services.

The CiscoPro 760 series consists of two models, the CPA765 and the CPA766. The CPA766 features a built-in Network Termination 1 (NT1) device to provide an all-in-one solution for ISDN users in North America, and includes an external S/T port to support additional ISDN devices such as ISDN telephones. The CPA765 has an ISDN S/T interface for use in countries in which the

telephone company provides the NT1 device, or for users who prefer to use an external NT1 device for connecting to the ISDN network.

Both the CPA765 and the CPA766 feature two external analog telephone interfaces to allow devices such as standard telephones, facsimile machines, and modems to share an ISDN Basic Rate Interface (BRI) line, eliminating the need for multiple telephone lines or expensive ISDN telephones. Using Cisco's flexible Call Priority feature, the CPA765 and CPA766 can dynamically assign one or both ISDN B channels to incoming or outgoing analog calls, and then return the "channels" to data service when the call is complete. The CiscoPro 760 series products are the first low-cost ISDN access routers to provide support for supplemental telephone services, such as call waiting and call hold, for telecommuters and home offices with standard analog telephones.

Table 1. CiscoPro 760 Series

Model	Ethernet	NT1	Analog (POTS) Port	Countries
CPA765	10BT, AUI	No	(2) RJ-11	Worldwide
CPA766	10BT, AUI	Yes	(2) RJ-11	US and Canada

The CiscoPro 760 series also includes Cisco's exclusive ConnectPro software, a Microsoft Windows-based graphical user interface that simplifies the process of installing, configuring, and managing CiscoPro 760 series routers. In addition, initial configuration options for the CiscoPro 760 series can be entered using a standard touch-tone telephone.

The CiscoPro 760 series provides an ISDN access solution that complements the CiscoPro 1000 family. While the CiscoPro 1000 series is designed to meet the more complex needs of small branch offices, the CiscoPro 760 series is tailored for telecommuters, home offices, and small professional offices that require IP and IPX routing over ISDN.

### CiscoPro 760 Series Software Features

The CiscoPro 760 series offers the benefits of both IP and IPX routing and concurrent transparent bridging, remote management via the Simple Network Management Protocol (SNMP) and telnet, and multi-level authentication, all in a compact desktop package. Flash memory and software downloading via the Trival File Transfer Protocol (TFTP) protect the customer's investment and eliminate the expense of sending a technician to the remote site to perform software upgrades. The CiscoPro 760 series routers also support the Multilink Point-to-Point Protocol, providing up to 128 Kbps of ISDN bandwidth, and STAC compression for up to 4:1 throughput.

All CiscoPro 760 series routers come pre-loaded with the standard SOHO feature set, which is ideal for telecommuters or home offices with up to four devices on the directly-attached Ethernet LAN. The Remote Office (MP) feature set software upgrade is available for users who require support for more than four devices on the LAN side of the router.

Table 2. CiscoPro 760 Family Software Features

Category	Feature
LAN	IP routing, IPX routing, concurrent transparent bridging
WAN	ISDN BRI, PPP, Combinet Packet Protocol (CPP), Multilink PPP (MP)
PPP	MP, LCP, BCP, IPCP, and IPXCP protocols
IP Routing	RIP, RIPv2 with extensions for demand circuits, static routes
IPX routing	Novell RIP (Novell IPX Router Specification, Rev. A, 9/2/92)
Management	SNMP, telnet, console port, TFTP for software upgrades
WAN Optimization	Dial on Demand Routing (DDR), Bandwidth on Demand via MP, 4:1 data compression, snapshot routing for IP and IPX, Demand RIP (RFC1582), IPX watching and sequence spoofing
Security	PAP, CHAP, access lists, local password, PPP Caller ID, Dialback

#### Features at a Glance

- Two RJ-11 analog telephone ports for sharing the ISDN BRI line with analog devices such as standard telephones, fax machines, and modems.
- Certified for use in more than 20 countries worldwide (CPA765).
- Supplemental telephone services supported over ISDN, including call waiting, cancel call waiting, call hold and call retrieve.
- One ISDN BRI port.
- Built-in NT1 device and external S/T port for support of additional ISDN devices such as ISDN telephones (CPA766).
- One Ethernet port with an autosensing AUI (10Base5) or 10BaseT (RJ-45) connector.
- Cisco's Call Priority mode for maximum flexibility when initiating or accepting analog calls over ISDN.
- Flash memory for software upgrades.
- IP and IPX routing with concurrent transparent bridging.
- PPP callback.
- Network management and monitoring via SNMP, telnet, and console port.
- Initial configuration via touch-tone telephone.
- Windows-based ConnectPro software to simplify configuration and management.
- 4:1 STAC data compression for throughput of up to 512 Kbps.
- Support for all major ISDN central office switches worldwide.

## **CiscoPro Solutions**

## Telecommuting

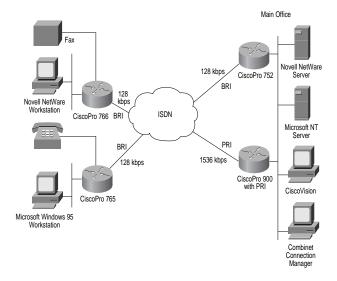
The CiscoPro 760 family gives employees who work from their homes transparent access to network servers and other resources on their companies' office LANs. IP and IPX routing support the most common LAN protocols found on today's networks, while transparent bridging provides a solution for other network environments. CiscoPro Connection Manager provides security, call management, device configuration, and accounting functions when used

with CiscoPro 900<sup>™</sup>, 750, or 760 family products at the central site, and CiscoVision provides a standards-based SNMP network management and monitoring solution.

Table 3. CiscoPro 760 Family Telecommuting Features and Benefits

Feature	Description	Benefit
Analog telephone interfaces	Allows standard analog telephones, fax machines, or modems to share the ISDN line	Controls recurring costs by eliminating the need for multiple telephone lines
Built-in NT1 device (CPA766)	Eliminates the need for a separate external NT1 device and power supply for users in the US and Canada	Minimizes acquisition, installation, and support costs
Additional External S/T interface (CPA766)	Allows a digital device such as a digital telephone or video code to access the ISDN line	Controls recurring costs by eliminating the need for a separate ISDN line or external NT1 for voice and videoconferencing applications
PPP callback	Central site initiates dialback connection to known directory number in user profile	More secure than password-only authentication schemes

Figure 1. Telecommuting Solution



### Home Office and Professional Office

The CiscoPro 760 series allows home offices and small professional offices to connect easily and inexpensively to customers, vendors, service bureaus, and other small offices. For example, a small publishing firm with several large clients can use a CiscoPro 760 series router to connect transparently to customer sites for transferring large image files quickly and efficiently. CiscoVision provides SNMP network management functions, and TACACS+ provides a centralized solution for authentication, authorization, and accounting.

Figure 2. Home Office/Professional Office

Service Bureau

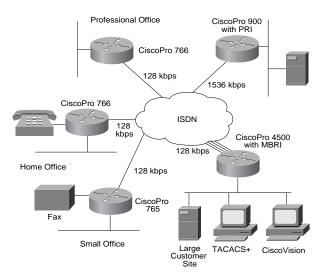


Table 4. CiscoPro 760 Family Home Office and Professional Office Features and Benefits

Feature	Description	Benefit
Multiprotocol routing and concurrent transparent bridging	Supports routing of IP and IPX protocols and concurrent bridging on a per-connection basis	Maximizes application availability
Flash memory	Allows software images to be downloaded to the router over the LAN or WAN	Protects capital investment by enabling software upgrades
Centralized administration	Routers can be managed remotely via SNMP and telnet	Minimizes support costs by leveraging centralized technical staff
Cisco ConnectPro	Provides a user-friendly, guided interface for device setup and configuration	Minimizes deployment and support costs

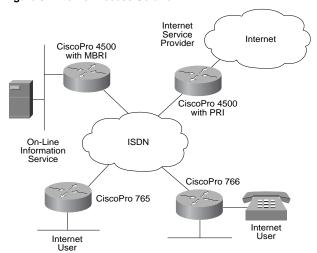
### Internet Access

The CiscoPro 760 series offers customers a cost-effective, high-speed solution for accessing on-line information services or the Internet. The IP routing feature allows transparent access to the Internet for applications such as e-mail, file transfers, and browsing the World Wide Web. With Personal Network Profiles, the user can maintain one set of configuration parameters for connecting to the Internet, and another for connecting to other offices or service providers.

Table 5. CiscoPro 760 Family Internet Access Features and Benefits

Feature	Description	Benefit
Multilevel user authentication	Support for CHAP and PAP security protocols	Prevents unauthorized access to network resources
Personal Network Profiles	Allows protocol, security, and DDR parameters to be assigned on a per-connection or ad-hoc basis	Increases productivity by simplifying the process of connecting to multiple sites
Access Lists	Allows traffic to be filtered by protocol or by address on a per-user basis	Permits remote access only to specified resources

Figure 3. Internet Access Solution



# CiscoPro 760 Series Advantages

### Low Cost of Ownership

The CiscoPro 760 series reduces the total cost of ownership for the telecommuting or home office solution in the following ways:

- Acquisition costs: The integrated NT1 and analog telephone interfaces eliminate the need to purchase separate telephone services and equipment to support these functions.
- Support costs: Because the CiscoPro 760 series supports remote management via SNMP and telnet, all common monitoring functions can be performed from a central location. Flash memory and TFTP downloading eliminate the expense of sending a service technician to the remote site to perform software upgrades.
- WAN costs: Cisco intelligent bandwidth optimization features ensure that WAN changes are kept to a minimum.

### Ease of Use

The CiscoPro 760 series has been designed to minimize the complexity of configuring and operating multiprotocol routers. While Personal Network Profiles make the process of connecting to multiple sites transparent to the user, the Cisco ConnectPro software provides an intuitive graphical user interface for installing, configuring, and monitoring CiscoPro 760 series routers. Initial configuration parameters can also be entered directly into the router via a standard touch-tone phone.

### **Bandwidth Optimization**

Multilink PPP and 4:1 data compression ensure that WAN bandwidth is used as efficiently as possible and that connect time charges are minimized. Snapshot routing prevents the ISDN line from being dialed unneccessarily to exchange periodic routing updates, and IPX spoofing keeps the IPX session active even when the line is down. Finally, access lists prevent broadcast traffic on the LAN from bringing up the WAN connection unnecessarily.

# Dial-on-Demand Routing and Bandwidth on Demand

Cisco's DDR feature allows WAN connections to be brought up only when the router senses traffic that has been defined as "interesting" by the user or network administrator. As bandwidth needs increase-for instance, when a large file transfer is initiated-the second B channel can be brought up automatically to carry the additional traffic.

### Interoperability

The CiscoPro 760 series is fully interoperable with other Cisco routers such as the CPA900, CPA2500, and CPA4500 using Multilink PPP for IP and IPX routing. The CiscoPro 760 series is also interoperable with other vendors' equipment that supports Multilink PPP (MP).

### Cisco ConnectPro

Cisco ConnectPro provides the user or network administrator with an easy-to-use tool to simplify the deployment of CiscoPro 760 series routers. ConnectPro provides a series of interview dialogs with context-sensitive help screens for initial configuration. ISDN-specific parameters such as directory numbers and Service Profile IDs (SPIDs) can be easily entered using the graphical interface.

Cisco ConnectPro also provides a graphical representation of ISDN B-channel activity and traffic throughput performance. The Cisco ConnectPro software is included at no extra charge with every CiscoPro 760 series product.

# CiscoVision and CiscoPro Connection Manager

The CiscoPro 760 family can be managed by CiscoVision, a full-featured Microsoft Windows network management application based on the Simple Network Management Protocol (SNMP). When connecting to other CiscoPro 750, 760, or 900 family routers, the CiscoPro Connection Manager application can also be used for call management, device configuration, and call accounting.

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