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# I.D. Number: 102PA Cisco 4700 Modular Router

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- [More Information on Cisco 4700 Modular Router](#)
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## Overview

Cisco is introducing a powerful new member to the Cisco 4000 series. The Cisco 4700 increases performance for high- bandwidth applications through a 133-MHz Reduced Instruction Set Computing (RISC) CPU and a fast, secondary memory cache. The combination of the RISC CPU and the secondary cache makes the Cisco 4700 one of the most powerful modular access routers in the industry.

The Cisco 4700 is completely compatible with the existing Cisco 4000 series Network Processor Modules (NPMs) with the exception of the NP-1E. Just like the Cisco 4000 and 4500 systems, the Cisco 4700 provides three high-speed NPM slots. Available NPMs include Ethernet, Token Ring, Fiber Distributed Data Interface (FDDI), serial, multiple Integrated Services Digital Network (ISDN) Basic Rate Interface (BRI) and Primary Rate Interface (PRI), as well as Asynchronous Transfer Mode (ATM).

The Cisco 4700 excels in several key applications that provide new opportunities as well as extending the following current ones:

- LAN to ATM or FDDI access
- IBM internetworking
- ISDN PRI and high-density multiple BRI
- High bandwidth compression
- Any other Cisco Internetwork Operating System (Cisco IOS) processor-intensive application

With more than 80,000 units installed worldwide as of July 1, 1995, the Cisco 4000 series is the most popular modular router in the industry.

## Cisco 4000 series



## Cisco 4000 Series Positioning

The Cisco 4700 is positioned at the top of the Cisco 4000 series family and is capable of high-performance

LAN, WAN, and ISDN applications.

The Cisco 4000-M is optimized for lower-bandwidth (regional) WAN/ISDN aggregation applications, while the Cisco 4500 is suitable for medium-requirement LAN/WAN/ISDN applications. The high-performance RISC architecture and the fast secondary cache subsystem enable the Cisco 4700 router to excel in process-level tasks such as data compression, tunneling, policy/security, and protocol conversion applications, as well as high-bandwidth, fast-switching applications.

<b>Applications</b>	<b>Cisco 4000</b>	<b>Cisco 4500</b>	<b>Cisco 4700</b>
Low-Density LAN Connectivity	xx	xx	x
Low-Speed Serial Aggregation	xxx	xx	x
High-Speed Serial Aggregation	x	xxx	xxx
Low-Density ISDN, MBRI	xxx	xx	x
High-Density ISDN, MBRI		xx	xxx
High-Density ISDN, PRI		xx	xxx
IBM Internetworking	xx	xx	xxx
FDDI Access		xx	xxx
ATM Access		x	xxx
x = Good choice for price/performance considerations  xx = Better choice for price/performance  xxx = Best choice for price/performance/density reasons			

**Figure 1.: Positioning of Cisco 4000 Series**



## System Configuration

- IDT R4600 133-MHz CPU
- 512-KB Secondary Cache Memory
- 16-MB Main DRAM Memory
- 4-MB Shared Memory
- 4-MB System Flash Memory
- Three NPM slots

The Cisco 4700 uses the same software and the same memory options as the Cisco 4500-M.

## Applications

## LAN-to-ATM Access

Combined with the new NP-6E six-port Ethernet and ATM modules announced on July 10, the Cisco 4700 can provide a high-performance, low-cost ATM access solution, filling in the solution space between the Cisco 4000 and 7000 series. Additionally, the current Token Ring and FDDI modules provide lower-density ATM access solutions.

In the example shown in Figure 2, the Cisco 4700's performance, the six-port Ethernet card, and the security and bandwidth management features of the Cisco IOS software are combined to create an ATM access router.

### Figure 2.: ATM Backbone Access



## IBM Internetworking

The power of the 133-MHz IDT ORION RISC CPU used in the Cisco 4700 provides performance that is unparalleled in the IBM internetworking market. Features like Data-Link Switching (DLSw), Advanced Peer-to-Peer Networking (APPN) routing, and remote source-route bridging (RSRB) greatly benefit from the high performance of the Cisco 4700 (see Figure 3).

### Figure 3.: IBM Internetworking



## ISDN PRI

The Cisco 4700 is also an excellent system for high-density ISDN applications. A Cisco 4700 can support two ISDN PRI modules and thus supports up to 46 (in North America/Japan) or 60 (in Europe/Australia) ISDN B channels. The Cisco 4700 can also support two 4-port or 8-port ISDN MBRI cards for a total of 16 or 32 ISDN B channels. The Cisco 4700 with either ISDN MBRI or PRI supports both remote LANs and ISDN remote node users dialing in (see Figure 4).

## Availability and Cisco IOS Support

The Cisco 4700 is orderable on August 21 and will ship on August 28. It requires Cisco IOS Release 10.2(8), 10.3(5), 11.0(1) or higher.

### Figure 4.: ISDN PRI



## Technical Specifications

### Network Processor Modules Supported

**Table 1.: Network processor modules supported by the Cisco 4700 Modular Router**

Module	Cisco 4000-M	Cisco 4500-M	Cisco 4700
NP-1E Single-Port Ethernet NPM	3	NA	NA
NP-2E Dual-Port Ethernet NPM	3	3	3
NP-6E Six-Port Ethernet NPM	NA	3	3
NP-1R Single-Port Token Ring NPM	3	3	3
NP-2RV2 Dual-Port Token Ring NPM	3	3	3
NP-1F <sup>1</sup> Single-Port FDDI NPM	1	2	2
NP-1A <sup>1</sup> Single-Port ATM NPM	NA	1	1
NP-2T Dual-Port Serial NPM	3	3	3
NP-4T Four-Port Serial NPM	3	3	3
NP-4G <sup>1</sup> Four-Port Serial G.703 NPM	3	3	3
NP-4B Four-Port ISDN BRI NPM	2	2	2
NP-8B Eight-Port ISDN BRI NPM	1	2	2
NP-CE1 Single-Port ISDN PRI/CE1 NPM	1	2	2
NP-CT Single-Port ISDN PRI/CT1 NPM	1	2	2

<sup>1</sup>Several variations available including single mode and multimode.

## Physical Description

**Table 2.: Cisco 4700 Modular Router description**

Characteristic	Specification
Dimensions and Weight	17.7 x 17.6 x 3.4" (H x W x D) (43.4 x 44.7 x 8.6 cm)
	Weight (avg. shipping) 24 lb (10.9 kg)
CPU	Processor type: 133-MHz IDT ORION R4600 RISC CPU
Memory	Flash memory: 4 MB expandable to 8 or 16 MB
	Main memory: 16 MB standard, expandable to 32 MB
	Shared memory: 4 MB standard, expandable to 8 or 16 MB
	Nonvolatile random: 128 or 512-KB access memory (NVRAM)
	Boot Flash memory: 4 MB standard, expandable to 8 or 16 MB
Power Requirements	Consumption: 200W (682 Btu/hour)
	Input: 100 to 240 VAC
	Frequency: 50 to 60 Hz
	Current rating: 3.0A @ 100V; 1.5A @ 240V
Environmental Ranges	Operating temperature range: 32° to 104° F (0° to 40° C)
	Nonoperating temperature range: -40° to 185° F (-40° to 85° C)
	Humidity (noncondensing): 5 to 95%

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