CHAPTER 1

Overview of Cisco 700 Series Routers

The Cisco 700 series routers connect Ethernet LANs to corporate networks over Integrated Services Digital Network (ISDN) Basic Rate Interface (BRI) lines. The Cisco 700 series routers offer multiprotocol routing capability between WAN and LAN ports, as well as the ability to function as a transparent bridge.

The Cisco 700 series router is available in five models. Table 1-1 lists the model numbers and the WAN and LAN interfaces available on each model.

Table 1-1 Cisco 700 Series Router Models

Model	Interfaces
Cisco 751	1 Ethernet and 1 ISDN BRI S/T
Cisco 752	1 Ethernet, 1 ISDN BRI U, and 1 ISDN BRI S/T
Cisco 753	1 Ethernet, 1 ISDN BRI U, 1 ISDN BRI S/T, and 1 analog telephone
Cisco 761	1 Ethernet and 1 ISDN BRI S/T
Cisco 762	1 Ethernet, 1 ISDN BRI U, and 1 ISDN BRI S/T
Cisco 765	1 Ethernet, 1 ISDN BRI S/T, and 2 analog telephone
Cisco 766	1 Ethernet, 1 ISDN BRI U, 1 ISDN BRI S/T, and 2 analog telephone

Note If you are using Software Release 3.2 or later on a Cisco 760 series router, use the **version** command to display the router's motherboard type. If your router has a daughterboard installed, the **version** command will also display the daughterboard type.

Product Features

This section contains information about the Cisco 700 series features, including the available ports.

Dial-On-Demand Routing

The Cisco 700 series routers connect to remote devices across ISDN BRI lines by dynamically initiating and terminating ISDN connections based on several factors, including the level of the traffic on the Ethernet LAN, dynamic routing parameters, and static routing parameters. This feature is called dial-on-demand routing (DDR).

Data Compression

The Cisco 700 series routers support data compression using the compression algorithm QIC-122 standard, Stacker LZS. Data compression is a software configuration option that optimizes the ISDN line bandwidth. Packets are compressed before being sent onto the ISDN line. After they arrive at their destination, the packets are decompressed and sent onto the remote LAN.

Hardware Features

Table 1-2 lists the Cisco 700 series hardware features.

Table 1-2 Cisco 700 Series Hardware Features

Router Model	Feature
All models	1 MB of primary memory using DRAM[1]
Cisco 760 routers	464 KB of Flash memory
Cisco 750 routers	256 KB of Flash memory
Cisco 760 routers	8 KB of NVRAM[2] to store configurations
Cisco 750 routers	2 KB of NVRAM to store configurations
All models	1 RJ-45 10BaseT port for connection to a 10BaseT Ethernet network
Cisco 750 routers	1 BNC 10Base2 port for connection to a 10Base2 Ethernet network
Cisco 760 routers	1 DB-15 AUI port for connection to an Ethernet network using an external transceiver
All models	1 RJ-45 ISDN BRI port for connection to an ISDN line
Cisco 752 Cisco 753 Cisco 762 Cisco 766	A second RJ-45 ISDN BRI port for an optional connection to an ISDN device, such as a telephone or fax
Cisco 753 Cisco 765 Cisco 766	1 or 2 RJ-11 analog telephone ports for connection to an analog device, such as a telephone, modem, or fax
All models	1 DB-9 config port for connection to a terminal or PC

1. DRAM = dynamic random-access memory.
2. NVRAM = nonvolatile random-access memory.

Figure 1-1 and Figure 1-2 show the front panels of the Cisco 750 series and Cisco 760 series routers.

Figure 1-1 Front Panel, Cisco 750 Series Router (Cisco 753 Shown)

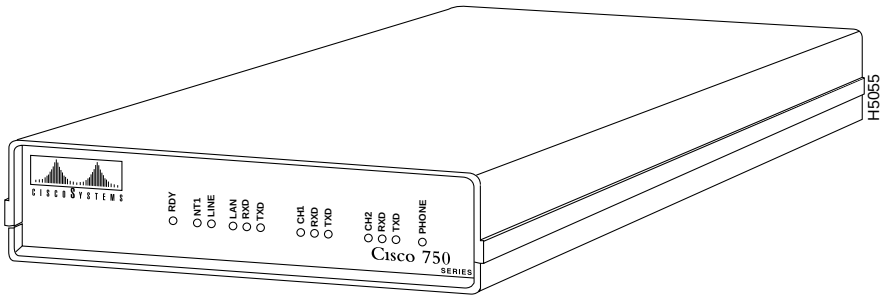
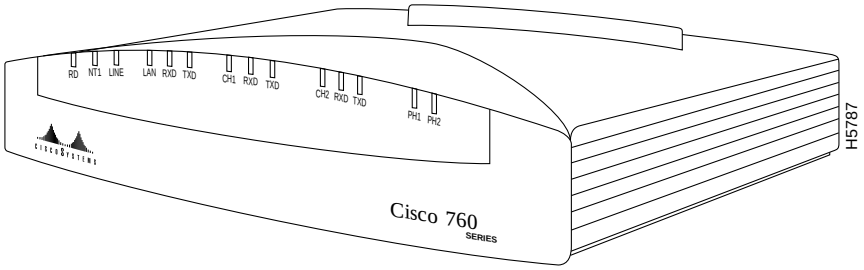


Figure 1-2 Front Panel, Cisco 760 Series Router (Cisco 766 Shown)



Cisco 700 Series Features

The Cisco 700 series routers offer the following features:

- Internet Protocol (IP) and Internetwork Packet Exchange (IPX) routing functions
- Transparent bridging functions

Security Features

Cisco 700 series routers provide the following security features:

- Point-to-Point Protocol (PPP) authentication support, including Password Authentication Protocol (PAP) and Challenge-Handshake Authentication Protocol (CHAP)
- Password security for local and remote configuration access
- Password security for connection establishment
- ISDN BRI Caller ID security for connection establishment
- Internet Protocol (IP) filtering based on source and destination addresses, source and destination ports, and packet types

SNMP Support

The Cisco 700 series routers support Simple Network Management Protocol (SNMP).

SNMP Community Names

The Cisco 700 series routers support the following SNMP community names:

- public
- proxy
- private
- regional
- core

These community names are read-only and cannot be changed. The Cisco 700 series routers do not support SNMP **set** commands.

Supported MIBs

The Cisco 700 series routers support the following SNMP Management Information Bases (MIBs):

- MIB II
- 802.1d Bridge MIB

MIB II

The Cisco 700 series routers support MIB II standards as follows:

- System
- Interfaces (all objects, except that a connection is considered to be an interface)
- Address translation
- IP
- Transmission Control Protocol (TCP)
- Internet Control Message Protocol (ICMP)
- User Datagram Protocol (UDP)
- Simple Network Management Protocol (SNMP)

802.1d Bridge MIB

The Cisco 700 series routers support 802.1d MIB standards as follows:

- Base
- Transparent bridging
- Static

Supported Standards and RFCs

The Cisco 700 series routers support the following Request For Comments (RFCs) documents:

- RFC 1058—Routing Information Protocol
- RFC 1332—PPP Internet Protocol Control Protocol (IPCP)
- RFC 1334—PPP Authentication Protocols
- RFC 1552—PPP Internetwork Packet Exchange
- RFC 1570—PPP Link Control Protocol (LCP) Extensions
- RFC 1582—Extensions to RIP to Support Demand Circuits
- RFC 1618—PPP Over ISDN
- RFC 1638—PPP Bridging Control Protocol (BCP)
- RFC 1661—Point-to-Point Protocol (PPP)
- RFC 1717—PPP Multilink Protocol (MP)
- RFC 1723—Routing Information Protocol (RIP) Version 2—Carrying Additional Information

System Specifications

The system specifications for the Cisco 700 series routers are listed in Table 1-3.

Table 1-3 System Specifications—Cisco 700 Series Routers

Description	Design Specification
Dimensions (H x W x D)	Cisco 751 and Cisco 752: 1.5 x 6.2 x 9.5" (3.8 x 15.8 x 24.1 cm) Cisco 753: 1.5 x 7.5 x 9.5" (3.8 x 19.1 x 24.1 cm) Cisco 760 series: 1.6 x 8.3 x 9.6" (4.1 x 21.1 x 24.4 cm)
Weight	Cisco 751: 1.4 lb. (0.6 kg) Cisco 752: 1.4 lb. (0.6 kg) Cisco 753: 1.5 lb. (0.7 kg) Cisco 761: 1.4 lb. (0.6 kg) Cisco 762: 1.5 lb. (0.7 kg) Cisco 765: 1.6 lb. (0.7 kg) Cisco 766: 1.7 lb. (0.8 kg)
Power supply (external)	Wall-mounted (Cisco 751 and Cisco 752) Desktop-mounted (Cisco 753 and Cisco 760 series)
Voltage	100–120/220–240 VAC (Cisco 751 and Cisco 752) 100–250 VAC (Cisco 753 and Cisco 760 series)
Frequency	50–60 Hz
Processor	16-MHz 80186 (Cisco 750 series) 25-MHz 80386 (Cisco 760 series)
Memory	1 MB of primary memory 256 KB of Flash memory (Cisco 750 series) 464 KB of Flash memory (Cisco 760 series) 2 KB of NVRAM (Cisco 750 series) 8 KB of NVRAM (Cisco 760 series)

Description	Design Specification
Network interface options	Cisco 751: 1 Ethernet, 1 BRI S/T Cisco 752: 1 Ethernet, 1 BRI S/T, 1 BRI U Cisco 753: 1 Ethernet, 1 BRI S/T, 1BRI U, 1 analog telephone Cisco 761: 1 Ethernet, 1 BRI S/T Cisco 762: 1 Ethernet, 1 BRI S/T, 1 BRI U Cisco 765: 1 Ethernet, 1 BRI S/T, 2 analog telephone Cisco 766: 1 Ethernet, 1 BRI S/T, 1 BRI U, 2 analog telephone
Ethernet interfaces	Ethernet 10BaseT—RJ-45 Ethernet 10Base2—BNC Ethernet AUI—DB-15
ISDN BRI interface	ISDN S/T—RJ-45 ISDN U—RJ-45
Analog telephone interface	RJ-11
Configuration port	DB-9F (9-pin female)
Operating temperature	32–120°F (0–50°C)
Storage temperature	-30–160°F (-35–70°C)
Operating humidity	20–95%, noncondensing
Regulatory compliance	This product conforms to FCC Class B requirements and other compliance as outlined in the *Cisco 750 Series and Cisco 760 Series Public Network Certification* document that shipped with your system.

Warning Ultimate disposal of this product should be handled according to all national laws and regulations. (To see translated versions of this warning, refer to the appendix "Translated Safety Warnings.")