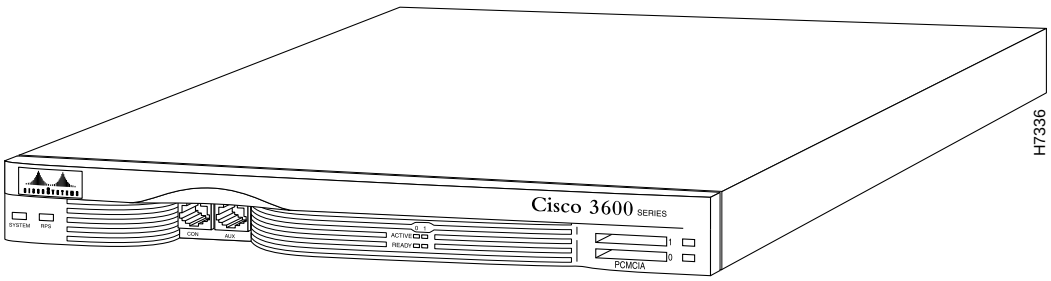
CHAPTER 1

Overview of the Cisco 3620 Router

The Cisco 3620 router, a member of the Cisco 3600 series of routers, is a two-slot modular access router whose LAN and WAN connections can be configured by means of interchangeable network modules and WAN interface cards. The modular design of the router provides flexibility, allowing you to configure the router to your needs and to reconfigure it if your needs change.

Figure 1-1 shows the front panel of the router.

Figure 1-1 Front Panel of the Cisco 3620 Router



Features

The features of the Cisco 3620 router include the following:

- High-performance 80-MHz Reduced Instruction Set Computer (RISC) processor
- Slots for two network modules
- Slots for two Personal Computer Memory Card International Association (PCMCIA) cards
- Flash memory
- Four slots for dynamic random-access memory (DRAM), which you can configure as shared memory or main (processor) memory
- Supports connection to an optional external redundant power supply
- High-speed console and auxiliary ports (up to 115.2 kbps)
- Hardware thermal alarm to warn of excessively high operating temperature
- Mounting in a 19-inch, 23-inch, or 24-inch rack, on a wall, on a desk, or on a tabletop

Specifications

Table 1-1 lists the module interface options available for the router. Some of the modules provide two empty slots which accept optional WAN interface cards. Table 1-2 lists the WAN interface cards available for the router.

Table 1-1 Module Interface Options

Module	Port Option	Part Number
1 Ethernet 2 WAN card slot	One Ethernet port, slots for two WAN interface cards	NM-1E2W
2 Ethernet 2 WAN card slot	Two Ethernet ports, slots for two WAN interface cards	NM-2E2W
1 Ethernet 1 Token Ring, 2 WAN card slot	One Ethernet port, one Token Ring port, slots for two WAN interface cards	NM-1E1R2W

Table 1-1 Module Interface Options (Continued)

Module	Port Option	Part Number
Asynchronous/synchronous serial	Four ports Eight ports	NM-4A/S NM-8A/S
ISDN[1]-BRI[2]	Four ports Eight ports	NM-4B-S/T NM-8B-S/T
ISDN-BRI with NT1[3]	Four ports Eight ports	NM-4B-U NM-8B-U
Channelized T1/ISDN-PRI[4]	One port Two Ports	NM-1CT1 NM-2CT1
Channelized T1/ISDN-PRI with CSU[5]	One port Two ports	NM-1CT1-CSU NM-2CT1-CSU
Channelized E1/ISDN-PRI balanced	One port Two ports	NM-1CE1B NM-2CE1B
Channelized E1/ISDN-PRI unbalanced	One port Two ports	NM-1CE1U NM-2CE1U

1. ISDN = Integrated Services Digital Network
2. BRI = Basic Rate Interface
3. NT1 = Network Termination 1
4. PRI = Primary Rate Interface
5. CSU = channel service unit

Table 1-2 WAN Interface Card Options

WAN Interface Card	Port Option	Part Number
1-port serial	Synchronous serial EIA/TIA-232[1], EIA/TIA-449, V.35, X.21, or EIA-530	WIC-1T
1-port ISDN-BRI	One BRI port with S/T interface	WIC36-1B-S/T
1-port ISDN-BRI with NT1	One BRI port with U interface	WIC36-1B-U

1. EIA/TIA-232 and EIA/TIA-449 were known as recommended standards RS-232 and RS-449 before their acceptance as standards by the Electronic Industries Association (EIA) and Telecommunications Industry Association (TIA).

Table 1-3 lists the specifications of the router.

Table 1-3 System Specifications

Description	Specification
Dimensions (H x W x D)	1.75 x 17.5 x 13.5" (4.4 x 44.5 x 34.2 cm), 1 rack unit in height
Weight	15 lb (6.8 kg), maximum including chassis and two network modules
Input voltage, AC power supply Current Frequency Power dissipation	100 to 240 VAC, autoranging 1.0A 50/60 Hz 60 W (maximum)
Input voltage, DC power supply Current Power dissipation	38 to 72 VDC 3.0 A 60W (maximum)
Console and Auxiliary ports	RJ-45 connector
Operating humidity	5 to 95%, noncondensing
Operating temperature	32 to 104°F (0 to 40°C)
Nonoperating temperature	–40 to 185°F (–40 to 85°C)
Noise level	45 dBA maximum
Regulatory compliance	FCC Part 15 Class B. For additional compliance information, refer to the *Regulatory Compliance and Safety Information* document.

Identifying Network Interfaces

Each individual network interface on the router is identified by a slot number and a unit number.

Slot Numbering

The two chassis slots used to mount network modules are numbered 0 and 1, as follows:

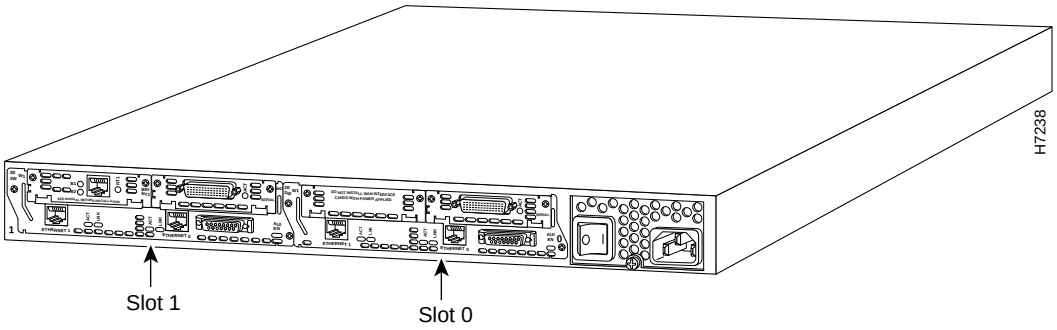
- Slot 0 is on the right (as viewed from the rear of the chassis), near the power supply. (See Figure 1-2.)
- Slot 1 is on the left.

These slot numbers correspond to the two sets of LEDs on the front panel of the chassis. The slot number is used as part of the identification of the network interfaces installed in the router. WAN interface cards are identified by the slot number of the network module in which they are installed.

You can install any network module into any available slot in the chassis.

Note WAN interface cards install into WAN card slots in 2 WAN card slot (2-slot) network modules, rather than directly into the chassis. The network modules that accept WAN interface cards have two slots labeled W0 and W1. BRI WAN interface cards can only be installed in the W1 slot, which is the slot on the left when you are facing the network module faceplate. The serial WAN interface card can be installed in either slot of a 2-slot network module.

Figure 1-2 Rear View of Router



Unit Numbering

Unit numbers begin at 0 for each module, and continue from right to left and (if necessary) from bottom to top.

If a module contains more than one interface type, each interface type has its own set of unit numbers. Using the router shown in Figure 1-2 as an example, slots 0 and 1 both contain a 2 Ethernet 2 wan-card-slot (2E 2-slot) network module. A serial WAN interface card is installed in the W0 WAN card slot in both network modules. A 1-port ISDN-BRI (BRI S/T) WAN interface card is installed in the W1 WAN card slot of the network module in slot 1. The slot and unit numbers are as follows:

- Ethernet: Slot 0, Ethernet interface 0, referred to as Ethernet 0/0
- Ethernet: Slot 0, Ethernet interface 1, referred to as Ethernet 0/1
- Serial: Slot 0, serial interface 0, referred to as serial 0/0
- Ethernet: Slot 1, Ethernet interface 0, referred to as Ethernet 1/0
- Ethernet: Slot 1, Ethernet interface 1, referred to as Ethernet 1/1
- Serial: Slot 1, serial interface 0, referred to as serial 1/0
- BRI: Slot 1, BRI interface 0, referred to as BRI 1/0

Memory

The Cisco 3620 has the following types of memory:

- DRAM memory—Serves two functions: it stores the running configuration and routing tables and it is used for packet buffering by the router's network interfaces. The Cisco Internetwork Operating System (Cisco IOS) software executes from DRAM memory.
- Nonvolatile random-access memory (NVRAM)—Stores the system configuration file and the virtual configuration register. (See the appendix "Virtual Configuration Register.")

- Flash memory—Stores the operating system software image. You can also add Flash memory on PCMCIA cards.
- Eraseable programmable read-only memory (EPROM)–based memory—Stores the ROM monitor, which allows you to boot an operating system software image from Flash or PCMCIA memory when Flash memory does not contain a valid boot helper image.

Table 1-4 lists processor and memory specifications for the Cisco 3620 router.

Table 1-4 Processor and Memory Specifications

Description	Specification
Processor	80-MHz IDT[1] R4600 RISC
DRAM[2] (main plus shared)	4 to 64 MB
NVRAM	128 KB
Flash memory (SIMM[3])	4 to 32 MB
Flash memory (PCMCIA)	4 to 32 MB
Boot ROM	512 KB

1. IDT = Integrated Device Technology
2. DRAM = Dynamic random access memory
3. SIMM = Single inline memory module