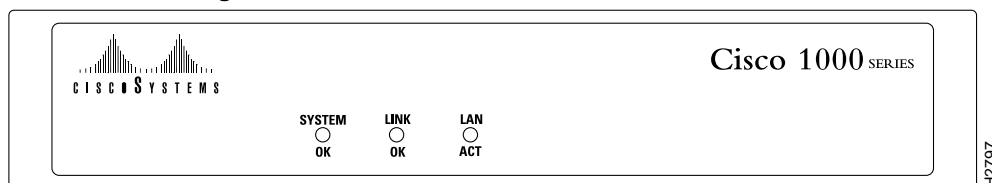


Cisco 1020 Overview

The Cisco 1020 router connects small office Ethernet LANs to corporate networks through standard telephone dial-up or leased telephone lines. After it is configured, the router will automatically route packets to and from remote destinations based on Internet Protocol (IP) or Internetwork Packet Exchange (IPX) addresses. The remote dial-up network routing connections can be on-demand, continuous, or manual.

Figure 1-1 Cisco 1020—Front Panel



Note This publication contains hardware installation and software configuration procedures. For command information, refer to the *Cisco 1020 Command Reference* publication on UniverCD, or a printed copy can be ordered.

Product Specifications

Following is information on features of the ports, configuration options, security features, and routing capabilities.

General Features

The Cisco 1020 supports the following features:

- PCMCIA Type-2 modem for integrated modem connection
- Flash memory capability
- Wall, desktop, or desk-side mountable
- Support for up to two async interfaces and one Ethernet (10BaseT) interface
- Network-independent booting from local Flash memory
- Speeds up to 115.2 Kbps on each line simultaneously
- Multiline load balancing for increased throughput over multiple lines
- Packet prioritization for telnet, rlogin, and RIP
- Trivial File Transfer Protocol (TFTP) boot via network
- Domain Name System (DNS) host name lookup
- Adjustable Maximum Transmission Unit (MTU) on WAN ports
- Service Advertisement Protocol (SAP) with selective filtering
- Novell server keep alive spoofing
- Single or multiprotocol support selectable on each port
- On-demand dial-up Serial Line Internet Protocol (SLIP) & Point-to-Point Protocol (PPP) support
- PPP Auto Detect
- SNMP Management Information Base (MIB-2) support for network monitoring
- Full network and communication port monitoring
- Built-in **ping** utility
- Selective packet tracing

Refer to the *Cisco 1020 Command Reference* publication for additional details.

Supported Network Connections

The Cisco 1020 has three ports for local and wide area network connections:

- 1 RJ-45 10BaseT port (Ether 0) for connection to your Ethernet network
- 1 RJ-45 Serial port (Console or Async 1) for configuration, or connecting an external modem
- 1 Type-2 PCMCIA modem slot (Async 2) for integrated modem connection

Note The Cisco 1020 ships with an RJ-45 to DB-25 (female) cable for connecting the console port to a PC serial port. You may also connect a standard ASCII terminal or an external modem to this port. See the appendix “Cabling Specifications” for kit information.

Administrative Configuration Options

The Cisco 1020 can be configured through the console port, from a personal computer (PC) serial port, standard ASCII terminal, or via telnet. Configuration options include:

- Full command line configuration
- Telnet login support for command line configuration
- All communications parameters configurable online
- Network downloadable software upgrades and configuration

Security Features

Security is enhanced through the following:

- IP filtering on source/destination addresses, protocol, source/destination ports, and established status of connection
- IPX filtering on source/destination network, source/destination host, source/destination socket
- Point-to-Point protocol (PPP), Password Authentication Protocol (PAP), and Challenge Handshake Authentication Protocol (CHAP)

Note CHAP is preferred.

- Password security for administrative access
- Host security for Simple Network Management Protocol (SNMP) access
- Username/password for connection establishment

Routing Capabilities

The Cisco 1020 provides the following routing capabilities:

- On-demand, continuous, and manual dial-out
- For security, all dial-out connections may use Point-to-Point Protocols PAP or CHAP
- All dial-out connections may use a “chat script”
- Dynamic Routing on a per interface basis using Routing Information Protocol (RIP) for IP and IPX

Wide-Area Network (WAN) Connectivity

The following WAN connections are supported:

- PPP with Address/Control Field compression, Protocol Field compression, PAP & CHAP authentication protocols, Magic Number loopback detection, Maximum Receive Unit negotiation, Async Control Character Map negotiation, IP control protocol, IP address negotiation and assignment (negotiated or specified), Van Jacobsen TCP/IP header compression, IPX control protocol, and IPX PPP.
- Serial Line Internet Protocol (SLIP)
- Compressed Serial Line IP (CSLIP)
- IPXWAN

Supported Standards and RFCs

The following standards and Request for Comments (RFCs) are supported:

- Transmission Control Protocol (TCP), Internet Protocol (IP), Internet Packet Exchange (IPX), Sequenced Packet Exchange (SPX), Service Advertising Protocol (SAP), Routing Information Protocol (RIP), Serial Line Internet Protocol (SLIP), Compressed Serial Line Internet Protocol (CSLIP), Internet Control Message Protocol (ICMP), User Datagram Protocol (UDP), Address Resolution Protocol (ARP), and Point-to-Point Protocol (PPP)
- Fully compliant with the following RFCs:
 - RFC 1331, The Point-to-Point Protocol (PPP) for the Transmission of Multi-protocol Datagrams over Point-to-Point links
 - RFC 1333, PPP Link Quality Monitoring
 - RFC 1334, PPP Authentication Protocols
- Backward compatible with the following RFCs:
 - RFC 1171, The Point-to-Point Protocol for the Transmission of Multi-Protocol Datagrams over Point-to-Point links
 - RFC 1172, The Point-to-Point Protocol (PPP) Initial Configuration Options

Cisco 1020 Specifications

Design specifications for the Cisco 1020 follow:

- Network interface: RJ-45 for 10BaseT Ethernet
- Console interface (Async 1): RJ-45 for console port configuration or external modem
- PCMCIA interface: Modem communications with Type-2 Personal Computer Memory Card International Association (PCMCIA) card slot
- Hardware flow control: Request to Send (RTS)/Clear to Send (CTS)
- Serial async EIA/TIA-232/423 support: Data Terminal Ready (DTR), Carrier Detect (DCD), Transmitting Data (TXD), Receiving Data (RXD), Request to Send (RTS), Clear to Send (CTS).

Table 1-1 lists the Cisco 1020 specifications.

Table 1-1 Cisco 1020—System Specifications

Description	Design Specification
Dimensions H x W x D	1.75" x 8.0" x 8.25" (4.5 cm x 20.3cm x 21 cm)
Weight Chassis and Power Supply	4.5 lb (2 kg)
Input voltage	100 to 270 volts alternating current (VAC) at 50-60 Hz
Output voltage	+5 and -5 volts direct current (VDC)
Power dissipation	11 Watts
Processor	386SE (25 MHz)
Memory	1024 Megabytes RAM, 128 kilobytes NVRAM
PCMCIA interface	Type-2 (data rates up to 115200 bps)
Ethernet interface	10BaseT (RJ-45)
Asynchronous serial interface	EIA/TIA-232/423 (RJ-45) (data rates up to 115200 bps)
Operating temperature	32 to 104°F (0 to 40°C)
Nonoperating temperature	-40 to 185°F (-40 to 85°C)
Operating humidity	10 to 90%, noncondensing

Description	Design Specification
Regulatory Compliance	This product conforms to FCC Class B requirements

