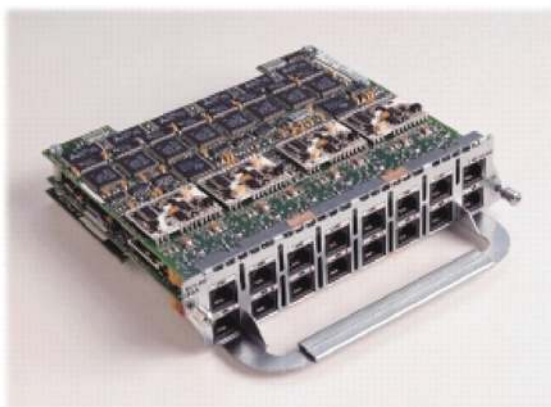


## Cisco 2600, 3600 and 3700 Analog Modem Network Modules (NM-8AM and NM-16M)

The introduction of the analog modem network modules for the award-winning Cisco 2600 and, 3600, and 3700 platforms expands the already extensive range of network modules currently available for these modular routers. These new cost-effective network modules support basic telephone service connections (RJ-11) and allow up to 8 or 16 concurrent remote analog modem users per network module users to connect to a Cisco 2600 or 3620, and up to 48 users to connect to a Cisco 3640. Combined with the differentiated services delivered through Cisco IOS<sup>®</sup> software, Cisco 2600, and 3600, and 3700 customers have best-of-breed scalability, flexibility, and investment protection, all in cost-effective, multifunctional platforms.



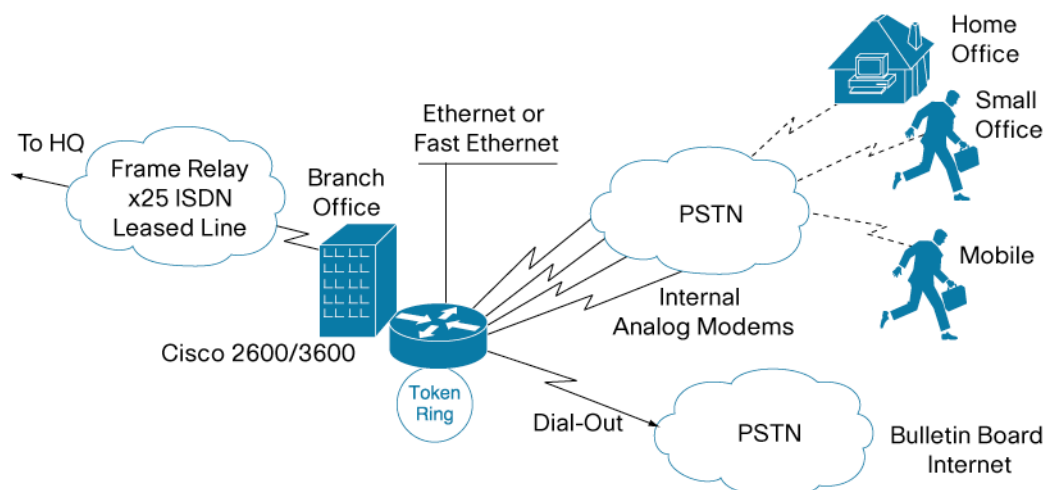
### Applications

Historically, branch office connectivity has been synonymous with connecting the local LAN to a regional or central site. With the rapid growth in mobile computing and telecommuting, more and more branch offices need to add user-to-LAN capabilities.

Using the analog modem network modules, the Cisco 2600, 3600 and 3700 provide the ideal functionality for the branch and enterprise offices.

The following diagram illustrates some typical applications for the analog modem network modules.

**Figure 1.** Typical Cisco 2600, 3600 or 3700 with Analog Modem Applications



### Mid-Density Analog RAS Server

A Cisco 2600 or 3725 combined with an 8- or 16- port analog modem network module provides the ideal mid-density remote access server (RAS).

Up to 16 analog phone lines (RJ-11) can be connected to the internal V.34 modems. A variety of LAN topologies, including Fast Ethernet, Ethernet, and Token Ring are supported.

Cisco IOS software provides for a wide range of protocols, such as TCP/IP, Internetwork Packet Exchange (IPX), NetBEUI, and AppleTalk. Cisco IOS software also provides for a wide range of software features, such as software compression, encryption, and firewall support.

### High-Density Analog RAS Server

In areas where Primary Rate Interface (PRI) or CT1 circuits are unavailable or not feasible, a Cisco 3640, 3660, or 3745 together with three 16-port analog modem network modules offers a cost-effective, one-chassis, 48-port solution for dial-in users.

The Cisco 3700 series performance allows for modem wire-rate access to the LAN and WAN, at the same time allowing for flexible “backhaul” options such as Frame Relay and ISDN. All these features are available in one chassis utilizing the Cisco stacking architecture; together with the Cisco Multilink Point-to-Point Protocol (MP), the port capacity of the Cisco 3600 or 3700 can be easily expanded with additional units and still look like one chassis.

### Multifunction Branch Office Router

By combining a T1 channel service unit/data service unit (CSU/DSU) WAN interface card, an analog modem network module, and possibly voice over IP, the Cisco 2600, 3600 and 3700 can provide a one-chassis solution to all branch office requirements.

### Features

The analog modem network modules, offers the most flexible, scalable, manageable, and high-performance basic telephone service dial access solution available in the market today.

- **8 or 16 internal analog modems per network module**—Internal modems provide simple setup of your remote access server. There is no separate external power, no mess of cables, and you can have everything in one chassis!

- **Support for speeds up to 33.6 kbps**—This feature allows users to achieve maximum data transfer rates available today for analog connections, equating to faster file transfers, speedier Web access, and quicker e-mail downloads.
- **Ease of configuration**—The Cisco 2610 supports the GUI-based configuration tool, the Fast Step utility. This utility is designed to simplify configuration of the Cisco 2610 with analog modems. Using a PC-based graphical interface, the Cisco 2610 can be up and running within 30 minutes from opening the box!
- **Centrally managed modem capabilities**—These analog modems can be managed via the same Simple Network Management Protocol (SNMP)-based tools used to manage the rest of the network (such as CiscoWorks), providing network managers with one solution at a central management point. Optional enhanced modem management Managed Modem Technology License (MRTL) capabilities allow for the gathering of modem statistics, real-time call-in-progress, monitoring modem activity log, modem hard/soft busy out, and the ability to accomplish modem firmware upgrades. All these features result in reduced downtime, lower support costs, and lower operating costs.
- **Cisco IOS dial access software**—Cisco IOS software provides a broad range of features for the dial-in user, including:
  - Autosensing IPX, TCP/IP, AppleTalk Remote Access (ARA), AppleTalk Control Protocol (ATCP)
  - Serial Line Internet Protocol (SLIP), PPP, and MP
  - Reverse Telnet support for LAN-based dial-out
  - Domain Name System (DNS) Domain Name Server support

These features enable a wide variety of dial-in clients to utilize the applications and facilities of the branch office network.

- **Virtual private network (VPN) support**—This feature allows for cost-effective connections for a geographically dispersed user base. It can reduce access cost support and allow users easier access to their home LAN, while maintaining a high degree of security.
- **Robust security features**—Utilizing TACACS+, Challenge Handshake Protocol/Password Authentication Protocol (CHAP/PAP), Data Encryption Standard (DES) encryption, and the built-in firewall capabilities of the Cisco IOS software allows secure access for remote users to sensitive company data.

## Specifications

- General
  - Support for up to 16 concurrent sessions per network module
  - Fast Step graphical user interface (GUI) configuration option for Cisco 2610
  - Comprehensive security options
  - GUI based management
  - Flexible LAN topologies
- Dial-related
  - Autosensing IPX, TCP/IP, ARA, ATCP
  - 2-wire Leased-Line support
  - SLIP, PPP, and MP

- Reverse Telnet support for LAN-based dial-out
- DNS Domain Name Server support
- Network management
  - Centralized management of multiple Cisco 2600, 3600 and 3700 with CiscoWorks
  - In-band and out-of-band management via TCP/IP and SNMP, including Management Information Base II (MIB II) and other extensions, over TCP/IP
  - TCP/IP addresses can be assigned via Dynamic Host Configuration Protocol (DHCP), per user, via an internal address pool, or selected remotely
  - Maintains a detailed activity log for accounting, billing, and troubleshooting
  - Advanced management using the (optional) MMTL
  - Ability to download image and configuration across routers
- Security
  - User name, password, and dial-back security
  - Multilevel administration password support
  - CHAP and PAP support
  - Centralized authentication via authentication, authorization, and accounting (AAA)
  - IP device and network filtering
  - AppleTalk zone and device filtering

### **Modem Specifications**

- Carrier protocols
  - Bell 103 at 300 bps
  - ITU V.21 at 300 bps
  - ITU V.22 at 1200 bps
  - Bell 212A at 1200 bps
  - ITU V.22bis at 2400 bps
  - ITU V.32 up to 9600 bps
  - ITU V.32bis up to 14,400 bps
  - V.34 up to 28,800 bps
  - Does not support V.90 or V.92
- Error-correcting link access protocols
  - V.42 Link Access Procedure for Modems (LAPM), MNP 2-4
- Compression protocols
  - V.42bis (includes MNP-5)

### **Country Availability**

Check the Cisco 2600/3600 home pages for updated country lists, at

<http://www.cisco.com/en/US/products/hw/routers/ps259/index.html>

<http://www.cisco.com/en/US/products/hw/routers/ps274/index.html>

### **Hardware Specifications**

