

Cisco 3600 Series ISDN PRI Connectivity Options (NM-1CT1, NM-1CT1-CSU, NM-2CT1, NM-2CT1-CSU, NM-1CE1B, NM-2CE1B, NM-1CE1U, NM-2CE1U, NM-1FE1CT1, NM-1FE1CT1-CSU, NM-1FE2CT1, NM-1FE2CT1-CSU, NM-1FE1CE1B, NM-1FE1CE1U, NM-1FE2CE1B, NM-1FE2CE1U)

THE ASTONISHING VERSATILITY OF THE CISCO 3600 ROUTER SERIES IS HIGHLIGHTED BY ITS BROAD SUPPORT OF INTEGRATED SERVICES DIGITAL NETWORK PRIMARY RATE INTERFACE (ISDN PRI) CONNECTIVITY.

The available Cisco 3600/2600 PRI network modules provide various port densities to meet customer requirements at various price points. The optional, integrated CSU lets customers consolidate customer premises equipment (CPE) to provide multifunction dial access server, router, and other capabilities within the Cisco 3600/2600 series in power branch office environments. The balanced and unbalanced serial connectivity options enable conformity to a customer's specific application.

Customers can choose among a number of network module options to precisely fit their requirements:

- NM-1CT1—One-port Channelized T1/ISDN PRI
- NM-1CT1-CSU—One-port Channelized T1/ISDN PRI with Channel Service Unit (CSU)
- NM-2CT1—Two-port Channelized T1/ISDN PRI
- NM-2CT1-CSU—Two-port Channelized T1/ISDN PRI with CSU
- NM-1CE1B—One-port Channelized E1/ISDN PRI, balanced
- NM-1CE1U—One-port Channelized E1/ISDN PRI, unbalanced
- NM-2CE1B—Two-port Channelized E1/ISDN PRI, balanced
- NM-2CE1U—Two-port Channelized E1/ISDN PRI, unbalanced
- NM-1FE1CT1—One-port 10/100BaseTX Ethernet with one-port T1 PRI/Channelized
- NM-1FE1CT1-CSU—One-port 10/100BaseTX Ethernet with one-port T1 PRI/Channelized with integrated CSU
- NM-1FE2CT1—One-port 10/100BaseTX Ethernet with two-port T1 PRI/Channelized
- NM-1FE2CT1-CSU—One-port 10/100BaseTX Ethernet with two-port T1 PRI/Channelized with integrated CSU

- NM-1FE1CE1B—One-port 10/100BaseTX Ethernet with one-port E1 PRI/Channelized Balanced mode (120 ohm)
- NM-1FE1CE1U—One-port 10/100BaseTX Ethernet with one-port E1 PRI/Channelized Unbalanced mode (75 ohm)
- NM-1FE2CE1B—One-port 10/100BaseTX Ethernet with two-port E1 PRI/Channelized Balanced mode (120 ohm)
- NM-1FE2CE1U—One-port 10/100BaseTX Ethernet with two-port E1 PRI/Channelized Unbalanced mode (75 ohm)

Note: The 2600 only supports PRI network modules without a LAN connection.

For midrange, high-density ISDN PRI applications, the Cisco 3600/2600 provides superior performance and port densities. For example, a fully configured Cisco 3640 can support 8 ISDN PRI ports in one chassis, which can be multiplexed to provide up to 192 T1 channels at 56/64 kbps T1, or 240 E1 channels at 56-64 kbps.

These PRI and FE/PRI network modules support the 3600 internal digital modems in the 3600 for PRI, CT1, and R2 connections. This allows up to 30 V.90 modems in a 3620 or 60 V.90 modems in a 3640.

Figure 1 High Density ISDN Applications

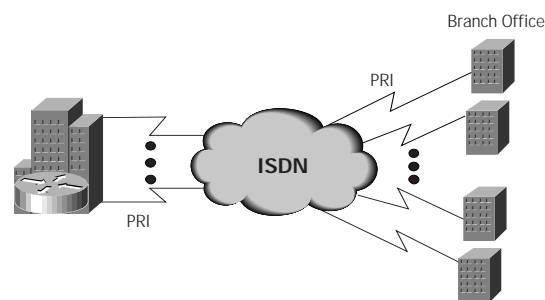


Table 1 Physical Limitations of ISDN PRI Modules per Chassis

| Type of Module | Number of Modules per Chassis | | |
|--------------------------------|-------------------------------|------------|------------|
| | Cisco 3640 | Cisco 3620 | Cisco 2600 |
| NM-1CT1, 2CT1 | Three | One | One |
| NM-1CT1-CSU, 2CT1-CSU | Three | One | One |
| NM-1CE1B, 2CE1-B | Three | One | One |
| NM-1CE1U, 2CE1-U | Three | One | One |
| NM-1FE1CT1, NM1FE2CT1 | Four | Two | N/A |
| NM-1FE1CT1-CSU, NM-1FE2CT1-CSU | Four | Two | N/A |
| NM-1FE1CE1B, NM-1FE2CE1B | Four | Two | N/A |
| NM-1FE1CE1U, NM-1FE2CE1U | Four | Two | N/A |

Table 2 Cisco IOS® release requirements for ISDN PRI modules

| Type of Module | Cisco IOS Release |
|--------------------------------|---------------------|
| NM-1CT1, 2CT1 | 11.1.(8)AA or later |
| NM-1CT1-CSU, 2CT1-CSU | 11.1.(8)AA or later |
| NM-1CE1B, 2CE1-B | 11.1.(8)AA or later |
| NM-1CE1U, 2CE1-U | 11.1.(8)AA or later |
| NM-1FE1CT1, NM1FE2CT1 | 11.3(4)T or later |
| NM-1FE1CT1-CSU, NM-1FE2CT1-CSU | 11.3(4)T or later |
| NM-1FE1CE1B, NM-1FE2CE1B | 11.3(4)T or later |
| NM-1FE1CE1U, NM-1FE2CE1U | 11.3(4)T or later |

Table 3 Technical Specifications for NM-1CT1, 2CT1, NM-1CT1-CSU, 2CT1-CSU, NM-1CE1B, 2CE1-B, NM-1CE1U, 2CE1-U, NM-1FE1CT1, NM1FE2CT1, NM-1FE1CT1-CSU, NM-1FE2CT1-CSU, NM-1FE1CE1B, NM-1FE2CE1B, NM-1FE1CE1U, NM-1FE2CE1U

| Technical Specifications | |
|--------------------------|---|
| Dimensions (H x W x D) | 1.55 x 7.10 x 7.2 |
| Weight | 2 lbs max |
| Homologation | |
| Environmental Conditions | Op. temp. 32–104 F (0–40 C) Non-op. temp -13–158 F (-25–70 C) |
| Relative Humidity | 5–95% |
| Safety | |
| Protocols Supported | Full Cisco IOS support by release 11.2 |
| EMI | Class B EMI/Class B EMI |

The following cables are available:

| Cable Type | Product Number | Length | Male/Female | For Use With |
|--|----------------|--------|-------------|--------------|
| MIP-CT1 DSX1 to DB15 through cable | CAB-7KCT1DB15 | | | CT1/CE1 PRI |
| MIP-CT1 DSX1 to DB15 null cable | CAB-7KCT1NULL | | | CT1 / PRI |
| E1 ISDN PRI | CAB-E1-PRI | 10 ft. | | CE1 / PRI |
| E1 Twinax 120 ohm balanced | CAB-E1-TWINAX | 3m | | CE1 / PRI |
| E1 DB15 120 ohm balanced | CAB—E1-DB15 | 5m | | CE1 / PRI |
| FSIP and MIP-CE1 BNC 75 ohm unbalanced | CAB-E1-BNC | 5m | | CE1 / PRI |

LEDs—Network module status indicator, status LEDs, including carrier detect, local/remote alarm, and loopback.

Network interfaces—All supported by Cisco 3600/2600 LAN Routers.



Corporate Headquarters

Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
<http://www.cisco.com>
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 526-4100

European Headquarters

Cisco Systems Europe s.a.r.l.
Parc Evolic, Batiment L1/L2
16 Avenue du Quebec
Villebon, BP 706
91961 Courtaboeuf Cedex
France
<http://www-europe.cisco.com>
Tel: 33 1 69 18 61 00
Fax: 33 1 69 28 83 26

**Americas
Headquarters**

Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
<http://www.cisco.com>
Tel: 408 526-7660
Fax: 408 527-0883

Asia Headquarters

Nihon Cisco Systems K.K.
Fuji Building, 9th Floor
3-2-3 Marunouchi
Chiyoda-ku, Tokyo 100
Japan
<http://www.cisco.com>
Tel: 81 3 5219 6250
Fax: 81 3 5219 6001

Cisco Systems has more than 200 offices in the following countries. Addresses, phone numbers, and fax numbers are listed on the

Cisco Connection Online Web site at <http://www.cisco.com/offices>.

Argentina • Australia • Austria • Belgium • Brazil • Canada • Chile • China • Colombia • Costa Rica • Croatia • Czech Republic • Denmark • Dubai, UAE
Finland • France • Germany • Greece • Hong Kong • Hungary • India • Indonesia • Ireland • Israel • Italy • Japan • Korea • Luxembourg • Malaysia
Mexico • The Netherlands • New Zealand • Norway • Peru • Philippines • Poland • Portugal • Puerto Rico • Romania • Russia • Saudi Arabia • Singapore
Slovakia • Slovenia • South Africa • Spain • Sweden • Switzerland • Taiwan • Thailand • Turkey • Ukraine • United Kingdom • United States • Venezuela