

Cisco 4400 Series Integrated Services Router 1-, 2-, and 4-Port Serial Network Interface Modules

Cisco® 4400 Series Integrated Services Router Network Interface Modules (ISR NIMs) provide highly reliable synchronous serial WAN connections for remote sites. These interfaces use well-known point-to-point WAN protocols such as High-Level Data Link Control (HDLC) and Point-to-Point Protocol (PPP) as well as Frame Relay, offering cost-effective virtualized WAN connections in both point-to-point and point-to-multipoint designs. You can mix and match NIMs to tailor cost-effective solutions for common networking solutions for low- and high-density WAN aggregation.

Cisco offers three new synchronous serial NIMs:

- Cisco 1-Port Serial WAN Network Interface Card (NIM-1T)
- Cisco 2-Port Serial WAN Network Interface Card (NIM-2T)
- Cisco 4-Port Serial WAN Network Interface Card (NIM-4T)

WAN Access and Aggregation

Figure 1 shows two typical serial WAN connection scenarios between two locations. With support for serial speeds up to 8 Mbps per port, the 2- and 4-port serial NIMs are ideal for low- and medium-density WAN aggregation (Figure 2). Bisynchronous and X.25 standards are not supported on these modules.

Figure 1. WAN Connections (Sync)

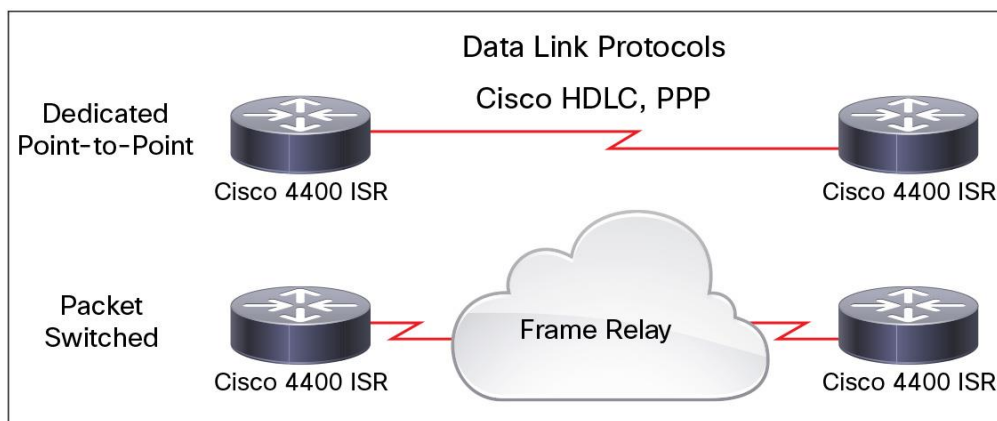
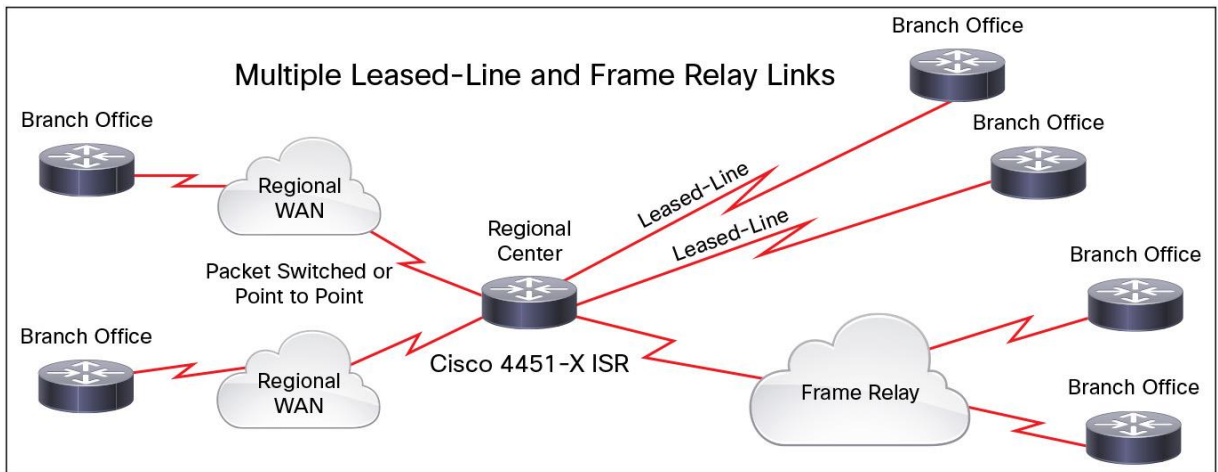


Figure 2. WAN Concentration



Ordering Information

Table 1 gives ordering information, and Table 2 lists supported platforms and quantities.

Table 1. Cisco 1- and 2-Port Serial NIMs

Part Number	Description
NIM-1T	1-Port Serial WAN Interface Card
NIM-2T	2-Port Serial WAN Interface Card
NIM-4T	4-Port Serial WAN Interface Card

The Cisco 4400 Series ISRs require Cisco IOS® Software Release XE3.12 or later and the IP Base feature set as a minimum.

Table 2. Supported Platforms and Quantities

Platforms	NIM-1T	NIM-2T	NIM-4T
Cisco 4451-X	3	3	3

Connectors and Cabling

The NIM-1T, NIM-2T, and NIM-4T use Cisco Smart Serial connectors. These ports use the same connectors and cabling as the HWIC-4A/S and HWIC-2A/S modules for the Cisco Integrated Services Routers Generation 2 (ISR G2) routers. The supported cables are noted in Table 3.

Table 3. Smart Serial Cabling for NIM-1T, NIM-2T, and NIM-4T

Product Number	Cable Type	Length	Connector Type
CAB-SS-V35MT	V.35 DTE	10 ft (3m)	Male
CAB-SS-V35FC	V.35 DCE	10 ft (3m)	Female
CAB-SS-232MT	EIA/TIA-232 DTE	10 ft (3m)	Male
CAB-SS-232FC	EIA/TIA-232 DCE	10 ft (3m)	Female
CAB-SS-449MT	EIA/TIA-449 DTE	10 ft (3m)	Male
CAB-SS-449FC	EIA/TIA-449 DCE	10 ft (3m)	Female

Product Number	Cable Type	Length	Connector Type
CAB-SS-X21MT	X.21 DTE	10 ft (3m)	Male
CAB-SS-X21FC	X.21 DCE	10 ft (3m)	Female
CAB-SS-530MT	EIA/TIA-530 DTE	10 ft (3m)	Male
CAB-SS-530AMT	EIA/TIA-530A DTE	10 ft (3m)	Male

Specifications

NIM specifications are listed in Tables 4 and 5.

Table 4. NIM Signaling and Telecom Specifications

Specification	NIM-1T	NIM-2T	NIM-4T
Synchronous support	Yes	Yes	Yes
Synchronous maximum speed (per port)	8 Mbps	8 Mbps	8 Mbps
Serial protocols	EIA-232, EIA-449, EIA-530, EIA-530A, V.35, and X.21	EIA-232, EIA-449, EIA-530, EIA-530A, V.35, and X.21	EIA-232, EIA-449, EIA-530, EIA-530A, V.35, and X.21
Telecomm post, telephone, and telegraph (PTT)	<ul style="list-style-type: none"> TBR1 and 2 JATE digital 	<ul style="list-style-type: none"> TBR1 and 2 JATE digital 	<ul style="list-style-type: none"> TBR1 and 2 JATE digital

Table 5. Homologation Specifications for NIM-1T, NIM-2T, and NIM-4T

Specification	Data
Safety	<ul style="list-style-type: none"> UL 60950-1 (United States) CAN/CSA 22.2, 60950-1 (Canada) AS/NZS 60950-1 (Australia/New Zealand) EN60950-1 (Europe) IEC 60950-1 (International)
Immunity	<ul style="list-style-type: none"> EN300386 CISPR24 EN55024 EN50082-1 61000-4-2/3/4/5/6/8/11
Emissions	<ul style="list-style-type: none"> FCC Part 15 Class A ICES-003 Class A EN55022 Class A CISPR22 Class A AS/NZSCISPR22 Class A VCCI Class A EN 300386 EN61000-3-2/3 CNS13438
Physical specifications	<ul style="list-style-type: none"> Singlewide NI, no slot restrictions Dimensions (H x W x D) 1.25 x 3.50 x 7.24 in. (3.18 x 8.89 x 18.39 cm)
Environmental specifications	<ul style="list-style-type: none"> Operating temperature: 32 to 104°F (0 to 40°C) Storage temperature: -4 to 149°F (-20 to 65°C) Relative humidity: 10 to 90%, noncondensing

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