Cisco C-NIM-2T Network Interface Module

Datasheet

Product Overview

- The Cisco C-NIM-2T is a two-port 100-Mbps/1-Gbps Ethernet WAN Network Interface Module for Catalyst 8000 Edge Platforms.
- It combines two RJ-45 copper line ports and two SFP fiber ports in two dual-combo port groups for routed WAN connectivity.
- The RJ-45 interfaces support 100BASE-TX and 1000BASE-T, while the SFP interfaces support 100BASE-FX and 1000BASE-X.
- One port from each group can be used simultaneously, allowing the deployment to select copper or fiber media for each WAN path.
- With 256-bit WAN MACsec and Cisco IOS XE 17.6.1 support, the module adds hardware-based link protection to compatible Catalyst platforms.
- It is supported on Catalyst 8200 Series, 8200L, and all 8300 Series platforms, making it suitable for secure branch and enterprise WAN designs.

Product Highlights

- **Dual-Mode WAN Connectivity:** Two port groups combine RJ-45 and SFP interfaces so each WAN path can use the appropriate copper or fiber medium.
- **100M/1G Interface Support:** RJ-45 ports support 100BASE-TX and 1000BASE-T, while SFP ports support 100BASE-FX and 1000BASE-X.
- **256-bit WAN MACsec:** Hardware-based 256-bit WAN MACsec provides IEEE 802.1AE link protection for supported routed WAN deployments.
- **Catalyst 8000 Compatibility:** The module supports Catalyst 8200, 8200L, and all 8300 Series platforms and requires Cisco IOS XE 17.6.1.

Detailed Features



C-NIM-2T Network Interface Module

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Component	Specification
Module Type	Cisco Ethernet Layer 3 WAN NIM
WAN Ports	2 dual-combo port groups; 2 RJ-45 and 2 SFP interfaces
Supported Speeds	100BASE-TX, 1000BASE-T, 100BASE-FX, and 1000BASE-X
Security and Software	256-bit WAN MACsec; Cisco IOS XE 17.6.1
Physical Specification	NIM form factor; 32 × 89 × 184 mm; 360 grams

Flexible Copper or Fiber WAN Access

The C-NIM-2T provides two RJ-45 copper line ports and two SFP fiber ports arranged as two dual-combo groups. This lets planners choose 100/1000BASE-T copper or 100/1000BASE-X fiber media according to the WAN handoff and site cabling.

Independent Port-Group Operation

Each port group contains one RJ-45 port and one SFP port. One port from each group can be configured for simultaneous use, providing two active WAN paths while retaining media flexibility at each connection point.

Broad Ethernet Speed Coverage

The copper interfaces support 100BASE-TX and 1000BASE-T, while the optical interfaces support 100BASE-FX and 1000BASE-X. This combination covers legacy Fast Ethernet handoffs as well as Gigabit Ethernet services.

Layer 3 WAN Module Design

The C-NIM-2T is an Ethernet Layer 3 WAN NIM for Catalyst 8000 Edge Platforms. Traffic entering the module is routed by the host platform, while local Layer 2 switching between module ports is not supported.

Hardware-Based WAN MACsec

The module supports 256-bit WAN MACsec based on IEEE 802.1AE. This provides link-layer protection for supported routed WAN connections without changing the media choice between copper and fiber.

Catalyst 8000 Platform Coverage

Cisco documents support for Catalyst 8200 Series, 8200L, and all 8300 Series platforms. The module is therefore suited to branch routers that need additional routed WAN interfaces.

Online Insertion Support

The C-NIM-2T supports online insertion. When installed directly in a NIM slot, Cisco documents online insertion but not online removal; removal requires the host router to be powered down.

Compact NIM Form Factor

The module uses a NIM form factor and measures 1.25 × 3.50 × 7.24 inches (32 × 89 × 184 mm), with a documented weight of 360 grams for space-constrained branch deployments.

Technical Specifications

Product Specifications

Feature	Value
User SKU	C-NIM-2T=
Product Model	C-NIM-2T
Product Type	Cisco Ethernet Layer 3 WAN Network Interface Module
Form Factor	NIM
Supported Platforms	Cisco Catalyst 8200 Series, 8200L, and all 8300 Series platforms
Required Cisco IOS XE Version	17.6.1
Port Architecture	2 dual-combo port groups; each group contains 1 RJ-45 and 1 SFP port
Simultaneous Use	One port from each group can be used simultaneously
RJ-45 Copper Ports	2
RJ-45 Interface Speeds	100BASE-TX and 1000BASE-T
SFP Fiber Ports	2
SFP Interface Speeds	100BASE-FX and 1000BASE-X

Feature	Value
WAN Connection	100/1000 BASE-T and 1000BASE-X SFP
MACsec Support	256-bit WAN MACsec; IEEE 802.1AE
Power over Ethernet	No
Layer 2 Switching	Not supported between local module ports or other ports within the router system
Traffic Processing	Host router routes all traffic entering the module
Online Insertion and Removal	Online insertion supported; online removal is not supported when installed directly in a NIM slot
Module Status LED	EN LED: off for no power, steady green for normal operation, green blinking during boot or ROM monitor, steady amber for failure
RJ-45 Port LEDs	Link LED: off for no link; steady green for link up. Activity LED: off for no data; green blinking for transmit/receive
SFP Port LED	Link LED: off when not present, steady green when link is up, steady amber when the SFP is unsupported or faulty
Supported SFP Transceivers	SFP-GE-S; SFP-GE-L; GLC-LH-SMD; GLC-ZX-SMD; GLC-SX-MMD; GLC-EX-SMD; GLC-SX-MM; GLC-LH-SM; GLC-ZX-SM; GLC-BX-D; GLC-BX-U; GLC-BX80-D-I; GLC-BX80-U-I; GLC-BX40-D-I; GLC-BX40-U-I; GLC-BX40-DA-I; GLC-LX-SM-RGD; GLC-FE-100FX; GLC-FE-100LX; GLC-FE-100EX
Backplane Connection	No 10G backplane connection to the forwarding engine
Dimensions (H × W × D)	1.25 × 3.50 × 7.24 in. (32 × 89 × 184 mm)
Weight	360 grams
Operating Temperature	32° to 104°F (0° to 40°C)
Storage Temperature	-38° to 150°F (-40° to 70°C)
Operating Humidity	5% to 85%
Relative Humidity	5% to 95%

Product Comparison

Feature	Cisco C-NIM-2T	Cisco C-NIM-1X	Cisco C-NIM-1M	Cisco C-SM-NIM-ADPT
Form factor	NIM	NIM	NIM	SM-X
Supported platforms	8300 and 8200 Series, 8200L	8300 Series	8300 and 8200 Series, 8200L	8300 Series

Feature	Cisco C-NIM-2T	Cisco C-NIM-1X	Cisco C-NIM-1M	Cisco C-SM-NIM-ADPT
Required Cisco IOS XE version	17.6.1	17.3.2	17.6.1	17.3.2
WAN connection	100/1000BASE-T; 1000BASE-X SFP	1000BASE-X SFP; 10-Gbps SFP+	100/1000/2500M BASE-T	Not a WAN interface
Connection media	2 RJ-45/SFP groups; one port from each group can be used simultaneously	1 × SFP/SFP+	1 × RJ-45	Carrier for up to 2 NIMs
Port count	2 dual-combo groups	1	1	Up to 2 NIMs
Power over Ethernet	No	No	90W IEEE 802.3 af/at/bt	No
MACsec support	256-bit	256-bit	No	Depends on installed NIM
Online insertion/ removal	Online insertion only	Online insertion only	Online insertion only	Full online insertion and removal
10G backplane connection	No	Yes	No	Yes
Dimensions	32 × 89 × 184 mm	32 × 89 × 184 mm	32 × 89 × 184 mm	40 × 206 × 207 mm
Weight	360 grams	240 grams	350 grams	500 grams
Best-fit role	Flexible 100M/1G routed WAN over copper or fiber	1G/10G high-speed routed WAN	1G/2.5G routed WAN with UPOE	Adds NIM capacity through an SM-X slot

Accessories

Category	Accessories
Included Accessories	No separate included accessories listed in the official Cisco documentation
Optional Accessories	Cisco supported SFP transceivers: SFP-GE-S; SFP-GE-L; GLC-LH-SMD; GLC-ZX-SMD; GLC-SX-MMD; GLC-EX-SMD; GLC-SX-MM; GLC-LH-SM; GLC-ZX-SM; GLC-BX-D; GLC-BX-U; GLC-BX80-D-I; GLC-BX80-U-I; GLC-BX40-D-I; GLC-BX40-U-I; GLC-BX40-DA-I; GLC-LX-SM-RGD; GLC-FE-100FX; GLC-FE-100LX; GLC-FE-100EX

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