Cisco C-NIM-8T

Datasheet

Product Overview

- The Cisco C-NIM-8T is an eight-port 10M/100M/1G LAN/WAN Network Interface Module for Catalyst 8000 Edge Platforms.
- It provides eight switched RJ-45 copper ports with line-rate Layer 2 forwarding for branch LAN expansion, access connectivity, and integrated LAN/WAN deployments.
- All ports support 10BASE-T, 100BASE-TX, and 1000BASE-T Ethernet, while the two highest-numbered ports can be configured as native Layer 3 ports.
- The module combines switching and routing in the host platform, with Layer 3 feature parity to the embedded Ethernet WAN ports of supported Catalyst platforms.
- IEEE 802.1AE MACsec, 802.1X, VLAN, QoS, IGMP snooping, SPAN, Auto-MDIX, and RMON support provide security and operational flexibility without a separate access switch.
- The C-NIM-8T is supported on Catalyst 8200 and 8300 Series platforms, uses an embedded NIM slot, and requires Cisco IOS XE 17.11.1 or later software support.

Product Highlights

- **Eight-Port RJ-45 Switching:** Eight 10/100/1000BASE-T RJ-45 ports provide line-rate Layer 2 switching for branch users, phones, access points, and other Ethernet devices.
- **Configurable LAN/WAN Roles:** The two highest-numbered ports can operate as native Layer 3 ports with feature parity to the host routers embedded Ethernet WAN ports.
- **MACsec and Access Security:** IEEE 802.1AE MACsec, IEEE 802.1X, secure port filtering, BPDU Guard, PortFast, and storm control help protect branch access links.
- **Integrated Branch Management:** Cisco IOS CLI, SNMP, CDP, VTP, RMON, Cisco Catalyst SD-WAN Manager, eight QoS queues per port, and 8 KB jumbo frames support daily operations.

Detailed Features



C-NIM-8T

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Component	Specification
Module Type	Cisco LAN/WAN Network Interface Module
Port Density	8 × RJ-45 switched copper ports
Ethernet Speeds	10BASE-T, 100BASE-TX, and 1000BASE-T
Layer 3 Capability	Two highest-numbered ports configurable as native Layer 3 ports
Security and Management	IEEE 802.1AE MACsec; IOS XE 17.11.1; Cisco Catalyst SD-WAN Manager support

Integrated LAN/WAN Switching

The C-NIM-8T combines an eight-port Layer 2 switch and configurable Layer 3 WAN interfaces in one NIM. This reduces the number of separate devices required at a branch and keeps LAN and WAN administration within the Catalyst 8000 host.

Eight Copper Access Ports

Eight RJ-45 ports support 10BASE-T, 100BASE-TX, and 1000BASE-T connections. Line-rate Layer 2 forwarding, autonegotiation, and Auto-MDIX simplify connectivity for users, phones, access points, and other branch Ethernet devices.

Flexible Layer 3 Port Roles

The two highest-numbered ports can be configured as native Layer 3 ports. In that mode, the ports provide feature parity with the embedded Ethernet WAN ports of supported Catalyst 8200, 8300, and 8200L platforms.

MACsec for LAN and WAN

The module is 128-/256-bit MACsec capable. LAN MACsec switch-to-switch is supported on all ports in Layer 2 mode, while 256-bit WAN MACsec with Tag-in-Clear is supported on ports operating in Layer 3 mode.

Broad Layer 2 Feature Set

The module supports 802.1Q trunking, 802.1D Spanning Tree, VLANs, voice VLANs, IGMP snooping, SPAN, PVST, VTP, private VLAN edge, protected ports, and secure port filtering for common branch switching designs.

QoS and Traffic Control

Each port provides eight QoS queues with IEEE 802.1p support. Per-port storm control, port-based priority, SDWRR and fixed scheduling, jumbo frames up to 8 KB, and per-port power monitoring and policing support predictable traffic handling.

Catalyst 8000 and SD-WAN Integration

The C-NIM-8T is supported on Catalyst 8200 and 8300 Series platforms, with C8200L support when using a 1G uplink. Cisco documents IOS XE 17.11.1 support and Cisco Catalyst SD-WAN Manager support from vManage 20.11.

Predictable Installation Model

The module is supported only in an embedded NIM slot, not in the C-SM-NIM-ADPT carrier. One LAN/WAN module is supported per chassis; online insertion is supported, while removal requires the host router to be powered off.

Technical Specifications

Product Specifications

Feature	Value
User SKU	C-NIM-8T=
Product Model	C-NIM-8T
Product Type	Cisco LAN/WAN Network Interface Module
Form Factor	C-NIM
Port Count	8
Port Type	RJ-45 copper
Ethernet Standards	10BASE-T, 100BASE-TX, and 1000BASE-T
Supported Ethernet Speeds	10M/100M/1G
Layer 2 Switching	Supported on all eight RJ-45 ports with line-rate forwarding
Native Layer 3 Ports	The two highest-numbered ports can be configured for native Layer 3 operation
Layer 3 Feature Parity	Feature parity with embedded Ethernet WAN ports of supported Catalyst 8200, 8300, and 8200L platforms

Feature	Value
MACsec Capability	128-/256-bit MACsec capable; LAN MACsec switch-to-switch on all Layer 2 ports; 256-bit WAN MACsec with Tag-in-Clear on Layer 3 ports
Power over Ethernet	No
SFP/SFP+ Support	No; all eight ports are RJ-45
Backplane Connection	10G backplane connection
Maximum Modules per Chassis	1 LAN/WAN module
Supported Installation Slot	Embedded NIM slot only
SM-NIM Carrier Adapter Support	Not supported in the SM-NIM Carrier Adapter or C-SM-NIM-ADPT
Supported Host Platforms	C8300-2N2S-4T2X; C8300-2N2S-6T; C8300-1N1S-4T2X; C8300-1N1S-6T; C8200-1N-4T; C8200L-1N-4T with 1G uplink
Minimum Cisco IOS XE Release	IOS XE 17.11.1 Universal Image
Installation Software Requirement	Cisco IOS XE Dublin 17.11.1a or later
Cisco Catalyst SD-WAN Manager	vManage 20.11 or later
Flex-Switch Mode	A device reload is required after installation to operate in Flex-Switch mode
Online Insertion and Removal	Online insertion supported; online removal requires the router to be powered off
Management	SNMP; Cisco IOS Software CLI; Cisco Discovery Protocol Versions 1 and 2; VTP; Cisco Catalyst SD-WAN Manager
Layer 2 Features	IEEE 802.1Q trunking; IEEE 802.1D Spanning Tree; static and dynamic MAC learning; IEEE 802.1X; guest VLAN; IGMP snooping; auxiliary VLANs; voice VLANs; SPAN; VTP; PVST; Auto-MDIX; RMON
VLAN Capacity	Up to 1024 VLANs and 4095 VLAN IDs
QoS	Eight QoS queues per port; IEEE 802.1p; SDWRR and fixed scheduling; port-based priority
Security Features	IEEE 802.1AE MACsec; IEEE 802.1X; secure port filtering; dynamic secure port; up to 100 secure MAC addresses; BPDU Guard; PortFast; private VLAN edge; protected port; per-port storm control
Jumbo Frames	8 KB
LED Indicators	EN: off for no power, steady green for normal operation, green blinking during boot or ROM Monitor, steady amber for module failure; RJ-45 Link: off for no link, steady green for link up; Activity: off for no data, green blinking for TX/RX
Dimensions (H × W × D)	1.25 × 3.50 × 7.24 in. (32 × 89 × 184 mm)

Feature	Value
Weight	8.1 oz (230 g)
Operating Temperature at Sea Level	23° to 131°F (−5° to 55°C)
Storage Temperature	−38° to 150°F (−40° to 70°C)
Relative Humidity	5% to 95%
Operating Humidity	5% to 85%

Product Comparison

Feature	Cisco C-NIM-8T	Cisco C-NIM-4X	Cisco C-NIM-8M
Form factor	Network Interface Module (NIM)	Network Interface Module (NIM)	Network Interface Module (NIM)
Port count	8	4	8
Connection media	8 × RJ-45	4 × SFP/SFP+	8 × RJ-45
Supported speeds	10M/100M/1G	1G/10G	100M/1G/2.5G
Supported platforms	Catalyst 8200 and 8300 Series and 8200L	Catalyst 8300 Series	Catalyst 8200 and 8300 Series and 8200L
Minimum Cisco IOS release	17.11.1	17.11.1	17.12.2
PoE	No	No	Yes; 802.3af, 802.3at, and 802.3bt compliant
MACsec	Yes; IEEE 802.1AE	Yes; IEEE 802.1AE	Yes; IEEE 802.1AE
Native Layer 3 ports	Last two ports configurable	Last two ports configurable	Last two ports configurable
10G backplane connection	Yes	Yes	Yes
Online insertion and removal	Yes	Yes	Yes
C-SM-NIM-ADPT support	No	No	No
Dimensions	32 × 89 × 184 mm	32 × 89 × 184 mm	32 × 89 × 184 mm
Weight	230 g	195 g	Approx. 300 g

Feature	Cisco C-NIM-8T	Cisco C-NIM-4X	Cisco C-NIM-8M
Best-fit role	Branch LAN expansion with optional routed WAN ports	High-speed SFP/SFP+ LAN/ WAN aggregation	Multigigabit branch access with PoE

Accessories

Category	Accessories
Included Accessories	No separate included accessories listed in the official Cisco documentation
Optional Accessories	No separate optional accessories listed in the official C-NIM-8T documentation

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