Cisco N9K-X9716D-GX

DATASHEET

16-Port 400G QSFP-DD Line Card for Nexus 9500

PRODUCT OVERVIEW

The **Cisco N9K-X9716D-GX** is a high-density, ultra-high-speed 16-port 400G QSFP-DD line card designed for the **Cisco Nexus 9500 Series** modular switches (Nexus 9504, 9508, and 9516). Built on **Cisco Cloud Scale ASIC technology**, it enables high-capacity 400G spine and leaf architecture for cloud environments and enterprise data centers.

HARDWARE & PERFORMANCE SPECIFICATIONS

SPECIFICATION	DETAILS / VALUE
Architecture	Cisco Cloud Scale Technology (ASIC)
Supported Chassis	Cisco Nexus 9504, Nexus 9508, Nexus 9516
Port Configuration	16 x 400G QSFP-DD Ports
Bandwidth Capacity	6.4 Tbps Line-Rate Performance per Slot
Forwarding Rate	Up to 2.5+ Billion Packets Per Second (Bpps)
Buffering	Smart On-Chip Shared Buffer

Port Speeds & Breakouts

- **400G Native:** 16 x 400G QSFP-DD
- **200G Breakout:** 2x 200G per QSFP-DD port
- **100G Support:** 4x 100G breakout / Native 100G QSFP28
- **40G / 10G Mode:** Backward compatible via breakout

Key Features & Environment

- **Power Efficiency:** Optimized power-per-bit consumption
- **Airflow:** Front-to-back chassis airflow integration
- **Telemetry:** Hardware-based line-rate streaming telemetry
- **Buffers & Queuing:** Advanced VOQ for congestion control

SOFTWARE & PROTOCOL SUPPORT

Operating Modes	Cisco NX-OS Software / Cisco ACI (Fabric Mode)

Routing & Encapsulation	VXLAN EVPN, SRv6, BGP, OSPF, IS-IS, RoCEv2 (RDMA)
Network Automation	Nexus Dashboard, Telemetry, Ansible, Terraform, Python