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C9600-LC-48YL DataSheet

Cisco C9600-LC-48YL 48-port 50G/25G/10G/1G SFP56 line card for Catalyst 9600 core switch. High-density, hot-swappable, supports C9600X-SUP-2 & C9600-SUP-1.

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C9600-LC-48YL Description

Cisco Catalyst C9600-LC-48YL, also called the Catalyst 9600 48-port SFP56 line card, delivers ultra-high-density fiber aggregation for enterprise core, distribution, and large campus networks. Compatible with both C9600-SUP-1 and C9600X-SUP-2 supervisor engines, it ensures flexible scaling, long-term investment protection, and seamless upgrades in the C9606R chassis. The module features non-blocking architecture, advanced security with MACsec support, robust automation, and best-in-class reliability for next-generation campus and data center networking.

Product Highlights

Ports

Slot Bandwidth(C9600X-SUP-2)

Slot Bandwidth(C9600-SUP-1)

Quick Specs

Ports	48 x 50G/25G/10G/1G SFP56
Supervisor Compatibility	C9600-SUP-1 / C9600X-SUP-2
Slot Bandwidth	4.8 Tbps (SUP-2) / 2.4 Tbps (SUP-1)
Max Power Consumption	300W (SUP-2) / 230W (SUP-1)
MTBF	640,750 hours
Dimensions	1.7 × 15.0 × 13.41 in (4.32 × 38.1 × 34.06 cm)

Key Features

48 High-Speed SFP56 Ports

Provides 48 non-blocking SFP56 ports supporting 50G, 25G, 10G, and 1G speeds, ideal for high-density campus core, data center aggregation, or ISP deployments demanding maximum flexibility and bandwidth.

Dual Supervisor Compatibility & Seamless Scalability

Fully compatible with both C9600X-SUP-2 and C9600-SUP-1 supervisor engines, enabling easy future upgrades and mixed deployments. Supports slot bandwidth up to 4.8 Tbps (SUP-2) for seamless expansion.

Future-Proof Non-blocking Architecture

Ensures line-rate performance on all ports, eliminating bottlenecks for evolving cloud, video, and critical enterprise workloads. Ready for large-scale Layer 2/3 campus and segmented network environments.

Enterprise-Grade Security & Policy Enforcement

Features hardware-based MACsec encryption (UADP ASIC), extensive ACL resources, and

Cisco Trust Anchor for high-assurance, end-to-end secure deployments in regulated or sensitive environments.

Operational Excellence & Automation Ready

Supports hot swapping, tool-free installation/removal, and advanced programmability with NETCONF, RESTCONF, and YANG. Flexible SDM templates and container-ready for rapid automation and easy network lifecycle management.

High Reliability, Energy Efficient, and Global Compliance

MTBF up to 640,750 hours, typical energy efficiency of 94%, and full compliance with international safety and environmental standards (CE, UL, FCC, RoHS, WEEE, VCCI, CCC, BSMI). Built for demanding 24/7 enterprise and carrier operations.
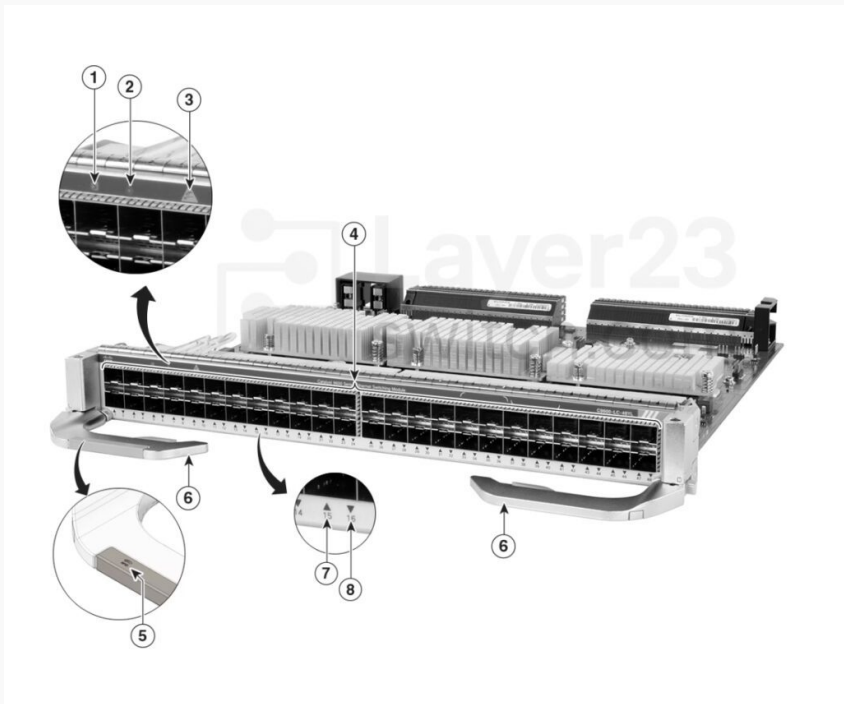
Product Comparison

Parameter	C9600-LC-48YL	C9600-LC-40YL4CD	C9600-LC-24C
Port Types	48x SFP56 (50/25/10/1G)	40x SFP56 (50/25/10G), 2x QSFP56, 2x QSFP-DD	24x QSFP28 (100/40G)
Supervisor Support	SUP-1, SUP-2	SUP-1, SUP-2	SUP-1, SUP-2
Max 50G Ports	48	40	N/A
Max 25G/10G Ports	48	40	N/A
Max 100G Ports	N/A	2	24
Slot Bandwidth	4.8 Tbps (SUP-2)	4.8 Tbps (SUP-2)	4.8 Tbps (SUP-2)
Power Consumption	300W (SUP-2)	420W (SUP-2)	280W (SUP-2)
Dimensions (H×W×D)	1.7×15.0×13.41 in	1.7×15.0×13.41 in	1.7×15.0×13.41 in
MTBF	640,750 hrs	580,420 hrs	710,750 hrs
MACsec Support	UADP ASIC only	Yes	Yes

Hot Swappable	Yes	Yes	Yes

Front Panel Components

1	Status LED	5	RFID embedded on the left ejector lever
2	Locate (Blue beacon) LED	6	Ejector levers
3	Sharp-edge hazard icon	7	Port Link LED for the port in the top row
4	50G/25G/10G/1G SFP56/SFP28/SFP+ ports	8	Port Link LED for the port in the bottom row

Specification

Parameter	Value	Parameter	Value
Product ID	C9600-LC-48YL	**Line Card Type**	48-port 50G/25G/10G/1G SFP56

Parameter	Value	Parameter	Value
Compatible Chassis	C9606R	Supervisor Compatibility	C9600X-SUP-2, C9600-SUP-1
Fan Tray Compatibility	C9606-FAN	Power Supply Support	C9600-PWR-3KWAC, C9600-PWR-2KWAC, C9600-PWR-2KWDC
Port Types	48x SFP56 (supporting 50G/25G/10G/1G)	Pluggable Optics	SFP56, SFP28, SFP+ 1G support (SUP-2): SFP-1G-SX/LH only
Non-blocking Architecture	Yes	Slot Bandwidth	4.8 Tbps (SUP-2), 2.4 Tbps (SUP-1)
Maximum Port Density per Chassis	192 (4 cards in C9606R)	Hot Swappable	Yes
MACsec Support	Supported (UADP ASIC only, not on SUP-2)	Max Power Consumption	300W (SUP-2), 230W (SUP-1)
Dimensions (H × W × D)	1.7 × 15.0 × 13.41 in (4.32 × 38.1 × 34.06 cm)	Weight	3.55 kg (7.83 lbs)
MTBF	640,750 hours	Operating Temperature	-5°C to 45°C (up to 6,000 ft)
Storage Temperature	-40°C to 75°C	Relative Humidity	10% to 95%, non-condensing
Altitude	-60 to 3,000 m (-197 to 9,843 ft)	Energy Efficiency	94% (typical)
Green Compliance	RoHS, WEEE, recyclable packaging	Regulatory Compliance	IEEE 802.3z, 802.3x, 802.3ab, CE, UL, FCC, VCCI, CCC, BSMI
Certifications	CE, UL, FCC, RoHS	Mixed Line Card Support	Yes, in any of 4 slots
Installation	Hot swappable, tool-free	MTBF	640,750 hours

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