C9600X-LC-56YL4C DataSheet

Cisco Catalyst C9600X-LC-56YL4C line card features 56x 50G/25G/10G SFP56 and 4x 100G QSFP28 uplinks for Catalyst 9600 modular switches. High-density, scalable, 50G-ready, designed for core and distribution upgrades.

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C9600X-LC-56YL4C Description

C9600X-LC-56YL4C line card, also referred to as Catalyst 9600X 56-port 50G module, is designed for the Cisco Catalyst 9600 Series modular switches, providing ultra-high-density aggregation for next-generation campus core and large-scale distribution deployments. It features 56 SFP56 ports supporting 50G/25G/10G, plus 4 QSFP28 uplink ports for 100G/40G. Optimized for use with the C9600X-SUP-2 supervisor engine, the C9600X-LC-56YL4C delivers non-blocking throughput and flexible port combinations, enabling scalable, secure, and high-performance network upgrades for demanding enterprise, service provider, or data center environments.

Product Highlights

Ports

Slot Bandwidth

Max rated power

Quick Specs

Parameter	Description

Product ID	C9600X-LC-56YL4C
Ports	56 x 50G/25G/10G SFP56, 4 x 100G/40G QSFP28 uplinks
Supervisor Compatibility	C9600X-SUP-2 only
Max Bandwidth/Slot	6.4 Tbps (C9600X-SUP-2 only)
Supported Chassis	Cisco Catalyst 9606R
Power Consumption	420W
Dimensions (H x W x D)	1.7 x 15.0 x 13.41 in. (4.32 x 38.1 x 34.06 cm)
Weight	3.75 kg (8.27 lbs)

Key Features

Ultra-High Port Density for Aggregation

Delivers 56 SFP56 ports supporting 50G/25G/10G, enabling maximum density for aggregation or core networking in enterprise and service provider environments.

Flexible Uplink Expansion

Includes 4 QSFP28 uplink ports for 100G/40G connectivity, ideal for core, data center interconnect, or uplink to high-speed backbones.

Non-Blocking Architecture & High Bandwidth

Provides up to 6.4 Tbps per slot bandwidth (with SUP-2), ensuring true line-rate performance at all ports without oversubscription.

Optimized for Next-Gen Supervisor

Purpose-built to operate with C9600X-SUP-2, maximizing performance, scalability, and hardware-based security including MACsec-256 (license required).

Seamless Modular Integration

Integrates with the Catalyst 9600 Series ecosystem, allowing flexible combinations with other high-speed line cards for tailored campus, metro, or data center networks.

Advanced Resiliency & Hot-Swapping

Supports full hot-swappable module design, supervisor redundancy, and in-service software upgrades (ISSU), ensuring business continuity and operational efficiency.

Product Comparison

Parameter	C9600X-LC-56YL4C	C9600X-LC-32CD	C9600-LC-40YL4CD
Port Types	56 x 50G/25G/10G SFP564 x 100G/40G QSFP28	30 x 100G/40G QSFP282 x 400G/200G/100G/40G QSFP-DD	40 x 50G/25G/10G SFP562 x 200G QSFP562 x 400G QSFP-DD
Max Ports per Card	56 x 50G, 4 x 100G	30 x 100G, 2 x 400G	40 x 50G, 2 x 200G, 2 x 400G
Supervisor Compatibility	SUP-2 only	SUP-2 only	SUP-1, SUP-2
Max Per Card Bandwidth	6.4 Tbps (SUP-2)	6.4 Tbps (SUP-2)	6.4 Tbps (SUP-2), 2.4 Tbps (SUP-1)
Power Consumption	420W	420W	420W
Dimensions (H x W x D)	1.7 x 15.0 x 13.41 in.	1.7 x 15.0 x 13.41 in.	1.7 x 15.0 x 13.41 in.
Weight	3.75 kg	3.95 kg	3.75 kg
MACsec Support	Yes (license required)	Yes (license required)	Yes (SUP-2 only)
Hot Swappable	Yes	Yes	Yes
Minimum Software	17.13.1 (SUP-2)	17.9.1 (SUP-2)	17.7.1 (SUP-1, SUP-2)
MTBF	580,420 hrs	580,420 hrs	580,420 hrs

Front Panel Components

1	Status LED	5	4 x 100G/40G QSFP28 portsPorts 57 to 60: 100G/40G
2	Locate (Blue beacon) LED	6	Port Link LEDs
3	56 x 50G/25G/10G SFP56 portsPorts 1 to 56: 50G/25G/10G	7	Ejector levers
4	Sharp-edge hazard icon	8	RFID embedded on the left ejector lever

Specification

Parameter	Value	Parameter	Value
Product ID	C9600X-LC-56YL4C	**Ports (SFP56)**	56 x 50G/25G/10G
Ports (QSFP28)	4 x 100G/40G	**Supervisor Compatibility**	C9600X-SUP-2 only
Chassis Support	C9606R	**Max Bandwidth per Slot**	6.4 Tbps (SUP-2)

Parameter	Value	Parameter	Value
Power Consumption	420W	Dimensions (H x W x D)	1.7 x 15.0 x 13.41 in. (4.32 x 38.1 x 34.06 cm)
Weight	3.75 kg (8.27 lbs)	Operating Temp.	-5° to 45°C (up to 6000 ft); -5° to 40°C (up to 10,000 ft)
Humidity	10% to 95%, non-condensing	MTBF	580,420 hours
Hot Swappable	Yes	MACsec Support	Yes (license required)
Minimum Software	17.13.1 (SUP-2)	Standards	IEEE 802.3cd, 802.3by, 802.3ae
Pluggable Optics	SFP56, QSFP28	Supervisor Redundancy	Yes (on chassis)

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