Cisco Catalyst C9500-12Q-E

Enterprise High-Density 40G Core Switch Datasheet

NETWORK ESSENTIALS

Product Overview

The Cisco Catalyst C9500-12Q-E is an enterprise-class 1RU high-performance core switch designed for dense 40G environments. Built on the Cisco UADP 2.0 ASIC architecture, it provides 12 dedicated 40 Gigabit Ethernet QSFP+ ports. Paired with the Network Essentials license, it offers robust enterprise switching, high availability, security, and smart automation capabilities.

GENERAL SPECIFICATIONS

Parameter	Specification Details
Model Code	C9500-12Q-E
Form Factor	1 Rack Unit (1RU) Rack-mountable
Port Density	12 x 40 Gigabit Ethernet QSFP+ Ports
Breakout Support	Supports 40G to 4x10G breakout cables for higher 10G port density
Power Supply	Dual redundant, hot-swappable AC/DC (Default: 950W AC)
Fan Tray	Hot-swappable variable speed fans (Front-to-Back Airflow)
License Included	Cisco Network Essentials (Upgradable to Network Advantage)

PERFORMANCE & SCALABILITY

Metric	Capacity / Value
Switching Capacity	Up to 960 Gbps
Forwarding Rate	Up to 720 Mpps (Million Packets Per Second)
Total MAC Addresses	64,000
IPv4 / IPv6 Routes	64,000 IPv4 / 32,000 IPv6
DRAM Memory	16 GB
Flash Memory	16 GB
VLAN IDs	4,094

KEY FEATURES & CAPABILITIES

- **Unified Access Data Plane (UADP) 2.0:** Hardware-based programmable pipeline for optimal wire-rate switching.
- **High Availability:** Supports Cisco StackWise Virtual technology to pair switches into a single resilient control plane.

- **Security Integration:** Hardware Anchor, MACsec encryption support, Secure Boot, and Trust Anchor Technologies.
- **Automation & Management:** Ready for Cisco DNA Center, model-driven telemetry, NETCONF/RESTCONF, and Python execution.
- **Core Layer 3 Features:** Support for essential enterprise routing including OSPF, EIGRP, RIP, PBR, and VRF-Lite.

PHYSICAL & ENVIRONMENTAL SPECIFICATIONS

Property	Value
Dimensions (H x W x D)	1.73 x 17.5 x 21.52 inches (4.4 x 44.5 x 54.7 cm)
Weight	11.8 kg (26.0 lbs)
Operating Temperature	0°C to 45°C (32°F to 113°F)
Operating Humidity	10% to 95% (non-condensing)
Input Voltage	100 to 240 VAC (50/60 Hz)