

Cisco Catalyst C9800-40-K9

Enterprise Campus Wireless Controller Appliance

TECHNICAL DATASHEET

Cisco Catalyst C9800-40 Wireless Controller Front View

Cisco Catalyst 9800-40 Wireless Controller (1RU Enterprise Rackmount Appliance)

Product Overview: The Cisco Catalyst C9800-40-K9 is a high-performance, enterprise-grade wireless controller engineered for medium to large campus deployments. Operating on Cisco IOS XE, it combines seamless high availability (SSO), open programmable APIs, 40 Gbps line-rate throughput, and centralized control for up to 2,000 Access Points.

KEY ARCHITECTURAL FEATURES

CISCO IOS XE OPERATING SYSTEM

Modern open OS enabling hot software patching, programmable telemetry, modular code execution, and zero-downtime upgrades.

ALWAYS-ON RESILIENCE

1:1 Stateful Switchover (SSO) combined with In-Service Software Upgrade (ISSU) prevents service interruption during system maintenance.

HIGH-SPEED MODULAR UPLINKS

Equipped with 4x 10G SFP+ fixed uplinks alongside a flexible network adapter slot supporting optional multi-port 10G or 40G connections.

VERSATILE DEPLOYMENT TOPOLOGIES

Natively supports Centralized (Local), FlexConnect branch mode, Mesh, and SD-Access Wireless (Fabric) topologies.

SCALE & PERFORMANCE SPECIFICATIONS

Maximum Access Points	Up to 2,000 Access Points (Wi-Fi 5, Wi-Fi 6/6E, Wi-Fi 7)
Maximum Concurrent Clients	Up to 32,000 Concurrent Clients
Maximum Throughput	Up to 40 Gbps aggregate throughput
Maximum WLANs / SSIDs	4,096 WLANs
FlexConnect Scale	Up to 2,000 FlexConnect groups; 100 APs per FlexConnect group

HARDWARE & INTERFACE SPECIFICATIONS

Fixed Uplink Ports	4x 10G SFP+ / 1G SFP interfaces
Uplink Module Slot	1x Network Adapter Module Slot (supports optional 2x 40G QSFP+ or 8x 10G SFP+)
Management Interfaces	1x 10/100/1000M RJ-45, 1x 10G/1G Service Port (SP)
Redundancy Port (RP)	1x Dedicated 10G SFP+ / 1G SFP SSO pairing port
Console & Storage	1x RJ-45 Serial Console, 1x Micro-USB Console, 2x USB 3.0 Ports
Form Factor	1RU Rackmount Chassis

POWER, THERMAL & PHYSICAL CHARACTERISTICS

Dimensions (H x W x D)	4.38 cm x 44.5 cm x 49.5 cm (1.72 in. x 17.5 in. x 19.5 in.)
System Weight	10.43 kg (23.0 lbs) with dual power supplies installed
Power Supply Units	Dual redundant, hot-swappable AC (750W) or DC power supplies
Power Consumption	~250W nominal system power consumption
Operating Temperature	0°C to 40°C (32°F to 104°F)
Cooling Architecture	Front-to-back airflow with field-replaceable fan modules

SECURITY, TELEMETRY & MANAGEMENT

- **Encrypted Traffic Analytics (ETA):** Detects malicious threats within encrypted traffic flows without compromising privacy or requiring decryption.
- **Cisco Trust Anchor Technology:** Hardware-rooted secure boot, anti-counterfeit protection, and cryptographic authentication modules.
- **Model-Driven Telemetry:** High-frequency streaming telemetry using gRPC, NETCONF/YANG, and RESTCONF models.
- **Centralized Management:** Full lifecycle automation with Cisco Catalyst Center (DNA Center), Cisco Prime Infrastructure, and REST APIs.
- **Hot Patching & ISSU:** Apply bug fixes and security patches on live systems without dropping active client connections.