

C9800-40-K9 Datasheet

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Overview

C9800-40-K9 is the Cisco Catalyst 9800-40 Wireless Controller. Built from the ground-up for the Intent-based networking and Cisco DNA, Cisco Catalyst 9800 Series Wireless Controllers are Cisco IOS® XE based and integrates the RF excellence of Cisco Aironet® access points creating the best-in-class wireless experience for your evolving and growing organization. The Cisco Catalyst 9800 Series Wireless Controllers are built on an open and programmable architecture with built-in security, streaming telemetry and rich analytics. The Cisco Catalyst 9800 Series Wireless Controllers are built on the three pillars of network excellence— always on, secure, and deployed anywhere— which strengthens the network by providing the best wireless experience without compromise, while saving time and money. The Cisco® Catalyst® 9800-40 is a fixed wireless controller with seamless software updates for midsize and large enterprises.

Model	C9800-40-K9
Maximum number of access points	Up to 2000
Maximum number of clients	32,000
Maximum throughput	Up to 40 Gbps
Maximum WLANs	4096
Maximum VLANs	4096
Interfaces	4x 10 GE/1 GE SFP+/SFP
Form factor	1RU
License	Smart License enabled
Operating system	Cisco IOS XE
Access points	Aironet 802.11ac Wave 1 and Wave 2 access points
Dimension (W × D × H)	17.3 inches × 19.5 inches × 1.72 inches (43.94 cm × 49.53 cm × 4.37 cm)
Weight	22.8 lb (10.34 kg)

①	PWR: Power LED	⑩	SSD: SSD activity LED
②	ALM: Alarm LED	⑪	RP: 1 GE SFP port (the only SFPs supported on the RP port are GLC-SX-MMD and GLC-LH-SMD)
③	EN: USB console-enabled LED	⑫	RP: RJ-45 10/100/1000 redundancy Ethernet port
④	SP: RJ-45 10/100/1000 management Ethernet port	⑬	USB ports 0 and 1
⑤	LINK: RJ-45 connector LED	⑭	CON: Mini USB console port
⑥	TE1: 1 GE SFP/10 GE SFP+ port 1	⑮	CON: RJ-45 compatible console port
⑦	TE3: 1 GE SFP/10 GE SFP+ port 3	⑯	HA: High-availability LED
⑧	TE2: 1 GE SFP/10 GE SFP+ port 2	⑰	SYS: System LED
⑨	TE0: 1 GE SFP/10 GE SFP+ port 0		

Model	Description
LIC-C9800-DTLS-K9	Cisco Catalyst 9800 Series Wireless Controller DTLS License
C9800-AC-750W R=	Cisco Catalyst 9800-40 750W AC Power Supply Reverse Air
GLC-BX-D	1000BASE-BX SFP, 1490NM
GLC-BX-U	1000BASE-BX SFP, 1310NM
GLC-LH-SMD	Cisco GLC-LH-SMD 1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM
GLC-SX-MMD	Cisco GLC-SX-MMD 1000BASE-SX SFP transceiver module, MMF, 850nm, DOM

GLC-ZX-SMD	Cisco GLC-ZX-SMD 1000BASE-ZX SFP transceiver module, SMF, 1550nm, DOM
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GLC-TE	1000BASE-T SFP transceiver module for Category 5 copper wire
SFP-10G-SR	10GBASE-SR SFP Module
SFP-10G-SR-X=	SFP-10G-SR-X= 10GBASE-SR SFP Module, LC connector, 850nm, 300m range, multimode fiber (MMF), extended operating temperature range
SFP-10G-LR	10GBASE-LR SFP+ Module for SMF 10 Gbps
SFP-10G-LRM	10GBASE-LRM SFP Module
SFP-10G-ER	Cisco 10GBASE-ER SFP+ Module for SMF
CISCO SFP-10G-ZR	Cisco 10GBASE-ZR SFP10G Module for SMF
SFP-H10GB-ACU7M	Cisco Direct-Attach Active Optical Cables with SFP+ Connectors, SFP-H10GB-ACU7M

SFP-H10GB-ACU10M	Cisco SFP-H10GB-ACU10M Direct-Attach Active Optical Cables with SFP+ Connectors
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Model	C9800-40-K9	C9800-80-K9
Maximum number of access points	Up to 2000	Up to 6000
Maximum number of clients	32,000	64,000
Maximum throughput	Up to 40 Gbps	Up to 80 Gbps
Maximum WLANs	4096	4096
Maximum VLANs	4096	4096
License	Smart License enabled	Smart License enabled
Operating system	Cisco IOS XE	Cisco IOS XE
Access points	Aironet 802.11ac Wave 1 and Wave 2 access points	Aironet 802.11ac Wave 1 and Wave 2 access points

C9800-40-K9 Specification

Maximum number of access points	Up to 2000
Maximum number of clients	32,000
Maximum throughput	Up to 40 Gbps
Maximum WLANs	4096
Maximum VLANs	4096
Max Site Tags	2000
Max APs per Site	100
Max Policy Tags	2000
Max RF Tags	2000
Max RF Profiles	4000
Max Policy Profiles	1000
Max Flex Profiles	2000
Interfaces	4x 10 GE/1 GE SFP+/SFP
Power supply	AC power with optional redundant AC power
Maximum power consumption	381W
Deployment modes	Centralized, Cisco Flex Connect®, and Fabric Wireless (SD-Access)
Form factor	1RU

License	Smart License enabled
Operating system	Cisco IOS XE
Management	Cisco DNA Center™ 1.2.8, Cisco Prime® Infrastructure 3.5, integrated Web UI, and third party (open standards APIs)
Interoperability	Aire OS-based controllers with 8.8 MR2, 8.5 MR4, and 8.5 MR3 special
Policy engine	Cisco Identity Services Engine (ISE) 2.2, 2.3, and 2.4
Cisco Connected Mobile Experiences (CMX)	CMX 10.5.1
Access points	Air onet 802.11ac Wave 1 and Wave 2 access points
Dimension (W × D × H)	17.3 inches × 19.5 inches × 1.72 inches (43.94 cm × 49.53 cm × 4.37 cm)
Weight	22.8 lb (10.34 kg)
Wireless standards	IEEE 802.11a, 802.11b, 802.11g, 802.11d, WMM/802.11e, 802.11h, 802.11n, 802.11k, 802.11r, 802.11u, 802.11w, 802.11ac Wave1 and Wave2

Wired, switching, and routing standards	IEEE 802.3 10BASE-T, IEEE 802.3u 100BASE-TX, 1000BASE-T, 1000BASE-SX, 1000-BASE-LH, IEEE 802.1Q VLAN taggin, 802.1AX Link Aggregation
Data standards	• RFC 768 User Datagram Protocol (UDP) • RFC 791 IP • RFC 2460 IPv6 • RFC 792 Internet Control Message Protocol (ICMP) • RFC 793 TCP • RFC 826 Address Resolution Protocol (ARP) • RFC 1122 Requirements for Internet Hosts • RFC 1519 Classless Interdomain Routing (CIDR) • RFC 1542 Bootstrap Protocol (BOOTP) • RFC 2131 Dynamic Host Configuration Protocol (DHCP) • RFC 5415 Control and Provisioning of Wireless Access Points (CAPWAP) Protocol • RFC 5416 CAPWAP Binding for 802.11
Security standards	• Wi-Fi Protected Access (WPA) • IEEE 802.11i (WPA2, RSN) • RFC 1321 MD5 Message-Digest Algorithm • RFC 1851 Encapsulating Security Payload (ESP) Triple DES (3DES) Transform • RFC 2104 HMAC: Keyed-Hashing for Message Authentication • RFC 2246 TLS Protocol Version 1.0 • RFC 2401 Security Architecture for the Internet Protocol • RFC 2403 HMAC-MD5-96 within ESP and AH • RFC 2404 HMAC-SHA-1-96 within ESP and AH • RFC 2405 ESP DES-CBC Cipher Algorithm with Explicit IV • RFC 2407 Interpretation for Internet Security Association Key Management Protocol (ISAKMP) • RFC 2408 ISAKMP • RFC 2409 Internet Key Exchange (IKE) • RFC 2451 ESP CBC-Mode Cipher Algorithms • RFC 3280 Internet X.509 Public Key Infrastructure (PKI) Certificate and Certificate Revocation List (CRL) Profile • RFC 4347 Datagram Transport Layer Security (DTLS) • RFC 5246 TLS Protocol Version 1.2
Encryption standards	• Static Wired Equivalent Privacy (WEP) RC4 40, 104 and 128 bits • Advanced Encryption Standard (AES): Cipher Block Chaining (CBC), Counter with CBC-MAC (CCM), Counter with CBC Message Authentication Code Protocol (CCMP) • Data Encryption Standard (DES): DES-CBC, 3DES

	- Secure Sockets Layer (SSL) and Transport Layer Security (TLS): RC4 128-bit and RSA 1024- and 2048-bit - DTLS: AES-CBC - IPsec: DES-CBC, 3DES, AES-CBC 802.1AE MACsec encryption
Authentication, Authorization, and Accounting (AAA) standards	- IEEE 802.1X - RFC 2548 Microsoft Vendor-Specific RADIUS Attributes - RFC 2716 Point-to-Point Protocol (PPP) Extensible Authentication Protocol (EAP)-TLS - RFC 2865 RADIUS Authentication - RFC 2866 RADIUS Accounting - RFC 2867 RADIUS Tunnel Accounting - RFC 2869 RADIUS Extensions - RFC 3576 Dynamic Authorization Extensions to RADIUS - RFC 5176 Dynamic Authorization Extensions to RADIUS - RFC 3579 RADIUS Support for EAP - RFC 3580 IEEE 802.1X RADIUS Guidelines - RFC 3748 Extensible Authentication Protocol (EAP) - Web-based authentication - TACACS support for management users
Management standards	- Simple Network Management Protocol (SNMP) v1, v2c, v3 - RFC 854 Telnet - RFC 1155 Management Information for TCP/IP-based Internets - RFC 1156 MIB - RFC 1157 SNMP - RFC 1213 SNMP MIB II - RFC 1350 Trivial File Transfer Protocol (TFTP) - RFC 1643 Ethernet MIB - RFC 2030 Simple Network Time Protocol (SNTP) - RFC 2616 HTTP - RFC 2665 Ethernet-Like Interface Types MIB - RFC 2674 Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering, and Virtual Extensions - RFC 2819 Remote Monitoring (RMON) MIB - RFC 2863 Interfaces Group MIB - RFC 3164 Syslog - RFC 3414 User-Based Security Model (USM) for SNMPv3 - RFC 3418 MIB for SNMP - RFC 3636 Definitions of Managed Objects for IEEE 802.3 MAUs - RFC 4741 Base NETCONF protocol - RFC 4742 NETCONF over SSH - RFC 6241 NETCONF - RFC 6242 NETCONF over SSH - RFC 5277 NETCONF event notifications - RFC 5717 Partial Lock Remote Procedure Call - RFC 6243 With-Defaults capability for NETCONF - RFC 6020 YANG - Cisco private MIBs
Management interfaces	- Web-based: HTTP/HTTPS - Command-line interface: Telnet, Secure Shell (SSH) Protocol, serial port - SNMP - NETCONF
Hard Disk Drives (HDD)	- SATA Solid-State Drive (SSD) 240 GB of memory
Environmental conditions supported	Operating temperature: - Normal: 5° to 40° C (41° to 104°F) - Short term: 5° to 50° C (41° to 122°F) Nonoperating temperature: -40° to 65° C (-104° to 149°F) Operating humidity:

	● Nominal: 5% to 85% no-condensing ● Short term: 5% to 90% noncondensing Nonoperating temperature humidity: ● 5% to 93% at 82°F (28°C) Operating altitude: ● Appliance operating: 0 to 3000 m(0 to 10,000 ft) ● Appliance nonoperating: 0 to 12,192 m(0 to 40,000 ft) Electrical input: ● AC input frequency range: 47 to 63 Hz ● AC input range: 90 to 264 VAC with AC PEM ● 1100W AC with optional redundant power supply (hot-swappable) Maximum power: 381W Heat dissipation: 1,300 BTU/hr Sound power level measure: ● A-weighted sound power level is 74.1 LpAm(dBA) @ 27C nominal operation
Regulatory compliance	Safety: ● UL/CSA 60950-1 ● IEC/EN 60950-1 ● AS/NZS 60950.1 ● CAN/CSA-C22.2 No. 60950-1 EMC – Emissions – Class A ● FCC 47CFR15 ● AS/NZS CISPR 22 ● CISPR 22 ● EN55022/EN55032 (EMI-1) ● ICES-003 ● VCCI ● KN 32 (EMI-2) ● CNS-13438 EMC – Emissions: ● EN61000-3-2 Power Line Harmonics (EMI-3) ● EN61000-3-3 Voltage Changes, Fluctuations, and Flicker (EMI-3) EMC – Immunity: ● IEC/EN61000-4-2 Electrostatic Discharge Immunity ● IEC/EN61000-4-3 Radiated Immunity ● IEC/EN61000-4-4 EFT-B Immunity (AC Power Leads) ● IEC/EN61000-4-4 EFT-B Immunity (DC Power Leads) ● IEC/EN61000-4-4 EFT-B Immunity (Signal Leads) ● IEC/EN61000-4-5 Surge AC Port ● IEC/EN61000-4-5 Surge DC Port ● IEC/EN61000-4-5 Surge Signal Port ● IEC/EN61000-4-6 Immunity to Conducted Disturbances ● IEC/EN61000-4-8 Power Frequency Magnetic Field Immunity ● IEC/EN61000-4-11 Voltage Dips, Short Interruptions, and Voltage Variations ● K35 (EMI-2) EMC (ETSI/EN) ● EN 300 386 Telecommunications Network Equipment (EMC) (EMC-3) ● EN55022 Information Technology Equipment (Emissions) ● EN55024/CISPR 24 Information Technology Equipment (Immunity) ● EN50082-1/EN61000-6-1 Generic Immunity Standard (EMC-4)

