



Wi-Fi CERTIFIED™ Certificate



This certificate lists the features that have successfully completed Wi-Fi Alliance interoperability testing. Learn more: www.wi-fi.org/certification/programs

Certification ID: WFA131648

Product Info

| | |
|------------------------------|---|
| Date of Certification | September 27, 2024 |
| Company | Cisco Systems |
| Product Name | Cisco Catalyst 9800-L Wireless Controller and Cisco CW9176 AP |
| Product Model Variant | C9800-L and CW9176D1, Cisco IOS XE: 17.15 |
| Model Number | C9800-L and CW9176 |
| Category | Routers |
| Sub-category | Enterprise/Service Provider Access Point, Switch/Controller or Router |

Summary of Certifications

| CLASSIFICATION | CERTIFICATION |
|---------------------|--|
| Connectivity | 2.4 GHz Spectrum Capabilities 5 GHz Spectrum Capabilities 6 GHz Spectrum Capabilities Wi-Fi CERTIFIED 6® Release 2 Wi-Fi CERTIFIED 7™ Wi-Fi CERTIFIED™ a Wi-Fi CERTIFIED™ ac Wi-Fi CERTIFIED™ b Wi-Fi CERTIFIED™ g Wi-Fi CERTIFIED™ n Wi-Fi Enhanced Open™ 2023-12 |
| Optimization | WMM® WMM®-Power Save Wi-Fi Agile Multiband™ |
| Security | Protected Management Frames WPA2™-Enterprise 2018-04 WPA2™-Personal 2021-01 WPA3™-Enterprise 2022-12 WPA3™-Personal 2023-12 |



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Summary of Certifications (continued)

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CLASSIFICATION

CERTIFICATION

Spectrum & Regulatory
Features

Spectrum & Regulatory



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Wi-Fi Components

Wi-Fi Component Operating System

Linux, Version: 17.15

Wi-Fi Component Firmware

17.15

RF Architecture

| Bands Supported | Transmit (Tx) | Receive (Rx) |
|-----------------|---------------|--------------|
| 2.4 GHz | 4 | 4 |
| 5 GHz | 4 | 4 |
| 6 GHz | 4 | 4 |

Certifications

2.4 GHz Spectrum Capabilities

20 MHz Channel Width in 2.4 GHz

5 GHz Spectrum Capabilities

20 MHz Channel Width in 5 GHz

40 MHz Channel Width in 5 GHz

80 MHz Channel Width in 5 GHz

160 MHz Channel Width in 5 GHz

6 GHz Spectrum Capabilities

Standard power operation

20 MHz Channel Width in 6 GHz

40 MHz Channel Width in 6 GHz

80 MHz Channel Width in 6 GHz

160 MHz Channel Width in 6 GHz

320 MHz channel width in 6 GHz

Protected Management Frames

Spectrum & Regulatory

Spectrum & Regulatory (continued)

802.11d

802.11h

WMM®

WMM®-Power Save

Legacy Power Save

Unschedule auto PS

WPA2™-Enterprise 2018-04

EAP methods

WPA2™-Personal 2021-01

WPA3™-Enterprise 2022-12

EAP methods

192-bit security

Fast Transition OTA on WPA3-Enterprise



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WPA3™-Enterprise 2022-12 (continued)

Fast Transition OTA on WPA3-Enterprise transition mode
Fast Transition OTDS on WPA3-Enterprise

WPA3™-Personal 2023-12

AKM 24
AKM 25
Fast Transition OTA on WPA3-Personal
Fast Transition OTA on WPA3-Personal transition mode
Fast Transition OTDS on WPA3-Personal
Beacon Protection

Wi-Fi Agile Multiband™

Automatically populate BSS Transition candidate list
Fast Transition OTA on WPA2-Enterprise
Fast Transition OTA on WPA2-Personal

Wi-Fi CERTIFIED 6® Release 2

4 antenna support
A-MPDU with A-MSDU
Beamforming sounding
BSRP Trigger frame
Compressed Block Ack Rx (buffer size 256)
Compressed Block Ack Tx (buffer size 256)
DL MU-MIMO
DL OFDMA
Individual Target Wake Time
LDPC Rx
LDPC Tx
MCS 8-9 Rx
MCS 8-9 Tx
MCS 10-11 Rx

Wi-Fi CERTIFIED 6® Release 2 (continued)

MCS 10-11 Tx
MU EDCA Parameter Set element
MU-BAR Trigger frame
MU-RTS Trigger frame
Operating mode indication
SU beamformer
SU-MIMO
UL OFDMA
Wi-Fi 6E
 Co-located BSS
 Multiple M-BSSID
Wi-Fi 6 Release 2 features
 UL MU-MIMO
 UL MU Control
 UL Extended Range
 Target Wake Time information frames
 Extended sleep
 Dynamic MU SMPS

Wi-Fi CERTIFIED 7™

A-MPDU with A-MSDU
Beamforming sounding
BSRP Trigger frame
BSS critical update
Compressed Block Ack Rx (buffer size 256)
Compressed Block Ack Tx (buffer size 256)
Compressed Block Ack Rx (buffer size 512)
Compressed Block Ack Tx (buffer size 512)
DL MU-MIMO
DL OFDMA
Dynamic MU SMPS
EMLSR (Enhanced Multilink Single-Radio)
LDPC Rx
LDPC Tx



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Wi-Fi CERTIFIED 7™ (continued)

MCS 8-9 Rx
MCS 8-9 Tx
MCS 10-11 Rx
MCS 10-11 Tx
MCS 12-13 Rx
MCS 12-13 Tx
Multi-RU
MU-RTS Trigger frame
Operating mode indication
 Operating mode indication for 320 MHz
Static puncturing
STR (Simultaneous Transmit and Receive)
SU-MIMO
Triggered uplink access optimization
UL MU-MIMO
UL OFDMA

Wi-Fi CERTIFIED™ n

A-MPDU Tx
OBSS on Extension Channel
Short Guard Interval
STBC

Wi-Fi Enhanced Open™ 2023-12

Wi-Fi CERTIFIED™ a

Wi-Fi CERTIFIED™ ac

A-MPDU with A-MSDU
DL MU-MIMO
Extended 5 GHz Channel Support
LDPC Rx
LDPC Tx
MCS 8-9 Rx
RTS with BW Signaling
Short Guard Interval
STBC
SU beamformer

Wi-Fi CERTIFIED™ b

Wi-Fi CERTIFIED™ g