



# 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](http://www.wi-fi.org/certification/programs)

## Certification ID: WFA132722

### Product Info

<b>Date of Certification</b>	September 17, 2024
<b>Company</b>	Cisco Systems
<b>Product Name</b>	Cisco Catalyst 9800-40 Wireless Controller and Cisco CW9176 AP
<b>Product Model Variant</b>	Cisco IOS XE: 17.15
<b>Model Number</b>	C9800-40 and CW9176
<b>Category</b>	Routers
<b>Sub-category</b>	Enterprise/Service Provider Access Point, Switch/Controller or Router

### Summary of Certifications

CLASSIFICATION	CERTIFICATION
<b>Connectivity</b>	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
<b>Optimization</b>	WMM® WMM®-Power Save Wi-Fi Agile Multiband™
<b>Security</b>	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™ 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

## Wi-Fi CERTIFIED™ n

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

## Wi-Fi Enhanced Open™ 2023-12