



# 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: WFA131647

### Product Info

<b>Date of Certification</b>	September 26, 2024
<b>Company</b>	Cisco Systems
<b>Product Name</b>	Cisco Meraki CW9176
<b>Product Model Variant</b>	Cisco Meraki CW9176D1, R31 (Internal Directional Antenna Variant)
<b>Model Number</b>	Cisco Meraki 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

R31

### Wi-Fi Component Firmware

R31

### 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

### 6 GHz Spectrum Capabilities

Standard power operation under AFC  
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

## WPA3™-Personal 2023-12

AKM 24

AKM 25

Fast Transition OTA on WPA3-Personal

Fast Transition OTA on WPA3-Personal transition mode

Beacon Protection

## Wi-Fi Agile Multiband™

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

Co-located BSS

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

MCS 10-11 Tx

MU EDCA Parameter Set element

## Wi-Fi CERTIFIED 6® Release 2 (continued)

MU-BAR Trigger frame

MU-RTS Trigger frame

Operating mode indication

SU beamformer

SU-MIMO

UL OFDMA

Wi-Fi 6E

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

MCS 8-9 Rx

MCS 8-9 Tx

MCS 10-11 Rx



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## Wi-Fi CERTIFIED 7™ (continued)

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 (continued)

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

## Wi-Fi CERTIFIED™ n