



# 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: WFA101082**

## Product Info

Date of Certification	December 15, 2022
Company	Broadcom Corporation
Product Name	Broadcom 802.11 a/b/g/n/ac/ax 24g/5g/6g 2x2 wireless adapter
Product Model Variant	Wi-Fi Aware R4
Model Number	BCM94391
Category	Other
Sub-category	Embedded Module

## Summary of Certifications

CLASSIFICATION	CERTIFICATION
Applications & Services	Wi-Fi Aware™
Connectivity	2.4 GHz Spectrum Capabilities 5 GHz Spectrum Capabilities 6 GHz Spectrum Capabilities Wi-Fi CERTIFIED 6® Wi-Fi CERTIFIED™ a Wi-Fi CERTIFIED™ ac Wi-Fi CERTIFIED™ b Wi-Fi CERTIFIED™ g Wi-Fi CERTIFIED™ n Wi-Fi Enhanced Open™ 2021-01
Optimization	WMM® Wi-Fi Agile Multiband™ Wi-Fi Optimized Connectivity™ 2020 Wi-Fi QoS Management™
Security	Protected Management Frames WPA2™-Enterprise 2018-04 WPA2™-Personal 2021-01 WPA3™-Enterprise 2020-02 WPA3™-Personal 2020-12



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## Summary of Certifications (continued)

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### CLASSIFICATION

### CERTIFICATION

#### Security

WPA™-Enterprise  
WPA™-Personal

#### Spectrum & Regulatory Features

Spectrum & Regulatory



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## Wi-Fi Components

### Wi-Fi Component Operating System

Linux, version:Fedora 30

### Wi-Fi Component Firmware

1.27.45-r-998106:01-c6074623

### RF Architecture

Bands Supported	Transmit (Tx)	Receive (Rx)
2.4 GHz	2	2
5 GHz	2	2
6 GHz	2	2

## Certifications

### 2.4 GHz Spectrum Capabilities

20 MHz Channel Width in 2.4 GHz  
40 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

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

### Protected Management Frames

### Spectrum & Regulatory

### Spectrum & Regulatory (continued)

802.11h

### WMM®

### WPA2™-Enterprise 2018-04

EAP methods  
EAP TLS  
EAP TTLS  
PEAPv0  
PEAPv1

### WPA2™-Personal 2021-01

### WPA3™-Enterprise 2020-02

EAP methods  
EAP TLS  
EAP TTLS  
PEAPv0  
PEAPv1



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### WPA3™-Personal 2020-12

Fast Transition OTA on WPA3-Personal  
Fast Transition OTA on WPA3-Personal transition mode  
Fast Transition OTDS on WPA3-Personal  
Beacon Protection  
SAE-Public Key  
Operating Channel Validation  
Privacy Extensions  
    Active Scan  
    ANQP

### WPA™-Enterprise

### WPA™-Personal

### Wi-Fi Agile Multiband™

ANQP  
Beacon Report Measurement Active Mode  
Beacon Report Measurement Passive Mode  
BTM Query  
Cellular Data capable  
Fast Transition OTA on WPA2-Personal  
Fast Transition OTA on WPA2-Enterprise

### Wi-Fi Aware™

TCP/UDP NDP Initiator  
TCP/UDP NDP Responder  
Wi-Fi Aware pairing

### Wi-Fi CERTIFIED 6®

BSRP Trigger frame  
DL Mu PPDU multi-tone

### Wi-Fi CERTIFIED 6® (continued)

DL MU-MIMO  
MU EDCA Parameter Set element  
MU-BAR Trigger frame  
MU-RTS Trigger frame  
SU beamformee  
UL OFDMA  
UL TB PPDU multi-tone

### Wi-Fi CERTIFIED™ a

### Wi-Fi CERTIFIED™ ac

Extended 5 GHz Channel Support  
A-MPDU with A-MSDU  
DL MU-MIMO  
LDPC Rx  
MCS 8-9 Rx  
Short Guard Interval  
LDPC Tx  
SU beamformee

### Wi-Fi CERTIFIED™ b

### Wi-Fi CERTIFIED™ g

### Wi-Fi CERTIFIED™ n

A-MPDU Tx  
HT Duplicate Mode  
OBSS on Extension Channel  
Short Guard Interval

### Wi-Fi Enhanced Open™ 2021-01



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## Wi-Fi Optimized Connectivity™ 2020

Active Scan  
FILS Shared Key Authentication  
    FILS Indication Element support  
    AKM Suite Selector Type 15  
    FILS Higher Layer Protocol with DHCP v4 Rapid Commit  
Fast Transition OTA on WPA2-Enterprise  
Pushbutton  
Probe Deferral and Suppression

## Wi-Fi QoS Management™

Default DSCP to UP mapping  
DSCP QoS Map  
DSCP Policy  
Mirrored Stream Classification Service  
    MSCS setup at association  
Stream Classification Service