



# 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

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

### Summary of Certifications

CLASSIFICATION	CERTIFICATION
<b>Applications &amp; Services</b>	Wi-Fi Aware™
<b>Connectivity</b>	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
<b>Optimization</b>	WMM® Wi-Fi Agile Multiband™ Wi-Fi Optimized Connectivity™ 2020 Wi-Fi QoS Management™
<b>Security</b>	Protected Management Frames WPA2™-Enterprise 2018-04 WPA2™-Personal 2021-01 WPA3™-Enterprise 2020-02 WPA3™-Personal 2020-12



# Wi-Fi CERTIFIED™ Certificate

Certification ID: WFA101082



## Summary of Certifications (continued)

Page 2 of 5

### CLASSIFICATION

### CERTIFICATION

Spectrum & Regulatory  
Features

Spectrum & Regulatory



# Wi-Fi CERTIFIED™ Certificate

Certification ID: WFA101082



Role: Station

Page 3 of 5

## 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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Certification ID: WFA101082



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Page 4 of 5

## 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

## 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  
DL MU-MIMO  
MU EDCA Parameter Set element  
MU-BAR Trigger frame  
MU-RTS Trigger frame

## Wi-Fi CERTIFIED 6® (continued)

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

## Wi-Fi Optimized Connectivity™ 2020

Active Scan  
FILS Shared Key Authentication



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Certification ID: WFA101082



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Page 5 of 5

## Wi-Fi Optimized Connectivity™ 2020 (continued)

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