



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: WFA109957

Product Info

Date of Certification	April 13, 2021
Company	Qualcomm
Product Name	Qualcomm Technologies 2x2 Wi-Fi 6e SoC for Mobile and Compute
Product Model Variant	6E WPA3 update
Model Number	CA-WIFI6ESTA-50
Category	Other
Sub-category	Reference Design

Summary of Certifications

CLASSIFICATION	CERTIFICATION
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
Security	Protected Management Frames WPA2™-Enterprise 2018-04 WPA2™-Personal 2021-01 WPA3™-Enterprise 2020-02 WPA3™-Personal 2020-02
Spectrum & Regulatory Features	Spectrum & Regulatory



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Role: Station

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Wi-Fi Components

Wi-Fi Component Operating System

Linux, version:Ubuntu, linux 4.4.83

Wi-Fi Component Firmware

WCN6850.LNX.0.1

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
192-bit security



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WPA3™-Enterprise 2020-02 (continued)

192-bit security RSA 3K with the
TLS_DHE_RSA_WITH_AES_256_GCM_SHA384 cipher
suite

192-bit security RSA 3K with the
TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384
cipher suite

WPA3™-Personal 2020-02

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 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

SU beamformee

UL OFDMA

UL TB PPDU multi-tone

Wi-Fi CERTIFIED™ a

Wi-Fi CERTIFIED™ ac

Extended 5 GHz Channel Support

Wi-Fi CERTIFIED™ ac (continued)

RTS with BW Signaling

A-MPDU with A-MSDU

DL MU-MIMO

LDPC Rx

MCS 8-9 Rx

Short Guard Interval

STBC

LDPC Tx

SU beamformee

Wi-Fi CERTIFIED™ b

Wi-Fi CERTIFIED™ g

Wi-Fi CERTIFIED™ n

STBC

A-MPDU Tx

HT Duplicate Mode

OBSS on Extension Channel

Power Management

Short Guard Interval

Wi-Fi Enhanced Open™ 2021-01

Wi-Fi Optimized Connectivity™ 2020

Fast Transition OTA on WPA2-Enterprise