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 ID: WFA102479

Product Info

Date of Certification	February 24, 2021
Company	Samsung Electronics
Product Name	SM-G991U
Product Model Variant	2021-02-23
Model Number	SM-G991U
Category	Phones
Sub-category	Smartphone

Summary of Certifications

CLASSIFICATION	CERTIFICATION
Access	Wi-Fi Protected Setup™
Alternative topologies	Wi-Fi Aware™ Wi-Fi Direct®
Network management	WMM® WMM®-Admission Control WMM®-Power Save Wi-Fi Agile Multiband™ Wi-Fi Optimized Connectivity™ 2020
Performance	Voice-Enterprise
Security	Protected Management Frames WPA2™-Enterprise 2018-04 WPA2™-Personal 2021-01 WPA3™-Enterprise 2020-02 WPA3™-Personal 2020-02 Wi-Fi Enhanced Open™ 2021-01
Wi-Fi (MAC/PHY)	2.4 GHz Spectrum Capabilities 5 GHz Spectrum Capabilities Spectrum & Regulatory

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Summary of Certifications (continued)

CLASSIFICATION	CERTIFICATION
Wi-Fi (MAC/PHY)	Wi-Fi CERTIFIED 6® Wi-Fi CERTIFIED™ a Wi-Fi CERTIFIED™ ac Wi-Fi CERTIFIED™ b Wi-Fi CERTIFIED™ g Wi-Fi CERTIFIED™ n

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Wi-Fi CERTIFIED® Certificate

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Wi-Fi Components

Wi-Fi Component Operating System

Android, version:11.0

Wi-Fi Component Firmware

18.41.36.1

RF Architecture

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

Protected Management Frames

WMM®

WPA2™-Personal 2021-01

WPA3™-Personal 2020-02

Wi-Fi Agile Multiband™

Wi-Fi CERTIFIED 6®

A-MPDU with A-MSDU
DL OFDMA

Wi-Fi CERTIFIED 6® (continued)

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
Operating mode subfield in A-Control field
Operating mode indication
Operating mode UL MU Rx
SU beamformer
SU-MIMO
UL OFDMA

Wi-Fi CERTIFIED™ a

Wi-Fi CERTIFIED™ ac

A-MPDU with A-MSDU
LDPC Rx
LDPC Tx
MCS 8-9 Rx
Short Guard Interval

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Wi-Fi CERTIFIED™ ac (continued)

SU beamformer

Wi-Fi CERTIFIED™ b

Wi-Fi CERTIFIED™ g

Wi-Fi CERTIFIED™ n

OBSS on Extension Channel

Short Guard Interval

A-MPDU Tx

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Wi-Fi Component Operating System

Android, version:11.0

Wi-Fi Component Firmware

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RF Architecture

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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

Protected Management Frames

Spectrum & Regulatory

802.11h

Voice-Enterprise

WMM®

WMM®-Admission Control

WMM®-Power Save

WMM®-Power Save (continued)

Legacy Power Save
Unschedule auto PS

WPA2™-Enterprise 2018-04

EAP methods
- EAP AKA
- EAP AKA Prime
- EAP SIM
- EAP TLS
- EAP TTLS
- PEAPv0
- PEAPv1

WPA2™-Personal 2021-01

WPA3™-Enterprise 2020-02

EAP methods
- EAP AKA
- EAP AKA Prime
- EAP SIM
- EAP TLS

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Wi-Fi CERTIFIED® Certificate

Certification ID: WFA102479

Role: Station

WPA3™-Enterprise 2020-02 (continued)

EAP TTLS
PEAPv0
PEAPv1

WPA3™-Personal 2020-02

Wi-Fi Agile Multiband™

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™

Bluetooth® Low Energy - Browser
Bluetooth® Low Energy - Provider
Bluetooth® Low Energy - Seeker
Device Ranging

Wi-Fi CERTIFIED 6®

A-MPDU with A-MSDU
BSRP Trigger frame
DL MU-MIMO
Individual Target Wake Time
LDPC Rx
LDPC Tx
MCS 8-9 Rx
MCS 8-9 Tx
MCS 10-11 Rx
MCS 10-11 Tx

Wi-Fi CERTIFIED 6® (continued)

MU EDCA Parameter Set element
MU-BAR Trigger frame
MU-RTS Trigger frame
M-BSSID
Operating mode control field
Operating mode subfield in A-Control field
Operating mode indication
SU beamformee
UL OFDMA

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
OBSS on Extension Channel
Power Management
Short Guard Interval

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Wi-Fi CERTIFIED® Certificate

Certification ID: WFA102479

Role: Station

Wi-Fi Direct®

Wi-Fi Enhanced Open™ 2021-01

Wi-Fi Optimized Connectivity™ 2020

Fast Transition OTA on WPA2-Enterprise

Pushbutton

Wi-Fi Protected Setup™

Pushbutton

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