



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: WFA128160

Product Info

Date of Certification	October 23, 2023
Company	Samsung Electronics
Product Name	SM-S921U
Product Model Variant	2023-09-15
Model Number	SM-S921U
Category	Phones
Sub-category	Smartphone

Summary of Certifications

CLASSIFICATION	CERTIFICATION
Applications & Services	Voice-Enterprise Wi-Fi Aware™
Connectivity	2.4 GHz Spectrum Capabilities 5 GHz Spectrum Capabilities 6 GHz Spectrum Capabilities Wi-Fi CERTIFIED 6® Wi-Fi CERTIFIED 6® Release 2 Wi-Fi CERTIFIED™ a Wi-Fi CERTIFIED™ ac Wi-Fi CERTIFIED™ b Wi-Fi CERTIFIED™ g Wi-Fi CERTIFIED™ n Wi-Fi Direct® Wi-Fi Enhanced Open™ 2021-01
Optimization	WMM® WMM®-Admission Control WMM®-Power Save Wi-Fi Agile Multiband™ Wi-Fi Optimized Connectivity™ 2020 Wi-Fi QoS Management™



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Summary of Certifications (continued)

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CLASSIFICATION	CERTIFICATION
Security	Protected Management Frames WPA2™-Enterprise 2018-04 WPA2™-Personal 2021-01 WPA3™-Enterprise 2022-12 WPA3™-Personal 2022-06
Spectrum & Regulatory Features	Spectrum & Regulatory



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Role: Access Point

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Wi-Fi Components

Wi-Fi Component Operating System

Android 14.0

Wi-Fi Component Firmware

2.0.0.0.1518.1

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

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®

Max Throughput

WPA2™-Personal 2021-01

WPA3™-Personal 2022-06

Wi-Fi CERTIFIED 6®

A-MPDU with A-MSDU

LDPC Rx

Wi-Fi CERTIFIED 6® (continued)

LDPC Tx

MCS 8-9 Rx

MCS 8-9 Tx

MCS 10-11 Rx

MCS 10-11 Tx

SU beamformer

Wi-Fi CERTIFIED™ a

Wi-Fi CERTIFIED™ ac

A-MPDU with A-MSDU

LDPC Rx

LDPC Tx

MCS 8-9 Rx

Short Guard Interval

STBC

SU beamformer

Wi-Fi CERTIFIED™ b

Wi-Fi CERTIFIED™ g

Wi-Fi CERTIFIED™ n



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Wi-Fi CERTIFIED™ n (continued)

A-MPDU Tx
OBSS on Extension Channel
Short Guard Interval
STBC



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Role: Station

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Wi-Fi Components

Wi-Fi Component Operating System

Android 14.0

Wi-Fi Component Firmware

2.0.0.0.1518.1

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

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

802.11h

Voice-Enterprise

WMM®

Max Throughput

WMM®-Admission Control

WMM®-Power Save

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



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Role: Station

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WPA2™-Personal 2021-01

WPA3™-Enterprise 2022-12

EAP methods

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

192-bit security

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

Fast Transition OTA on WPA3-Enterprise

Fast Transition OTA on WPA3-Enterprise transition mode

Fast Transition OTDS on WPA3-Enterprise

Server Certificate Validation

WPA3™-Personal 2022-06

Fast Transition OTA on WPA3-Personal

Fast Transition OTA on WPA3-Personal transition mode

Fast Transition OTDS on WPA3-Personal

Wi-Fi Agile Multiband™

- ANQP
- ANQP-based Neighbor report
- 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

- Bluetooth® Low Energy - Browser
- Bluetooth® Low Energy - Provider
- Bluetooth® Low Energy - Seeker
- TCP/UDP NDP Initiator
- TCP/UDP NDP Responder

Device Ranging

Wi-Fi Aware pairing

Unsynchronized Service Discovery

Wi-Fi CERTIFIED 6® Release 2

A-MPDU with A-MSDU

Beamforming sounding

BSRP Trigger frame

Compressed Block Ack Rx (buffer size 256)

Compressed Block Ack Tx (buffer size 256)

DL MU-MIMO

DL MU PPDU multi-tone

HE NDP

LDPC Tx

LDPC Rx

Individual Target Wake Time

MCS 10-11 Rx

MCS 10-11 Tx

MCS 8-9 Rx

MCS 8-9 Tx

MU EDCA Parameter Set element

MU-BAR Trigger frame

MU-RTS Trigger frame

Operating mode control field

Operating mode subfield in A-Control field

Operating mode indication

SU beamformee

SU-MIMO



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Wi-Fi CERTIFIED 6® Release 2 (continued)

UL OFDMA
UL TB PPDU multi-tone
Wi-Fi 6E
Multiple M-BSSID
Wi-Fi 6 Release 2 features
UL Extended Range
M-BSSID control frames

Wi-Fi Direct®

Wi-Fi Enhanced Open™ 2021-01

Wi-Fi Optimized Connectivity™ 2020

Active Scan
Fast Transition OTA on WPA2-Enterprise
Pushbutton

Wi-Fi CERTIFIED™ a

Wi-Fi CERTIFIED™ ac

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

Wi-Fi QoS Management™

Default DSCP to UP mapping
DSCP QoS Map
Mirrored Stream Classification Service

Wi-Fi CERTIFIED™ b

Wi-Fi CERTIFIED™ g

Wi-Fi CERTIFIED™ n

A-MPDU Tx
OBSS on Extension Channel
Short Guard Interval
STBC