



# 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: WFA109493**

## Product Info

Date of Certification	December 17, 2020
Company	Samsung Electronics
Product Name	SM-G998N
Product Model Variant	V1
Model Number	SM-G998N
Category	Phones
Sub-category	Smartphone

## Summary of Certifications

CLASSIFICATION	CERTIFICATION
Access	Wi-Fi Protected Setup™
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™ a Wi-Fi CERTIFIED™ ac Wi-Fi CERTIFIED™ b Wi-Fi CERTIFIED™ g Wi-Fi CERTIFIED™ n Wi-Fi Direct® Wi-Fi Enhanced Open™ 2020-02
Optimization	WMM® WMM®-Admission Control WMM®-Power Save Wi-Fi Agile Multiband™ Wi-Fi Optimized Connectivity™ 2018



# Wi-Fi CERTIFIED™ Certificate

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## Summary of Certifications (continued)

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### CLASSIFICATION

### CERTIFICATION

#### Security

Protected Management Frames  
WPA2™-Enterprise 2018-04  
WPA2™-Personal 2020-02  
WPA3™-Enterprise 2020-02  
WPA3™-Personal 2020-12  
WPA™-Enterprise

#### 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, version:11.0

### Wi-Fi Component Firmware

20.25.324.4

### 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®

### WPA2™-Personal 2020-02

### WPA3™-Personal 2020-12

### Wi-Fi Agile Multiband™

### Wi-Fi CERTIFIED 6®

DL OFDMA

Individual Target Wake Time

Operating Mode indication

### Wi-Fi CERTIFIED 6® (continued)

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

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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Role: Station

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### 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

### 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

### Protected Management Frames

### Spectrum & Regulatory

### Voice-Enterprise

### WMM®

### WMM®-Admission Control

### WMM®-Power Save

### WPA2™-Enterprise 2018-04

EAP methods

### WPA2™-Personal 2020-02

### WPA3™-Enterprise 2020-02

EAP methods

### WPA3™-Personal 2020-12

### WPA™-Enterprise

### Wi-Fi Agile Multiband™

Beacon Report Measurement Active Mode

Beacon Report Measurement Passive Mode

BTM Query

Cellular Data capable



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Role: Station

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## Wi-Fi Agile Multiband™ (continued)

Fast Transition OTA on WPA2-Personal  
Fast Transition OTA on WPA2-Enterprise

## Wi-Fi CERTIFIED™ ac (continued)

MCS 8-9 Rx  
LDPC Tx

## Wi-Fi Aware™

## Wi-Fi CERTIFIED™ b

## Wi-Fi CERTIFIED 6®

A-MPDU with A-MSDU  
Beamforming sounding  
BSRP Trigger frame  
DL Mu PPDU multi-tone  
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  
MU EDCA Parameter Set element  
MU-BAR Trigger frame  
MU-RTS Trigger frame  
OM Control field Tx  
Operating Mode indication  
SU beamformee  
UL OFDMA  
UL TB PPDU multi-tone  
Wi-Fi 6E

## Wi-Fi CERTIFIED™ g

## Wi-Fi CERTIFIED™ n

## Wi-Fi Direct®

## Wi-Fi Enhanced Open™ 2020-02

## Wi-Fi Optimized Connectivity™ 2018

Fast Transition OTA on WPA2-Enterprise

## Wi-Fi Protected Setup™

PIN

## Wi-Fi CERTIFIED™ a

## Wi-Fi CERTIFIED™ ac

A-MPDU with A-MSDU  
LDPC Rx