# 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: WFA131717

## Product Info

| | |
|---|---|
| **Date of Certification** | September 13, 2024 |
| **Company** | Samsung Electronics |
| **Product Name** | SM-F958N |
| **Product Model Variant** | 2024-09-13 |
| **Model Number** | SM-F958N |
| **Category** | Phones |
| **Sub-category** | Smartphone |

## Summary of Certifications

| CLASSIFICATION | CERTIFICATION |
|---|---|
| **Applications & Services** | Voice-Enterprise<br>Wi-Fi Aware™ |
| **Connectivity** | 2.4 GHz Spectrum Capabilities<br>5 GHz Spectrum Capabilities<br>6 GHz Spectrum Capabilities<br>Wi-Fi CERTIFIED 6®<br>Wi-Fi CERTIFIED 6® Release 2<br>Wi-Fi CERTIFIED 7™<br>Wi-Fi CERTIFIED™ a<br>Wi-Fi CERTIFIED™ ac<br>Wi-Fi CERTIFIED™ b<br>Wi-Fi CERTIFIED™ g<br>Wi-Fi CERTIFIED™ n<br>Wi-Fi Direct®<br>Wi-Fi Enhanced Open™ 2023-12 |
| **Optimization** | WMM®<br>WMM®-Admission Control<br>WMM®-Power Save<br>Wi-Fi Agile Multiband™<br>Wi-Fi Optimized Connectivity™ 2020<br>Wi-Fi QoS Management™ |

| CLASSIFICATION | CERTIFICATION |
|---|---|
| Security | Protected Management Frames<br>WPA2™-Enterprise 2018-04<br>WPA2™-Personal 2021-01<br>WPA3™-Enterprise 2022-12<br>WPA3™-Personal 2023-12 |
| Spectrum & Regulatory Features | Spectrum & Regulatory |

# Wi-Fi CERTIFIED™ Certificate
## Certification ID: WFA131717

## Wi-Fi Components

**Wi-Fi Component Operating System**

Android 14.0

**Wi-Fi Component Firmware**

2.0.3.1.30.4

### 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

### WMM®

### WPA2™-Personal 2021-01

### WPA3™-Personal 2023-12

### Wi-Fi CERTIFIED 6®

A-MPDU with A-MSDU
LDPC Rx
LDPC Tx
MCS 8-9 Rx
MCS 8-9 Tx
MCS 10-11 Rx
MCS 10-11 Tx
SU beamformer
Wi-Fi 6E

### 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**

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

**Wi-Fi Enhanced Open™ 2023-12**

# Wi-Fi CERTIFIED™ Certificate

## Certification ID: WFA131717

## Wi-Fi Components

### Wi-Fi Component Operating System

Android 14.0

### Wi-Fi Component Firmware

2.0.3.1.30.4

### 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®

### 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

### 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

Server Certificate Validation

## WPA3™-Personal 2023-12

    AKM 24

Fast Transition OTA on WPA3-Personal

Fast Transition OTA on WPA3-Personal transition mode

Beacon Protection

## 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™

## Wi-Fi Aware™ (continued)

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 indication

SU beamformee

SU-MIMO

UL OFDMA

## Wi-Fi CERTIFIED 6® Release 2 (continued)

UL TB PPDU multi-tone

Wi-Fi 6E
  Multiple M-BSSID

Wi-Fi 6 Release 2 features
  UL MU-MIMO
  M-BSSID control frames

## Wi-Fi CERTIFIED 7™

Advertised TID-to-link mapping

A-MPDU with A-MSDU

Beamforming sounding

BSS critical update

Compressed Block Ack Rx (buffer size 256)

Compressed Block Ack Tx (buffer size 256)

DL MU-MIMO

EPCS (Emergency Preparedness Communications Services) priority access

LDPC Rx

LDPC Tx

Load Balancing in MLO

MCS 8-9 Rx

MCS 8-9 Tx

MCS 10-11 Rx

MCS 10-11 Tx

MCS 12-13 Rx

MCS 12-13 Tx

Multi-link reconfiguration – AP removal

Multi-RU

Operating mode indication

Static puncturing

SU-MIMO

UL MU-MIMO

UL OFDMA

## 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 8-9 Rx

Short Guard Interval

STBC

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

STBC

## Wi-Fi Direct®

Wi-Fi Direct with WPA2

## Wi-Fi Enhanced Open™ 2023-12

## Wi-Fi Optimized Connectivity™ 2020

Active Scan

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

Fast Transition OTA on WPA2-Enterprise

Pushbutton

### Wi-Fi QoS Management™

Default DSCP to UP mapping

DSCP QoS Map

Mirrored Stream Classification Service

    MSCS setup at association

Stream Classification Service