

# 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: WFA129986**

# **Product Info**

Date of Certification July 26, 2024

Company Vodafone Group PLC

Product Name Ultra HUB7

Product Model Variant DG4278VF

Model Number DG4278VF

**Category** Routers

Sub-category Cable, DSL or Other Broadband Gateway (Integrated Home Access

Device)

# **Summary of Certifications**

CLASSIFICATION CERTIFICATION

Network management WMM®

Wi-Fi Agile Multiband™

Security Protected Management Frames

WPA2<sup>™</sup>-Enterprise 2018-04 WPA2<sup>™</sup>-Personal 2021-01 WPA3<sup>™</sup>-Enterprise 2022-12 WPA3<sup>™</sup>-Personal 2023-12

Wi-Fi (MAC/PHY) 2.4 GHz Spectrum Capabilities

5 GHz Spectrum Capabilities

Spectrum & Regulatory
Wi-Fi CERTIFIED 6®
Wi-Fi CERTIFIED 7™
Wi-Fi CERTIFIED™ a
Wi-Fi CERTIFIED™ b
Wi-Fi CERTIFIED™ g
Wi-Fi CERTIFIED™ n



# Wi-Fi CERTIFIED® Certificate

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Role: Access Point Page 2 of 3

## Wi-Fi Components

Wi-Fi Component Operating System

Linux

Wi-Fi Component Firmware

23.2

## **RF Architecture**

Bands Supported	Transmit (Tx)	Receive (Rx)
2.4 GHz	4	4
5 GHz	4	4

#### 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

## **Protected Management Frames**

#### **Spectrum & Regulatory**

802.11d 802.11h

#### **WMM®**

#### WPA2™-Enterprise 2018-04

EAP methods

## WPA2™-Personal 2021-01

#### WPA3™-Enterprise 2022-12

EAP methods 192-bit security

#### WPA3™-Personal 2023-12

AKM 24
Beacon Protection
SAE-Public Key

#### Wi-Fi Agile Multiband™

#### Wi-Fi CERTIFIED 6®

4 antenna support

A-MPDU with A-MSDU

Basic Trigger frame in HE MU PPDU

BSRP Trigger frame

Compressed Block Ack Rx (buffer size 256)

DL MU-MIMO

DL OFDMA

Individual Target Wake Time



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#### Wi-Fi CERTIFIED 6® (continued)

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-RTS Trigger frame

Operating mode subfield in A-Control field

Operating mode indication

Operating mode UL MU Rx

SU beamformer

SU-MIMO

TXOP RTS Threshold

**UL OFDMA** 

#### Wi-Fi CERTIFIED 7™

A-MPDU with A-MSDU

**BSRP** Trigger frame

BSS critical update

Compressed Block Ack Rx (buffer size 256)

DL MU-MIMO

DL OFDMA

Dynamic MU SMPS

EMLSR (Enhanced Multilink Single-Radio)

LDPC Rx

LDPC Tx

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

#### Wi-Fi CERTIFIED 7™ (continued)

Multi-link reconfiguration – AP restart

Multi-RU

MU-RTS Trigger frame

Operating mode indication

STR (Simultaneous Transmit and Receive)

SU-MIMO

Triggered uplink access optimization

**UL MU-MIMO** 

**UL OFDMA** 

#### Wi-Fi CERTIFIED™ a

#### Wi-Fi CERTIFIED™ ac

A-MPDU with A-MSDU

DL MU-MIMO

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

A-MPDU Tx

HT Duplicate Mode

**OBSS** on Extension Channel

Short Guard Interval

**STBC**