



# 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: WFA129986**

## Product Info

<b>Date of Certification</b>	July 26, 2024
<b>Company</b>	Vodafone Group PLC
<b>Product Name</b>	Ultra HUB7
<b>Product Model Variant</b>	DG4278VF
<b>Model Number</b>	DG4278VF
<b>Category</b>	Routers
<b>Sub-category</b>	Cable, DSL or Other Broadband Gateway (Integrated Home Access Device)

## Summary of Certifications

<b>CLASSIFICATION</b>	<b>CERTIFICATION</b>
<b>Connectivity</b>	2.4 GHz Spectrum Capabilities 5 GHz Spectrum Capabilities Wi-Fi CERTIFIED 6® Wi-Fi CERTIFIED 7™ Wi-Fi CERTIFIED™ a Wi-Fi CERTIFIED™ ac Wi-Fi CERTIFIED™ b Wi-Fi CERTIFIED™ g Wi-Fi CERTIFIED™ n
<b>Optimization</b>	WMM® Wi-Fi Agile Multiband™
<b>Security</b>	Protected Management Frames WPA2™-Enterprise 2018-04 WPA2™-Personal 2021-01 WPA3™-Enterprise 2022-12 WPA3™-Personal 2023-12
<b>Spectrum &amp; Regulatory Features</b>	Spectrum & Regulatory

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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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Page 3 of 3

## 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

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