



# 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](https://www.wi-fi.org/certification/programs)

**Certification ID: WFA134171**

## Product Info

<b>Date of Certification</b>	February 20, 2025
<b>Company</b>	Extreme Networks
<b>Product Name</b>	AP4020 Universal Wireless Wi-Fi 7
<b>Product Model Variant</b>	WiFi 7
<b>Model Number</b>	AP4020-WW
<b>Category</b>	Routers
<b>Sub-category</b>	Enterprise/Service Provider Access Point, Switch/Controller or Router

## Summary of Certifications

CLASSIFICATION	CERTIFICATION
<b>Connectivity</b>	2.4 GHz Spectrum Capabilities 5 GHz Spectrum Capabilities 6 GHz Spectrum Capabilities Wi-Fi CERTIFIED 6® Release 2 Wi-Fi CERTIFIED 7™ Wi-Fi CERTIFIED™ a Wi-Fi CERTIFIED™ ac Wi-Fi CERTIFIED™ n Wi-Fi Enhanced Open™ 2023-12
<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 2024-10
<b>Spectrum &amp; Regulatory Features</b>	Spectrum & Regulatory

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Role: Access Point

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## Wi-Fi Components

### Wi-Fi Component Operating System

Linux

### Wi-Fi Component Firmware

17.10.369.61

### 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  
40 MHz Channel Width in 2.4 GHz

### Spectrum & Regulatory (continued)

802.11d  
802.11h

### 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

### WMM®

Max Throughput

### WPA2™-Enterprise 2018-04

EAP methods

### 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  
320 MHz channel width in 6 GHz

### WPA2™-Personal 2021-01

### WPA3™-Enterprise 2022-12

EAP methods  
192-bit security  
Fast Transition OTA on WPA3-Enterprise  
Fast Transition OTA on WPA3-Enterprise transition mode

### Protected Management Frames

### Spectrum & Regulatory

### WPA3™-Personal 2024-10

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## WPA3™-Personal 2024-10 (continued)

AKM 24  
Fast Transition OTA on WPA3-Personal  
Fast Transition OTA on WPA3-Personal transition mode  
Beacon Protection

## Wi-Fi Agile Multiband™

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

## Wi-Fi CERTIFIED 6® Release 2

A-MPDU with A-MSDU  
Basic Trigger frame in HE MU PPDU  
Beamforming sounding  
BSRP Trigger frame  
Compressed Block Ack Rx (buffer size 256)  
Compressed Block Ack Tx (buffer size 256)  
DL MU-MIMO  
DL OFDMA  
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  
Operating mode subfield in A-Control field  
Operating mode indication  
Operating mode UL MU Rx  
SU beamformer  
SU-MIMO

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

TXOP RTS Threshold  
UL OFDMA  
Wi-Fi 6E  
Co-located BSS  
Wi-Fi 6 Release 2 features  
UL MU-MIMO  
UL MU Control  
Target Wake Time information frames  
Dynamic MU SMPS  
Preamble Puncturing

## Wi-Fi CERTIFIED 7™

Advertised TID-to-link mapping  
A-MPDU with A-MSDU  
Beamforming sounding  
BSRP Trigger frame  
BSS critical update  
Compressed Block Ack Rx (buffer size 256)  
Compressed Block Ack Tx (buffer size 256)  
DL MU-MIMO  
DL OFDMA  
Dynamic MU SMPS  
EMLSR (Enhanced Multilink Single-Radio)  
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

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## Wi-Fi CERTIFIED 7™ (continued)

Multi-link reconfiguration – AP removal  
Multi-link reconfiguration – AP restart  
Multi-RU  
MU-RTS Trigger frame  
Operating mode indication  
    Operating mode indication for 320 MHz  
Static puncturing  
STR (Simultaneous Transmit and Receive)  
SU-MIMO  
Triggered uplink access optimization  
UL MU-MIMO  
UL OFDMA

## Wi-Fi CERTIFIED™ n (continued)

STBC

## Wi-Fi Enhanced Open™ 2023-12

## Wi-Fi CERTIFIED™ a

## Wi-Fi CERTIFIED™ ac

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

## Wi-Fi CERTIFIED™ n

A-MPDU Tx  
HT Duplicate Mode  
OBSS on Extension Channel  
RIFS  
Short Guard Interval

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