



# 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: WFA131171**

## Product Info

|                              |   |
|------------------------------|---|
| <b>Date of Certification</b> | September 16, 2024  |
| <b>Company</b>               | HAN Networks Co., Ltd.  |
| <b>Product Name</b>          | HAN Access Point  |
| <b>Product Model Variant</b> | AP511   |
| <b>Model Number</b>          | AP511   |
| <b>Category</b>              | Routers   |
| <b>Sub-category</b>          | Enterprise/Service Provider Access Point, Switch/Controller or Router |

## Summary of Certifications

| <b>CLASSIFICATION</b> | <b>CERTIFICATION</b>   |
|-----------------------|--|
| <b>Access</b>         | Passpoint® Release 3   |
| <b>Connectivity</b>   | 2.4 GHz Spectrum Capabilities<br>5 GHz Spectrum Capabilities<br>6 GHz Spectrum Capabilities<br>Wi-Fi CERTIFIED 6®<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 Enhanced Open™ 2023-12 |
| <b>Optimization</b>   | WMM®<br>WMM®-Power Save<br>Wi-Fi Agile Multiband™  |
| <b>Security</b>       | Protected Management Frames<br>WPA2™-Enterprise 2018-04<br>WPA2™-Personal 2021-01<br>WPA3™-Enterprise 2022-12<br>WPA3™-Personal 2023-12  |



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## Summary of Certifications (continued)

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### CLASSIFICATION

### CERTIFICATION

Spectrum & Regulatory  
Features

Spectrum & Regulatory



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Role: Access Point

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## Wi-Fi Components

### Wi-Fi Component Operating System

linux 5.4

### Wi-Fi Component Firmware

SPF 12.2

### 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

### Passpoint® Release 3 (continued)

Terms and Conditions  
Venue Information

### 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

### 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

### WMM®

### WMM®-Power Save

### WPA2™-Enterprise 2018-04

EAP methods

### Passpoint® Release 3

Roaming Consortium Selection

### WPA2™-Personal 2021-01

### WPA3™-Enterprise 2022-12



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## WPA3™-Enterprise 2022-12 (continued)

EAP methods  
192-bit security

## WPA3™-Personal 2023-12

AKM 24  
Beacon Protection

## Wi-Fi Agile Multiband™

Automatically populate BSS Transition candidate list  
Cellular Data aware

## Wi-Fi CERTIFIED 6®

A-MPDU with A-MSDU  
Basic Trigger frame in HE MU PPDU  
BSRP Trigger frame  
Co-located BSS  
Compressed Block Ack Rx (buffer size 256)  
Compressed Block Ack Tx (buffer size 256)  
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  
M-BSSID  
Operating mode indication

## Wi-Fi CERTIFIED 6® (continued)

SU beamformer  
SU-MIMO  
TXOP RTS Threshold  
UL OFDMA  
Wi-Fi 6E

## Wi-Fi CERTIFIED 7™

A-MPDU with A-MSDU  
BSRP Trigger frame  
BSS critical update  
Compressed Block Ack Rx (buffer size 256)  
Compressed Block Ack Tx (buffer size 256)  
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  
Multi-RU  
MU-RTS Trigger frame  
Operating mode indication  
Static puncturing  
STR (Simultaneous Transmit and Receive)  
SU-MIMO  
Triggered uplink access optimization  
UL OFDMA

## Wi-Fi CERTIFIED™ a

## Wi-Fi CERTIFIED™ ac



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## Wi-Fi CERTIFIED™ ac (continued)

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

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

## Wi-Fi Enhanced Open™ 2023-12