



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: WFA131992

Product Info

Date of Certification	February 26, 2025
Company	HAN Networks Co., Ltd.
Product Name	HAN Access Point
Product Model Variant	add MCS12-13
Model Number	AP521
Category	Routers
Sub-category	Enterprise/Service Provider Access Point, Switch/Controller or Router

Summary of Certifications

CLASSIFICATION	CERTIFICATION
Access	Passpoint® Release 3
Connectivity	2.4 GHz Spectrum Capabilities 5 GHz Spectrum Capabilities 6 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 Wi-Fi Enhanced Open™ 2023-12
Optimization	WMM® WMM®-Power Save Wi-Fi Agile Multiband™
Security	Protected Management Frames WPA2™-Enterprise 2018-04 WPA2™-Personal 2021-01 WPA3™-Enterprise 2022-12 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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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	4	4
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

Unschedule auto PS

WPA2™-Enterprise 2018-04

EAP methods

Passpoint® Release 3

Roaming Consortium Selection

WPA2™-Personal 2021-01



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WPA3™-Enterprise 2022-12

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
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 subfield in A-Control field
Operating mode indication

Wi-Fi CERTIFIED 6® (continued)

Operating mode UL MU Rx
SU beamformer
SU-MIMO
TXOP RTS Threshold
UL OFDMA
Wi-Fi 6E
Co-located BSS

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
MCS 12-13 Rx
MCS 12-13 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



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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

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

Wi-Fi Enhanced Open™ 2023-12