



# 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: WFA118603**

## Product Info

<b>Date of Certification</b>	March 7, 2022
<b>Company</b>	Huawei Device Co., Ltd.
<b>Product Name</b>	NoteBook
<b>Product Model Variant</b>	NbF-X
<b>Model Number</b>	NbF-X
<b>Category</b>	Computers & Accessories
<b>Sub-category</b>	Laptop Computer

## Summary of Certifications

<b>CLASSIFICATION</b>	<b>CERTIFICATION</b>
<b>Access</b>	Wi-Fi Protected Setup™
<b>Connectivity</b>	2.4 GHz Spectrum Capabilities 5 GHz Spectrum Capabilities Wi-Fi CERTIFIED 6® Wi-Fi CERTIFIED™ a Wi-Fi CERTIFIED™ ac Wi-Fi CERTIFIED™ b Wi-Fi CERTIFIED™ g Wi-Fi CERTIFIED™ n Wi-Fi Direct® Wi-Fi Enhanced Open™ 2021-01
<b>Optimization</b>	WMM® WMM®-Power Save Wi-Fi Agile Multiband™
<b>Security</b>	Protected Management Frames WPA2™-Enterprise 2018-04 WPA2™-Personal 2021-01 WPA3™-Enterprise 2020-02 WPA3™-Personal 2020-12

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Certification ID: WFA118603



## Summary of Certifications (continued)

Page 2 of 4

### CLASSIFICATION

### CERTIFICATION

Spectrum & Regulatory  
Features

Spectrum & Regulatory

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Role: Station

Page 3 of 4

## Wi-Fi Components

### Wi-Fi Component Operating System

Windows 11

### Wi-Fi Component Firmware

22.80

### RF Architecture

Bands Supported	Transmit (Tx)	Receive (Rx)
2.4 GHz	2	2
5 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

### 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

802.11h

### WMM®

### WMM®-Power Save

Legacy Power Save  
Unschedule auto PS

### WPA2™-Enterprise 2018-04

EAP methods  
EAP TLS  
EAP TTLS  
PEAPv0

### WPA2™-Personal 2021-01

### WPA3™-Enterprise 2020-02

EAP methods  
EAP TLS  
EAP TTLS  
PEAPv0  
192-bit security  
192-bit security RSA 3K with the  
TLS\_ECDHE\_RSA\_WITH\_AES\_256\_GCM\_SHA384  
cipher suite  
Fast Transition OTA on WPA3-Enterprise  
Fast Transition OTA on WPA3-Enterprise transition mode  
Server Certificate Validation

### WPA3™-Personal 2020-12

### Wi-Fi Agile Multiband™

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Page 4 of 4

## Wi-Fi Agile Multiband™ (continued)

Beacon Report Measurement Active Mode  
Beacon Report Measurement Passive Mode  
Fast Transition OTA on WPA2-Enterprise

## Wi-Fi CERTIFIED 6®

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

## Wi-Fi CERTIFIED™ a

## Wi-Fi CERTIFIED™ ac

Extended 5 GHz Channel Support

## Wi-Fi CERTIFIED™ ac (continued)

A-MPDU with A-MSDU  
DL MU-MIMO  
LDPC Rx  
MCS 8-9 Rx  
Short Guard Interval  
STBC  
LDPC Tx  
SU beamformee

## Wi-Fi CERTIFIED™ b

## Wi-Fi CERTIFIED™ g

## Wi-Fi CERTIFIED™ n

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

## Wi-Fi Direct®

## Wi-Fi Enhanced Open™ 2021-01

## Wi-Fi Protected Setup™

PIN  
Pushbutton

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