



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: WFA132451

Product Info

Date of Certification	September 4, 2024
Company	Fujitsu Client Computing Limited
Product Name	M.2 Module /FCZSW11H85139-11be
Product Model Variant	A Derivative of original model
Model Number	FCZSW11H85139-11be
Category	Computers & Accessories
Sub-category	External Adapter

Summary of Certifications

CLASSIFICATION	CERTIFICATION
Connectivity	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™ b Wi-Fi CERTIFIED™ g Wi-Fi CERTIFIED™ n Wi-Fi Enhanced Open™ 2023-12
Optimization	WMM® WMM®-Power Save Wi-Fi Agile Multiband™ Wi-Fi QoS Management™
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

Windows 11

Wi-Fi Component Firmware

23.70

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®

WMM®-Power Save

Legacy Power Save
Unschedule auto PS

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™-Enterprise 2018-04

EAP methods
EAP TLS
EAP TTLS
PEAPv0

Protected Management Frames

WPA2™-Personal 2021-01

Spectrum & Regulatory

WPA3™-Enterprise 2022-12



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WPA3™-Enterprise 2022-12 (continued)

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
Server Certificate Validation

WPA3™-Personal 2023-12

AKM 24
Beacon Protection

Wi-Fi Agile Multiband™

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

Wi-Fi CERTIFIED 6® Release 2

A-MPDU with A-MSDU
Beamforming sounding
BSRP Trigger frame
Compressed Block Ack Rx (buffer size 256)
Compressed Block Ack Tx (buffer size 256)
DL MU-MIMO
DL MU PPDU multi-tone
HE NDP
LDPC Tx
LDPC Rx
Individual Target Wake Time

Wi-Fi CERTIFIED 6® Release 2 (continued)

MCS 10-11 Rx
MCS 10-11 Tx
MCS 8-9 Rx
MCS 8-9 Tx
MU EDCA Parameter Set element
MU-BAR Trigger frame
MU-RTS Trigger frame
Operating mode control field
Operating mode subfield in A-Control field
Operating mode indication
SU beamformee
SU-MIMO
UL OFDMA
UL TB PPDU multi-tone
Wi-Fi 6E
Multiple M-BSSID
Wi-Fi 6 Release 2 features
UL MU-MIMO
UL MU Control
Target Wake Time information frames
Broadcast Target Wake Time
Dynamic MU SMPS
M-BSSID control frames
Preamble Puncturing

Wi-Fi CERTIFIED 7™

Advertised TID-to-link mapping
A-MPDU with A-MSDU
Beamforming sounding
BSS critical update
Compressed Block Ack Rx (buffer size 256)
Compressed Block Ack Tx (buffer size 256)
Compressed Block Ack Rx (buffer size 512)
Compressed Block Ack Tx (buffer size 512)



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Wi-Fi CERTIFIED 7™ (continued)

DL MU-MIMO
Dynamic MU SMPS
EMLSR (Enhanced Multilink Single-Radio)
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
Multi-link reconfiguration – AP removal
Multi-link reconfiguration – AP restart
Multi-RU
Operating mode indication
 Operating mode indication for 320 MHz
Static puncturing
SU-MIMO
Triggered uplink access optimization
UL MU-MIMO
UL OFDMA

Wi-Fi CERTIFIED™ a

Wi-Fi CERTIFIED™ ac

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

Wi-Fi CERTIFIED™ ac (continued)

SU beamformee

Wi-Fi CERTIFIED™ b

Wi-Fi CERTIFIED™ g

Wi-Fi CERTIFIED™ n

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

Wi-Fi Enhanced Open™ 2023-12

Wi-Fi QoS Management™

Default DSCP to UP mapping
DSCP QoS Map
Mirrored Stream Classification Service