



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: WFA130057

Product Info

Date of Certification	March 8, 2024
Company	Fujitsu Client Computing Limited
Product Name	M.2 Module / FCZSW11E39889-11be
Product Model Variant	A Derivative of original model
Model Number	FCZSW11E39889-11be
Category	Other
Sub-category	Other

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



Wi-Fi CERTIFIED™ Certificate

Certification ID: WFA130057



Summary of Certifications (continued)

Page 2 of 5

CLASSIFICATION

CERTIFICATION

Spectrum & Regulatory
Features

Spectrum & Regulatory



Wi-Fi CERTIFIED™ Certificate

Certification ID: WFA130057



Role: Station

Page 3 of 5

Wi-Fi Components

Wi-Fi Component Operating System

Windows 11

Wi-Fi Component Firmware

1.0.8.21-89b6e002-fw12fd3c65

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



Wi-Fi CERTIFIED™ Certificate

Certification ID: WFA130057



Role: Station

Page 4 of 5

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
UL Extended Range
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)



Wi-Fi CERTIFIED™ Certificate

Certification ID: WFA130057



Role: Station

Page 5 of 5

Wi-Fi CERTIFIED 7™ (continued)

Compressed Block Ack Tx (buffer size 512)
DL MU-MIMO
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
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

Wi-Fi CERTIFIED™ ac (continued)

Short Guard Interval
STBC
LDPC Tx
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
Stream Classification Service
 SCS with QoS characteristics