



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: WFA77387

Product Info

| | |
|-----------------------|---|
| Date of Certification | November 28, 2023 |
| Company | Espressif Systems (Shanghai) Co., Ltd. |
| Product Name | Wi-Fi & Bluetooth Internet of Things Module |
| Product Model Variant | ESPRESSIF ESP32-WROOM-32D |
| Model Number | ESP32-WROOM-32D |
| Category | Other |
| Sub-category | Embedded Module |

Summary of Certifications

| CLASSIFICATION | CERTIFICATION |
|--------------------|---|
| Access | Wi-Fi Protected Setup™ |
| Network management | WMM® |
| Security | Protected Management Frames WPA2™-Enterprise 2018-04 WPA2™-Personal 2018-04 WPA3™-Enterprise 2018-04 WPA3™-Personal 2019-08 |
| Wi-Fi (MAC/PHY) | 2.4 GHz Spectrum Capabilities Wi-Fi CERTIFIED™ b Wi-Fi CERTIFIED™ g Wi-Fi CERTIFIED™ n |

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Role: Station

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Wi-Fi Components

Wi-Fi Component Operating System

FreeRTOS, version:V8.2.0

Wi-Fi Component Firmware

bdd9eff

RF Architecture

| Bands Supported | Transmit (Tx) | Receive (Rx) |
|-----------------|---------------|--------------|
| 2.4 GHz | 1 | 1 |

Certifications

2.4 GHz Spectrum Capabilities

20 MHz Channel Width in 2.4 GHz
40 MHz Channel Width in 2.4 GHz

Protected Management Frames

WMM®

WPA2™-Enterprise 2018-04

EAP methods
EAP TLS
EAP TTLS
PEAPv0

WPA2™-Personal 2018-04

WPA3™-Enterprise 2018-04

EAP methods
EAP TLS
EAP TTLS
PEAPv0

WPA3™-Personal 2019-08

Wi-Fi CERTIFIED™ b

Wi-Fi CERTIFIED™ g

Wi-Fi CERTIFIED™ n

A-MPDU Tx
Short Guard Interval
STBC

Wi-Fi Protected Setup™

PIN
Pushbutton

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