



# 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: WFA113576**

## Product Info

<b>Date of Certification</b>	August 13, 2021
<b>Company</b>	Espressif Systems (Shanghai) Co., Ltd.
<b>Product Name</b>	Wi-Fi & Bluetooth Internet of Things Module
<b>Product Model Variant</b>	ESP32-MINI-1
<b>Model Number</b>	ESP32-MINI-1
<b>Category</b>	Other
<b>Sub-category</b>	Embedded Module

## Summary of Certifications

<b>CLASSIFICATION</b>	<b>CERTIFICATION</b>
<b>Connectivity</b>	2.4 GHz Spectrum Capabilities Wi-Fi CERTIFIED™ b Wi-Fi CERTIFIED™ g Wi-Fi CERTIFIED™ n
<b>Optimization</b>	WMM®
<b>Security</b>	Protected Management Frames WPA2™-Enterprise 2018-04 WPA2™-Personal 2021-01 WPA3™-Enterprise 2020-02 WPA3™-Personal 2020-02 WPA™-Enterprise WPA™-Personal



# Wi-Fi CERTIFIED™ Certificate

Certification ID: WFA113576



Role: Station

Page 2 of 2

## Wi-Fi Components

### Wi-Fi Component Operating System

Free RTOS

### Wi-Fi Component Firmware

E

### RF Architecture

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

## Certifications

### 2.4 GHz Spectrum Capabilities

20 MHz Channel Width  
40 MHz Channel Width

### Protected Management Frames

### WMM®

### 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  
Server Certificate Validation

### WPA3™-Personal 2020-02

### WPA™-Enterprise

### WPA™-Personal

### Wi-Fi CERTIFIED™ b

### Wi-Fi CERTIFIED™ g

### Wi-Fi CERTIFIED™ n

STBC  
A-MPDU Tx  
Short Guard Interval