



## Wi-Fi CERTIFIED™ Interoperability 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: WFA77387**

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<b>Date of Last Certification</b>	April 25, 2018
<b>Company</b>	Espressif Inc.
<b>Product</b>	Wi-Fi & Bluetooth Internet of Things Module
<b>Model Number</b>	ESP32-WROOM-32D
<b>Product Identifier(s)</b>	
<b>Category</b>	Other
<b>Subcategory</b>	Embedded Module
<b>Hardware Version</b>	Product: V2.2, Wi-Fi Component: V2.2
<b>Firmware Version</b>	Product: V2.1.0, Wi-Fi Component: bdd9eff
<b>Operating System</b>	Proprietary / Other: FreeRTOS, version: V8.2.0
<b>Frequency Band(s)</b>	2.4 GHz

### Summary of Certifications

<b>CLASSIFICATION</b>	<b>PROGRAM</b>
Connectivity	Wi-Fi CERTIFIED™ b, g, n
	WPA™ – Enterprise, Personal
	WPA2™ – Enterprise, Personal
Optimization	WMM®
Access	Wi-Fi Protected Setup™



**Security**

WPA™ – Enterprise, Personal  
WPA2™ – Enterprise, Personal  
EAP Type(s)  
EAP-TLS  
EAP-TTLS/MSCHAPv2  
PEAPv0/EAP-MSCHAPv2

**Wi-Fi CERTIFIED™ b**

**Wi-Fi CERTIFIED™ g**

**Wi-Fi CERTIFIED™ n**

2.4 GHz  
1 Spatial Stream 2.4 GHz  
Short Guard Interval  
TX A-MPDU  
STBC Receive  
40 MHz operation in 2.4 GHz, with coexistence mechanisms  
Reduced Interframe Space (RIFS)

**WMM®**

**Wi-Fi Protected Setup™**

2.4 GHz  
PIN  
Push-Button (PBC)