



# 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: WFA79382**

## Product Info

<b>Date of Certification</b>	October 2, 2018
<b>Company</b>	Ruckus Wireless, Inc.
<b>Product Name</b>	Ruckus E510 / ZoneDirector 3000
<b>Product Model Variant</b>	2018-10-02 (WFA79382 - 7528176)
<b>Model Number</b>	E510 / ZD3000
<b>Category</b>	Routers
<b>Sub-category</b>	Enterprise/Service Provider Access Point, Switch/Controller or Router

## Summary of Certifications

CLASSIFICATION	CERTIFICATION
<b>Connectivity</b>	2.4 GHz Spectrum Capabilities 5 GHz Spectrum Capabilities Wi-Fi CERTIFIED™ a Wi-Fi CERTIFIED™ ac Wi-Fi CERTIFIED™ b Wi-Fi CERTIFIED™ g Wi-Fi CERTIFIED™ n
<b>Optimization</b>	WMM® Wi-Fi Agile Multiband™
<b>Security</b>	Protected Management Frames WPA2™-Enterprise 2018-04 WPA2™-Personal 2018-04 WPA™-Enterprise WPA™-Personal
<b>Spectrum &amp; Regulatory Features</b>	Spectrum & Regulatory



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Role: Access Point

Page 2 of 3

## Wi-Fi Components

### Wi-Fi Component Operating System

Linux

### Wi-Fi Component Firmware

10.1.0.7.12

### RF Architecture

Bands Supported	Transmit (Tx)	Receive (Rx)
2.4 GHz	2	2
5 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

### 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

### Protected Management Frames

### Spectrum & Regulatory

802.11d  
802.11h

### WMM®

### WPA2™-Enterprise 2018-04

EAP methods

### WPA2™-Personal 2018-04

### WPA™-Enterprise

### WPA™-Personal

### Wi-Fi Agile Multiband™

Automatically populate BSS Transition candidate list  
Cellular Data aware  
Fast Transition OTA on WPA2-Enterprise  
Fast Transition OTA on WPA2-Personal

### Wi-Fi CERTIFIED™ a

### Wi-Fi CERTIFIED™ ac

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



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Page 3 of 3

## Wi-Fi CERTIFIED™ ac (continued)

SU beamformer

## Wi-Fi CERTIFIED™ b

## Wi-Fi CERTIFIED™ g

## Wi-Fi CERTIFIED™ n

OBSS on Extension Channel

RIFS

Short Guard Interval

STBC

A-MPDU Tx