

# MEC-WIFI-M432B-H

Mini PCIe Wireless 802.11 a/b/g/n/ac 2T2R BT 4.0

*Product Datasheet*



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## Revision History

Date	Revision	Description
2016.07.01	1.0	First Released
2017.09.19	1.1	Add <i>WIFI Direct</i> supports wireless peer to peer applications
2019.04.25	1.2	Win10 OS supported
2020.07.29	1.3	Operating temperature revised



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## Introduction

The MEC-WIFI-M432B-H is the 802.11ac dual band WLAN + Bluetooth 4.0 Half Mini Card to enable Wireless LAN very high speed and functionalities also BT connectivity. This solution is composed of the Realtek RTL8812AE WLAN chip and RTL8761AU BT chip

## Product Features

- Form factor: Half Mini Card type
- IEEE 802.11a/b/g/n/ac draft 2.0 compatible WLAN
- WLAN supports 2.4GHz and 5GHz channel
- 2T2R MIMO technology for extended reception robustness and exceptional throughput
- Bluetooth: BT 2.1/3.0/4.0
- Max. PHY data rate: 866.7Mbps using 80MHz bandwidth
- I/O: WLAN: PCIe1.1. BT: USB 2.0
- 2 x 50 Ohm RF connectors for 2.4G/5G diversity data transmission
- Win7, Win8 and Win10 OS supported
- RoHS compliant
- WIFI Direct supports wireless peer to peer applications

## Antenna Define

RF Connector #	*2
Antenna design	Two antenna for TX/RX, Diversity



## General Specification

IEEE Wireless Networking Standard	IEEE 802.11 a/b/g/n/ac Wireless Local Area Networks
RF Frequency Range	2.4G~2.5GHz / 5.725~5.785GHz ISM Dual Band
PHY Rate	173Mbps using 20MHz bandwidth 300Mbps using 40MHz bandwidth 866.7Mbps using 80MHz bandwidth
MIMO Technology	2T2R
IEEE 802.11i security mechanisms	WPA, WPA2. Open, shared key, pair-wise key authentication
Other IEEE standard	802.11e QoS Enhancement(WMM) 802.11h TPC, Spectrum measurement
Operating Voltage	+3.3V (+/-0.3V)
Interface	WLAN: PCIe 1.1 Bluetooth: USB2.0

## Board Specification

WLAN Chip	Realtek RTL8812AE
BT Chip	Realtek RTL8761AU
Antenna	* 2 (External antenna)
RF connector	Micro coaxial SMD : Foxconn HD9601F-T2 or iPEX 20279-001E-01 , or equivalent
Form Factor	Mini PCIe type



## Environmental

Operating	Operating temperature: 0 to 70 degree C Relative Humidity : 5-90% (non-condensing)
Storage	Temperature: -20 to 85 degree C Relative Humidity : 5-95% (non-condensing)

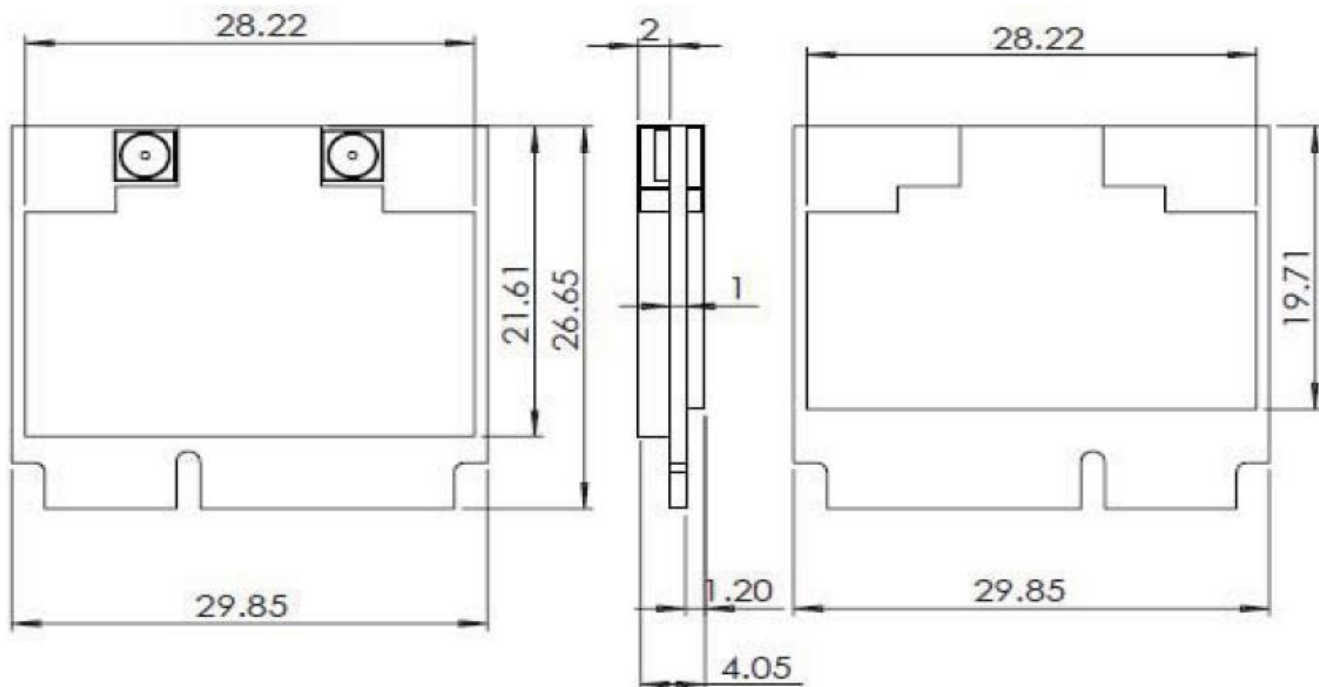
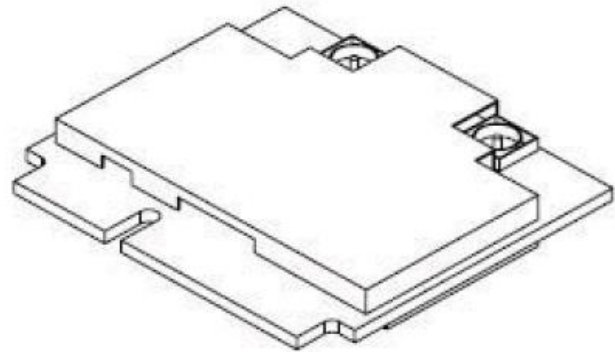
## Mechanical Specification

### ● Board Dimension

Form factor	Half Mini Card		
PCB Dimension	26.65W*29.85L mm		
PCB thickness	1mm (+/- 0.1mm)		
SMD	Double side		
Max. height of components (from PCB)	Top side	Shielding case	2.3mm (+/- 0.2mm)
	Bottom side	0mm	



- Mechanical Drawing



### Software and OS support

- Windows7, Windows8 and Windows10 Realtek WLAN driver ready
- Linux, Android is need to be discussed according to customer requirement.