

WiFi M.2 Module 5GHz 802.11ac/ an/ a

Part Number: WifiM

V1.0



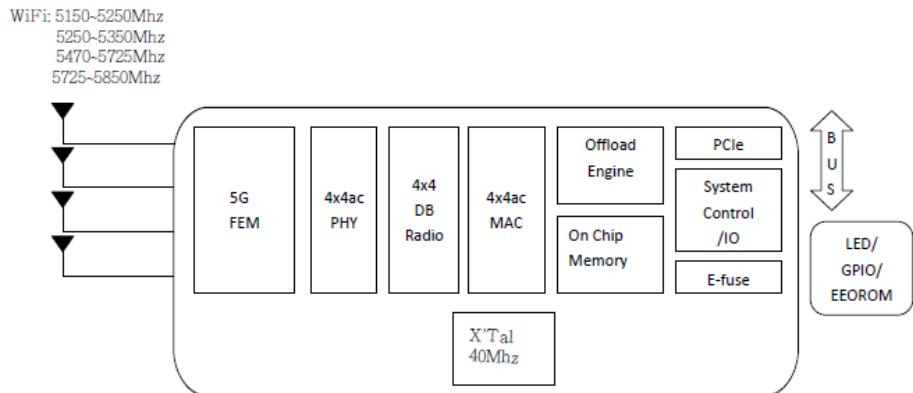
DESCRIPTION

WifiM is a 11ac 5GHz WiFi M.2 Module based on Mediatek MT7615 which is a WiFi Mini PCIe single chip which supports 1733 Mbps PHY rate. It fully complies with IEEE 802.11ac and IEEE 802.11 an standards, offering feature-rich wireless connectivity at high standards, and delivering reliable, cost-effective throughput from an extended distance.

Optimized RF architecture and baseband algorithms provide superb performance and low power consumption. Intelligent MAC design deploys a high efficient offload engine and hardware data processing accelerators which completely offloads Wi-Fi task of the host processor. MT7615 is designed to support standard based features in the areas of security, quality of service and international regulations, giving end users the greatest performance any time and in any circumstance.

With the advent of 802.11ac, multiuser MIMO (MU-MIMO) is defined. MT7615 supports MU-MIMO with different configurations.

MT7615 Block Diagram



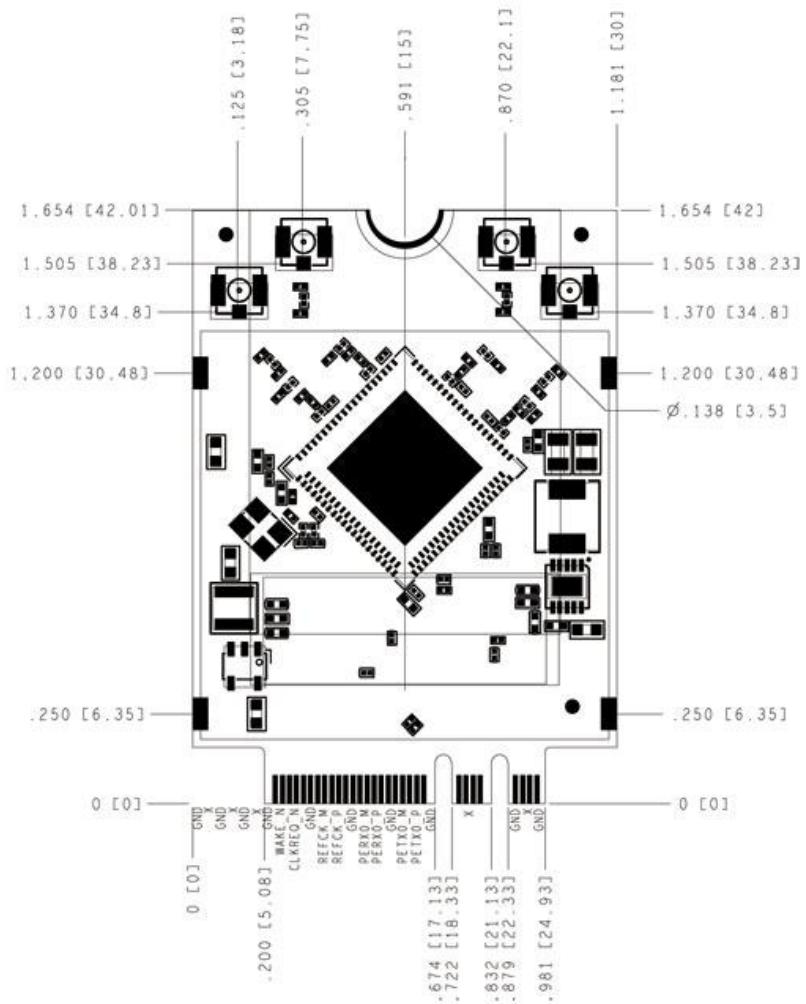
Features:

- Supports 4x4 4SS 11ac wave2 MU-MIMO
- MU-MIMO configurations of
 - 4 users: 4*1ss
- Supports 20,40, 80Mhz channels
- Embedded ARM Cortex R4 processor for full host CPU offload
- Embedded 32-bit RISC microprocessor
- iNIC Gen2 with full Wi-Fi offload
- Highly integrated RF with 40nm low power process
- 4T4R with support of up to 1733Mbps PHY rate
- Noise mitigation:
 - Supports background scan function for fast channel switching
 - Supports spectrum analysis for non-Wi-Fi signals
- Intelligent power saving
- Hardware-based Airtime Fairness (QoS)
- Integrate high efficiency internal 5G PAs
- Intelligent Calibration (iCal) reduces the production time
- WoWLAN via GPIO (client mode)
- Compact 12mm*12mm DRQFN118 package with PCIe Gen2 interface

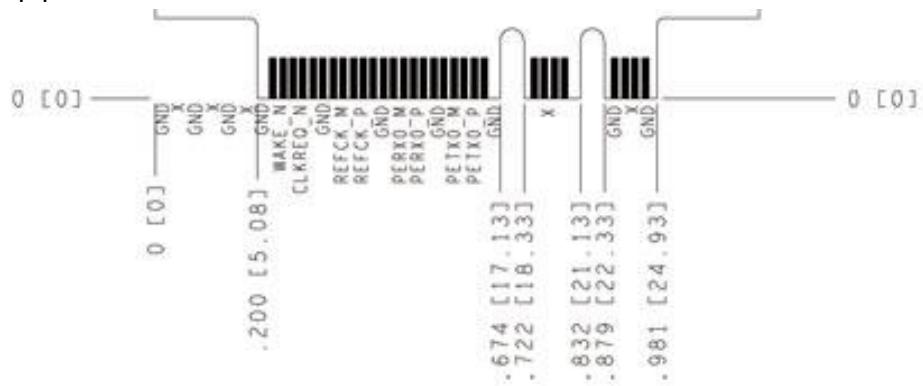
Specification:

Form Factor	M.2 3042 version
Standards	Wireless: IEEE 802.11ac/an (4Tx4R)
Data Rate	IEEE 802.11ac 1733Mbps@TX/RX IEEE 802.11a/n 600Mbps@TX/RX IEEE 802.11a 108Mbps IEEE 802.11ac up to 1733Mbps
Output Power	11a: 16.26dBm +/- 1.5dbm @ 54Mbps 11a/n: 16.96dBm +/- 1.5dbm @ MCS7, HT20, 17.19dbm @ MCS7, HT40 11ac VHT20: 16.96 +/- 1.5dBm @ MCS8 11ac VHT40: 17.19 +/- 1.5dBm @ MCS9 11ac VHT80: 17.87 +/- 1.5dBm @ MCS9
Receiver Sensitivity	11a: -75dBm @ 54Mbps 11a/n: -73dBm @ HT20, MCS7, -71dBm @ HT40, MCS7 11ac: -57dBm +/- 2dBm @ HT20 MCS8 11ac: -54dBm +/- 2dBm @ HT40 MCS9 11ac: -51dBm +/- 2dBm @ HT80 MCS9
Antenna	External Antenna connector (IPEX)
Frequency Range	5.15GHz ~ 5.850GHz
Software	Security: 64/128-bit WEP Encryption, WPA, WPA2 Driver: Linux
Operating Voltage	DC 3.3V ± 5%
Temperature	Operating: 0°C ~ +70°C Storage: -20°C ~ +90°C
Humidity	Operating Humidity: 10%~90% non-condensing Storage Humidity: 10%~90% non-condensing
Dimension	42.01(H) x 30.00(W)mm

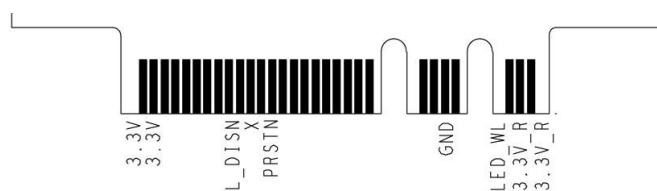
Dimension (mil [mm])



Top pins



Bottom pins



Federal Communications Commission Statement

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the Federal Communications Commission (FCC) rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment causes harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by doing one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement:

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a

separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC Label Instructions:

The outside of final products that contains this module device must display a label referring to the enclosed module. This exterior label can use wording such as:

“Contains

Transmitter Module FCC ID:2ARGX-WIFIM”, or “Contains FCC ID: 2ARGX-WIFIM”, Any similar wording that expresses the same meaning may be used.