

# RM100 User Manual

## Federal Communication Commission Interference

### Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the 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 does cause 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 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.

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

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

Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

## **FCC Radiation Exposure Statement**

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules.

This device is intended only for OEM integrators under the following conditions:

- 1) The antenna must be installed such that 20cm is maintained between the antenna and users, and
- 2) The transmitter module may not be co-located with any other transmitter or antenna,
- 3) For all products market in US, OEM has to limit the operation channels in CH1 to CH11 for 2.4Gband by supplied firmware programming tool. OEM shall not supply any tool or info to the end-user regarding to Regulatory Domain change.

As long as 3 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

## **Canadian Compliance Statement**

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

The device meets the exemption from the routine evaluation limits in section 2.5 of RSS 102 and compliance with RSS-102 RF exposure, users can obtain Canadian information on RF exposure and compliance.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- 1) L'appareil ne doit pas produire de brouillage;
- 2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Le dispositif rencontre l'exemption des limites courantes d'évaluation dans la section 2.5 de RSS 102 et la conformité à l'exposition de RSS-102 rf, utilisateurs peut obtenir l'information canadienne sur l'exposition et la conformité de rf.

## **Radiation Exposure Statement:**

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

## **Déclaration d'exposition aux radiations:**

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

## **IMPORTANT NOTE**

In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

## **End Product Labelling**

The final end product must be labelled in a visible area with the following:

“Contains certified FCC ID: 2AXJ4RM100”.

“Contains certified IC: 26583-RM100”.

## **Manual Information to the End User**

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.

### **1. Overview**

The RM100 Wi-Fi module provides a highly-integrated and flexible platform for developing and evaluating products and applications based on the RTL8720CM-VT2 SoC. The RM100 Wi-Fi module can be either used with development kit for software development or incorporated into OEM products to enable rapid deployment of Wi-Fi connected systems.

The module includes the following components:

RTL8720CM-VT2 chip

An integrated Balun

4MB SPI Flash

Shield

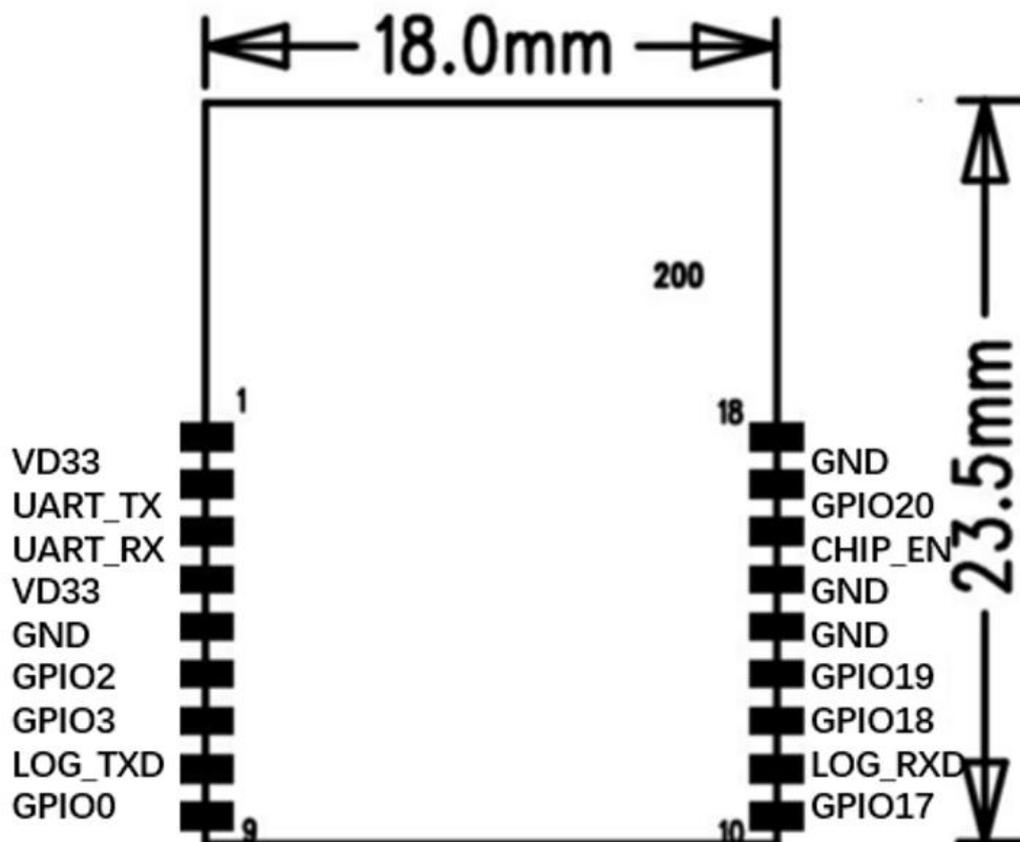
## 2. Interface and pinout

**Interface:**

UART

Power supply

Pinout:



## 3. Electric Feature

Power Supply	Type	DC
	Input	3.3V0.5A
	Typical(11n iperf test mode)	587mW
	Standby Mode	205mW

## 4. Mechanic Feature

Size: 18mm\*23.5mm\*3.9mm

## 5. Wireless Feature

Operating Frequency:2.4GHz:2412~2462MHz

Transfer Rate: 802.11b: 11/5.5/2/1 Mbps

802.11g: 54/48/36/24/18/9/6 Mbps

802.11n: up to 72.2 Mbps

Wireless Channel: ch1-ch11

Transmit Power:18.49dBm(max)

Antenna Type: external antenna with IPEX port

## 6. Physical and Environmental

Operating Temperature: 0°C~40°C

Storage Temperature: 0°C~40°C

Working Humidity: 10%~90% RH

## 7. Additional Description

The module will be installed inside another device. And the outside of the device into which the module is installed will display a label referring to the enclosed module. This exterior label will use the wording such as “Contains FCC ID: 2AXJ4RM100”, or any other similar wording that expresses the same meaning.