Shenzhen Rakwireless Technology RAK634 Wi-Fi Module User Manual

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Contents

Production description

RAK 634 is a wireless router module based on the MT7628N chip. It supports IEEE802.11b/g/n standards, and the module can be widely used in IP cameras, smart homes and Internet of Things projects. RAK 634 module supports both wired and wireless connection methods, with excellent radio frequency performance, wireless transmission is more stable, and the wireless transmission rate can reach 300Mbps.

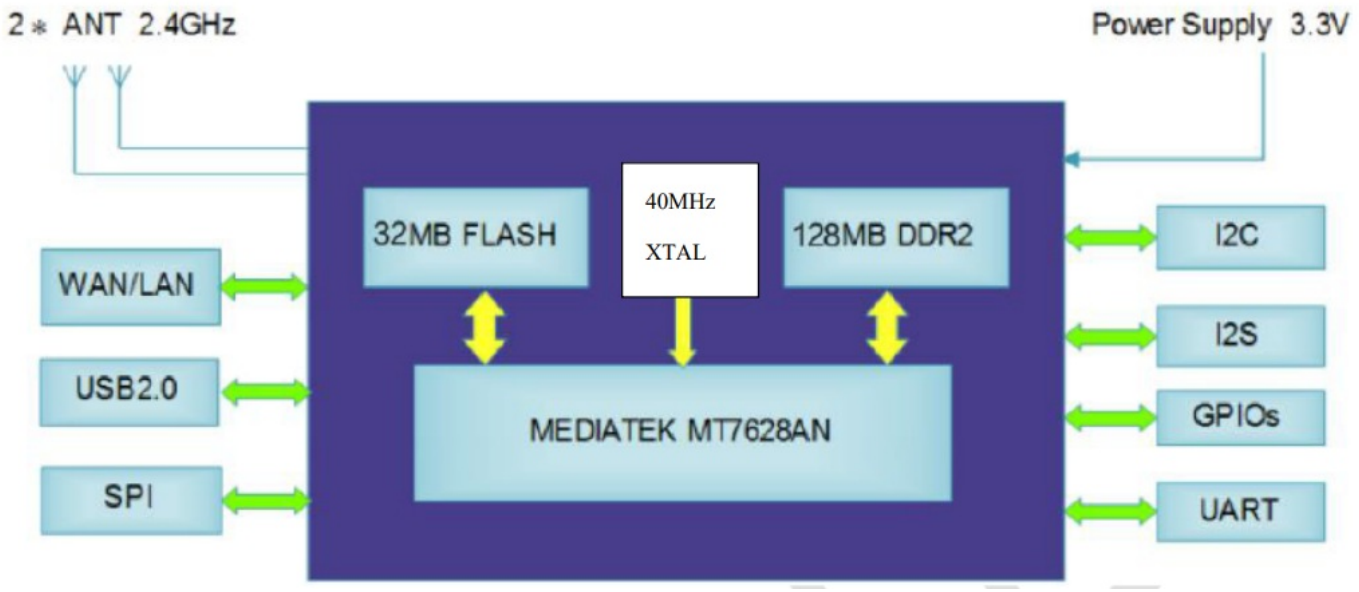
Product spec.

Comply with IEEE802.11b/g/n standard;
Support frequency: 2.402~2.462GHz;
The wireless transmission rate is up to 300Mbps;
Support two antenna connection methods: IPEX and Layout;

- Power supply range 3.3V±0.2V;

  Support IP cameras;
  - Support security monitoring;
  - Support smart home applications;

- Support wireless intelligent control;
- Support wireless security NVR system;



Hardware description

ITEMS	**CONTENTS**
Operating Frequency	2.400-2A835GHz
IEEE Standard	802.11b/g/n
Modulation	llb: CCK, DQPSK, DBPSK lig: 64-QAM,16-QAM, QPSK, BPSK 11n: 64-QAM,16-QAM, QPSK, BPSK
Data rates	llb:1,2,5.5 and 11Mbps 11g:6,9,12,18,24,36,48 and 54 Mbps 11n:MCS0-15 , HT20 reach up to 144 4Mbps. HT40 reach up to 300Mbps

RX Sensitivity	-95d8m (Min)
TX Power	20d8m (Max)
Host Interface	•WAN, 4•LAN, Host USI32.0 .12C , SD-XC, I2S/PCM, 2•UART,SPI,multiple GPIO
Antenna Type	1. Connect to the external antenna through i-pex connector; 2. layout and connect with other type connector;
Dimension	Typical (L X W X H): 47.6mm x 26mm x 2.5mm Tolerance: t0.15mm
Operation Temperature	-10•C to +50•C
Storage Temperature	-40t to +70T
Operation Voltage	3.3Vt0.2V/800mA

Certification warning

CE/UKCA:
Operating frequency range: 2402-2462MHz
Max. output power: 20dBm for CE

Correct Disposal of this product. This marking indicates that this product should not be disposed of with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmentally safe recycling.

Manufacture: Shenzhen RAKwireless Technology Co.,Ltd.

Room 506, Bldg B, New Compark, Pingshan First Road, Taoyuan Street, XiLi Town Nanshan District, Shenzhen, China

Economic operators for EU:

Company	Address
Allnet	Maistr. 2, Munich 82110 Germering, Germany
Marcom SRL (marcomweb)	Via della Metallurgia 11, 37139 Verona, Italy

Economic operators for UK:

Company name: Metavurt Ltd

address: 1st Floor Tuspark Newcastle 27 Grainger Street NE1 5JE Newcastle upon

Tyne UK

Hereby, Shenzhen RAKwireless Technology Co.,Ltd. declares that the radio equipment type RAK2171 is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address:
https://downloads.rakwireless.com/LoRa/RAK2171/Certification/RAK2171_CE_DOC.pdf

FCC/ISED:
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, and
2. this device must accept any interference received, including interference that may cause undesired operation.

Caution: The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: 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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

IC:

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.

This Class B digital apparatus complies with Canadian ICES-003

RF Exposure Statement:
This equipment complies with Industry Canada & FCC radiation exposure limits: This Transmitter must be installed to provide a separation distance of at least 20 cm from all persons.

The proposed FCC IC label format is to be placed on the module. If it is not visible when the module is installed into the system,
“Contains FCC ID: 2AF6B-RAK634, Contains IC: 25908- RAK634” shall be placed on the outside of final host system.

Labelling

- This radio transmitter [25908-RAK634] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Antenna info

Antenna #	Model	Manufacturer	Antenna Gain	Antenna Type	Connector Type
1#	SA05A01RA	HL GLOBAL	5.4dBi for Ant0 5.0dBi for Ant1	PIFA antenna	IPEX Connector
2#	SA03A01RA	HL GLOBAL	5.4dBi for Ant0 5.0dBi for Ant1	PIFA antenna	IPEX Connector
3#	SA05A02RA	HL GLOBAL	5.4dBi for Ant0 5.0dBi for Ant1	PIFA antenna	IPEX Connector
4#	6147F00013	Signal Plus	3.0 dBi for Ant0 & Ant1	PCB Layout Antenna	IPEX Connector
5#	K7ABLG2G4ML 400	Shenzhen RAK Wireless	2.0 dBi for Ant0 & Ant1	Fiber Glass Antenna	N-Type Male

Documents / Resources

	Shenzhen Rakwireless Technology RAK634 Wi-Fi Module [pdf] User Manual RAK634, 2AF6B-RAK634, 2AF6BRAK634, RAK634 Wi-Fi Module, RAK634, Wi-Fi Module

References

- The Official Website of RAKwireless - Where IoT Is Made Easy
- The Official Website of RAKwireless - Where IoT Is Made Easy - RAKwireless - IoT Made Easy