



Qingdao Intelligent Precise Electronics RK8812CU Wireless Module User Manual

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ZDRK8812CU User Manual

Product Name IEEE 802.11 a/b/g/n/ac 2.4GHz+5GHz 2T2R USB Module

Model ZDRK8812CU

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Introduction

Thank you for using the Wi-Fi module product provided by Qingdao Intelligent &Precise Electronics Co., Ltd. Before use, please read this user manual carefully. Please follow the technical specifications when using the module in your design and development activities. Qingdao Intelligent &Precise Electronics Co., Ltd has the right to change the contents of this manual in accordance with the needs of the technical development.

FCC & IC application:

This device complies with Part 15 of the FCC Rules / Industry Canada licence-exempt RSS standard(s). 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. The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

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

MPE Requirements

To satisfy FCC / IC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation.

To ensure compliance, operations at closer to this distance is not recommended.

Region Selection

Limited by local law regulations, the version for North America does not have a region selection option.

Label

Host labeling requirement: Contains transmitter module FCC ID 2AJVQ-RK8812CU".

Host labeling requirement: Contains transmitter module IC 22470-RK8812CU".

Product Information

2.1 Product Information

ZDRK8812CU Wi-Fi USB module is a wireless signal module device that works at 2.4GHz(2412-2462MHz)/5GHz (5150-5350MHz and 5470-5850MHz) .ZDRK8812CU complies with IEEE 802.11a 802.11b 802.11 g 802.11 n and 802.11 ac standards. It supports up to 867Mbps physical layer transmitting rate. ZDRK8812CU supports USB 2.0, which has up to 480Mbps data rate. ZDRK8812CU has a 2T2R structure and has one onboard Antenna. It could provide a stable wireless link with high throughput. ZDRK8812CU is a wireless signal module. It could transmit and receive Wi-Fi wireless signal devices without radar detection. It is widely used to the multi-media device, such as smart TV. Equipped with ZDRK8812CU, a smart TV could access to Wireless Local Network, which is also called WLAN or WIFI network. ZDRK8812CU helps multi-media devices achieve to send & receive data packages in a wireless way.

2.2 Feature

- IEEE standard IEEE 802.11a/b/g/n/ac
- operating Frequency 2.4GHz/5 GHz
- support up to 867Mbps
- 2T2R mode

- Support 20MHz, 40MHz, 80MHz in the 5GHz band, and 20MHz, 40MHz bandwidth in the 2.4GHz band.
- support USB 2.0 high data rate mode,10-pin interface
- support WFA/ WPA/WPA2 /WPS2.0/WAPI security
- RoH
- MAC /baseband/RF RTL8812CU

Product Specification

3.1 Parameter

WLAN Standard	IEEE802.11a/b/g/n/ac
Data Interface	USB2.0
WLAN Modulation Mode	WIFI: 802.11b: CCK, DQPSK, DBPSK 802.11a, 802.11g:64QAM, 16QAM, QPSK, BPSK 802.11n:64QAM, 16QAM, QPSK, BPSK 802.11ac:256QAM, 64QAM, 16QAM, QPSK, BPSK
WLAN Working Frequency	2.4G: 2412-2462MHz; 5G: 5150-5350 MHz, 5470-5850 MHz .
WLAN Receiver Sensitivity	11b @ 11Mbps: (Max.) : -84dBm , (Typical) : -87dBm (PER<8%) 11g @ 54Mbps: (Max.) : -69dBm , (Typical) : -77dBm (PER<10%) 11n @ MCS7 (2.4g HT20): (Max.) : -67dBm, (Typical) : -73dBm (PER<10%) 11n @ MCS7 (2.4g HT40): (Max.) : -64dBm, (Typical) : -68dBm (PER<10%) 11a @ 54Mbps: (5g) : -69dBm , (Typical) : -77dBm (PER<10%) 11n @ MCS7 (5g HT20): (Max.) : -67dBm , (Typical) : -73dBm (PER<10%) 11n @ MCS7 (5g HT40): (Max.) : -64dBm , (Typical) : -69dBm (PER<10%) 11ac @ MCS9 (5g HT80): (Max.) : -51dBm , (Typical) : -58dBm (PER<10%)
WLAN Antenna type	PIFA antenna
WLAN Antenna Gain	2.4G :Ant0:1.06dBi (MAX) ; Antl :2.72 dBi (MAX) 5G: Ant0: 1.8 1 dBi (MAX): Ant 1:3.07 dBi (MAX)
Working Voltage	3.3V±10% I/O supply voltage
Working Temperature	-10-470°C
Storage Temperature	-40—F125°C

Hardware information

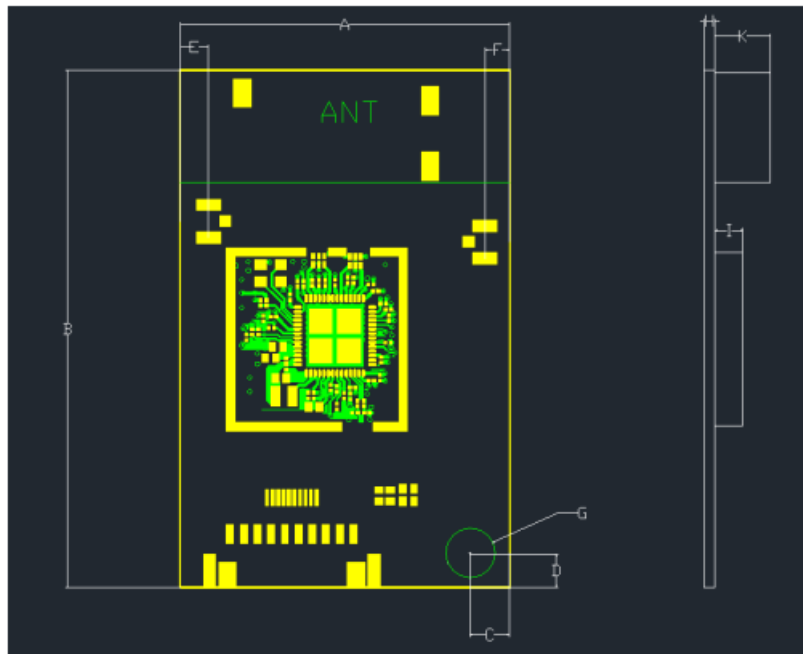
4.1 structure dimension Unit:mm

PCB Material FR-4 Surface treatment ENIG.

Appearance Dimension mm 30 +/- 0.3 ×47 +/- 0.3

PCB thickness 1.0mm +/-0.15mm .

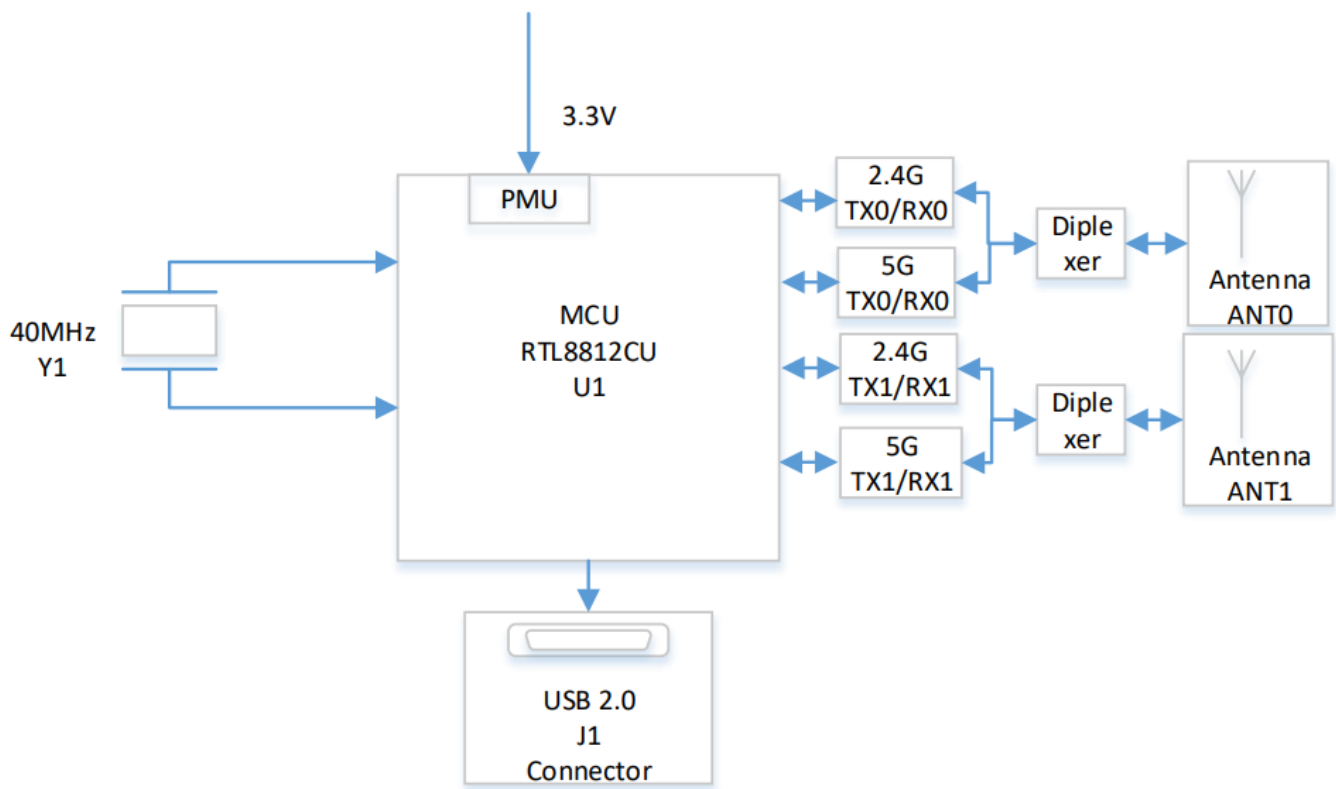
Via Φ4mm +/-0.15mm .



4.2 PIN definition

NO	Description
1	GND
2	DP
3	DM
4	VCC
5	VCC
6	VCC
7	WL_WAKE_HOST
8	HOST_WAKE_WL
9	RST
10	GND

4.3 Block Diagram



BLOCK DIAGRAM

5 EU single contact point

Hisense Czech (Manufacture) s.r.o.

U Nové Hospody 1164/4, 301 00 Plzeň ,Czech Republic.

6 Manufacture's postal address

No.218, Qianwangang Road, Qingdao Economic & Technological Development Zone, Shandong, China

7 Importer's name & address

Hisense Czech (Manufacture) s.r.o.

U Nové Hospody 1164/4, 301 00 Plzeň ,Czech Republic.

Documents / Resources

<p>ZDRK8812CU User Manual</p> <p>Product Name: ZDRK8812CU, 2AJVQ-RK8812CU, 2AJVQRK8812CU, RK8812CU Wireless Module, Wireless Module</p>	<p>Qingdao Intelligent Precise Electronics RK8812CU Wireless Module [pdf] User Manual RK8812CU, 2AJVQ-RK8812CU, 2AJVQRK8812CU, RK8812CU Wireless Module, Wireless Module</p>
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