

# The user manual of WIFI、Bluetooth module

## 1. The product description

The user can achieve the terminal equipment connection WIFI net and Bluetooth, through this module

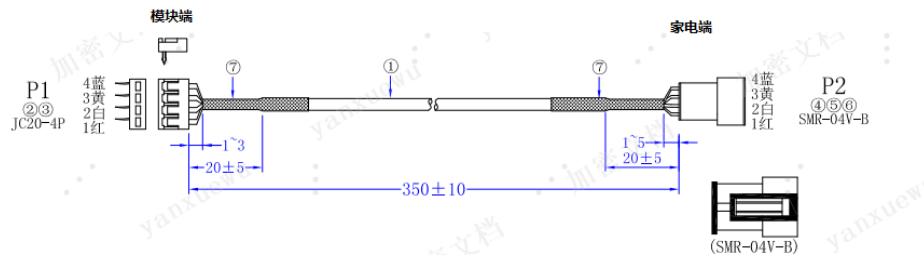
This equipment may be operated in all European countries.



## 2. Interface

### ◆ Interface

4pin through hole



### ◆ Pin definition

Pin	Name	Function	Remarks
1	VCC_5V	5V	
2	UART0_TX	UART0_TX	I/O
3	UART0_RX	UART0_RX	I/O
4	GND	GND	

### ◆ Power consumption requirements

The maximum working current is not more than 500mA, the instantaneous maximum current is not more than 700mA;

In standby mode, the power supply of the module shall be no less than 0.45W, and the power supply current shall be no less than 1A (DC-DC is recommended).

## 2. Basic parameters

Feature Description	Feature Description
Model	MWB414C.2
Product Name	WiFi 11b/g/n 1T1R and BLE4.2 Model
Major Chipset	Realtek RTL8720CF
WLAN Standard	IEEE 802.11b/g/n
Max Power	20dBm

BT Standard	BLE4.2 for BLE only
WLAN Frequency Range	2.4GHz~2.4835GHz
BT Frequency Range	2.4GHz~2.4835GHz
Spread Spectrum	IEEE 802.11b: DBPSK, DQPSK, CCK for DSSS (Direct Sequence Spread Spectrum) IEEE 802.11g: BPSK, QPSK, 16QAM, 64QAM for OFDM (Orthogonal Frequency Division Multiplexing) IEEE 802.11n: MCS0~MCS7, OFDM
Modulation Method	DSSS/DBPSK/DQPSK/16-QAM/ 64-QAM
Data Transfer Rate	802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0~MCS7, up to 72.2Mbps
Antenna Reference	PCB printed ANT
Interface	4pin through hole
Supply Voltage	5V±0.5V
Dimension	38×20×3.2mm
Operating Temperature	-10°C to 70°C
Storage Temperature	-20°C to 85°C

Note:

#### Low Temperature Operation

When the external temperature is lower than -10°C, the modules have an increased risk of damage and face unpredictable risks. Do not use modules at temperatures lower than -10 °C!

#### 4. The display method of Model approved code

In the factory, the model approve code is pasted on the back shell in a label.

#### 5. CE Statement



#### EU DECLARATION OF CONFORMITY

Hisense declares that the radio equipment type Hisense MWB414S .05 is in compliance with Directive 2014/53/EU.

#### 6. FCC 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.

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.

FCC ID:\*\*\*\*\*

## 7. Radiation Exposure Statement

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

This equipment should be installed and operated with minimum distance of 20 in (50cm) between the radiator and your body. This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter

### CAUTION:

To comply with the limits of the Class B digital device pursuant to Part 15 of the FCC Rules, this device is compliant with Class B limits. All peripherals must be shielded and grounded. Operation with non-certified peripherals or non-shielded cables may result in interference to radio or reception

### MODIFICATION

To assure continued compliance, Any changes or modifications not expressly approved by the grantee of this device could void the users authority to operate the device.

## 8. 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 of 50 cm(8 in )between the radiator and your body NOTE To satisfy FCC exterior labeling requirements, the following text must be placed on the exterior of the end product Contains Transmitter module FCC ID: 2A4A3FRIDGE-2087

To satisfy IESD exterior labeling requirements, the following text must be placed on the exterior of the end product " Contains Transmitter module IC: \*\*\*\*\*



This symbol on the product or on its packaging indicates that this product must not be disposed of with your household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

The device is restricted to indoor use only when operating in the 5150 to 5350 MHz frequency range.

	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR
	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT
	SI	SK	FI	SE	UK	NO	IS	LI	CH	TR

This equipment should be installed and operated with minimum distance of 20 in (50cm) between the radiator and

yourbody. This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter

**Manufacturer:** QingdaoHisense Communication Co., Ltd.

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Hisense Iberia, S.L.U

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Tecnológico 46980

Paterna (Valencia) - Spain

Hisense Italia S.r.l

**Address:** Via Montefeltro, 6/A, 20156 MILANO

Hisense South Africa

**Address:** The Estuaries, Building 17 Oxbow Crescent, Century City, Cape Town, SouthAfrica

#### **9. IC Statement**

- i、 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;Footnote4
- ii、 for devices with detachable antenna(s), the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit;
- iii、 for devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits as appropriate; and
- iv、 where applicable, antenna type(s), antenna models(s), and worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in section 6.2.2.3 shall be clearly indicated.

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

"Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device."

Le présent appareil est conforme aux CNR d'Industrie 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.

**IC ID:** \*\*\*\*\*