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Hisense

Hisense 2024 Washer Bluetooth Module

Specifications

- **Model:** MWB414S.05
- **Product Name:** WiFi 11b/g/n 1T1R and BT4.2 Model
- **Major Chipset:** Realtek RTL8720CF
- **WLAN Standard:** IEEE 802.11b/g/n
- **BT Standard:** BBLE 4.2
- **WLAN Frequency Range:** 2412-2462 MHz
- **BT Frequency Range:** 2402-2480 MHz

Product Usage Instructions

Interface

The module has a 16-pin stamp hole patch interface with the following pin definitions:

Pin	Module	Home Appliance Remark

Power Consumption Requirements

The maximum working current should not exceed 500mA, and the instantaneous maximum current should not exceed 700mA. In standby mode, the power supply of the module should be no less than 0.45W with a current of at least 1A (DC-DC is recommended).

Features

- **WLAN Features:**
  - CMOS MAC, Baseband PHY, and RF in a single chip for 802.11b/g/n compatible WLAN
- **Bluetooth Features:**
  - Support Bluetooth 4.2 BQB

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.

Interface

Interface16-pin stamp hole patch

Pin definition

Pin	Module	Home appliance	Remark
PIN1	GND	GND	GND
PIN2	Power VCC	Power VCC	3.3V
PIN3	NC		
PIN4	RX Log	RX Log	Used to download and grab logs
PIN5	TX Log	TX Log	Used to download and grab logs
PIN6	TX	TX communication	TLL level

PIN7	RX	RX communication	TLL level
PIN8	GND	GND	GND
PIN9	GND	GND	GND
PIN10	GPIO_2	The reserved GPIO	
PIN11	GPIO_1	The reserved GPIO	
PIN12	RESET	Hardware reseThe	The module restarts after being pulled down
PIN13	NC		
PIN14	DL_MODE	Forced to download	enter into download mode after being pulled up
PIN15	NC		
PIN16	GND	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).

Basic parameters

Feature Description	Feature Description
Model	MWB414S .05

Product Name	WiFi 11b/g/n 1T1R and BT4.2 Model
Major Chipset	Realtek RTL8720CF
WLAN Standard	IEEE 802.11b/g/n
BT Standard	BLE4.2
WLAN Frequency Range	2412-2462 MHz
BT Frequency Range	2402-2480 MHz
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 to72.2Mbps
Antenna Reference	PCB printed ANT
Interface	16-pin stamp hole patch
Supply Voltage	3.3V±0.3V
Dimension	20×18×3.15mm

Operating Temperature	-10°C to 70°C
Storage Temperature	-20°C to 85°C

Features

WLAN

- CMOS MAC, Baseband PHY, and RF in a single chip for 802.11b/g/n compatible WLAN
- Complete 802.11n solution for 2.4GHz band
- 65Mbps receive PHY rate and 65Mbps transmit PHY rate using 20MHz bandwidth
- Compatible with 8the 02.11n specification
- Backward compatible with 802.11b/g devices while operating in 802.11n mode

Bluetooth

- Support Bluetooth 4.2 BQB
- Bluetooth Smart Ready (Bluetooth Low Energy)
- Highly integrated Bluetooth Low Energy controller with a UART interface
- Combines a BLE Protocol (PHY, LL, L2CAP, SM, ATT, GAP, GATT), BLE Baseband, Modem, and BLE RF in a chip
- Supports BLE user GATT-based profile application

The display method of the Model-approved code

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

CE Statement

EU DECLARATION OF CONFORMITY

Hisense declares that the radio equipment type HisensMWB414S.0505 complies with Directive 2014/53/EU.

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, under 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 according to 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 too to 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: 2A4A3-WASHER2024

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 a minimum distance of 20 cm 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 under 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 with radio or reception.

The modular can be installed or integrated in mobile or fix devices only. This modular cannot be installed in any portable device, for example, USB dongle like transmitters is forbidden.

This modular complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This modular must be installed and operated with a minimum distance of 20 cm between the radiator and the user’s body.

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: “Contains Transmitter Module FCC ID: 2A4A3-WASHER2024 or Contains FCC ID: 2A4A3-WASHER2024.”

When the module is installed inside another device, the user manual of this device must contain below warning statements:

1. 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.
2. Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.
   The devices must be installed and used in strict accordance with the manufacturer’s instructions as described in the user documentation that comes with the product.

MODIFICATION

To assure continued compliance, any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the device.

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 a minimum distance of 20 cm between the radiator and your body. NOT:E: To satisfy FCC exterior labeling requirements, the following text must be placed on the exterior of the end product Contains Transmitter module

FCC ID: 2A4A3-WASHER2024

This symbol on the product 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.

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

- Manufacturer: Qingdao Hisensee Communication Co., Ltd.
- Address: 218 Qianwangang Road, Qingdao Economic & Technological Development Zone, Qingdao, China

IC Statement

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.

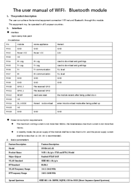
This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:
"Operation is subject to the following conditions device may not cause interference, and

1. This device must accept any interference,
2. This device must accept any interference, including interference that may cause undesired operation of the device."

Frequently Asked Questions

- **Q: How do I connect the module to my terminal equipment?**
  A: To connect the module to your terminal equipment for WiFi and Bluetooth functionality, please follow the pin definitions provided in the interface section of the user manual.
- **Q: What are the power consumption requirements of the module?**
  A: The module should not exceed a maximum working current of 500mA and an instantaneous maximum current of 700mA. In standby mode, ensure a power supply of at least 0.45W with a current of 1A (DC-DC recommended).

Documents / Resources

	Hisense 2024 Washer Bluetooth Module [pdf] User Manual 2A4A3-WASHER2024, 2A4A3WASHER2024, MWB414S .05, 2024 Washer Bluetooth Module, 2024, Washer Bluetooth Module, Bluetooth Module

References

- User Manual

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2024, 2024 Washer Bluetooth Module, 2A4A3-WASHER2024, 2A4A3WASHER2024, Bluetooth Module, Hisense, MWB414S .05, Washer Bluetooth Module

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