GREE GRJWB04-J4 WiFi Module User Manual

Model: GRJWB04-J4 **FCC ID** 2ADAP-GRJWB04J4 **IC** 12478A-GRJWB04J4Gree Electric Appliances, Inc. of Zhuhai

- Please read this manual carefully before operation and keep it well for future reference.
- Due to product improvement, Gree reserves the right to change contents of this manual without priornotice.
- Gree Electric Appliances, Inc. of Zhuhai reserves the final right to interpret this manual.

Contents

General Functions

The wireless module is a highly integrated single-chip low power dual bands(2.4GHz and 5GHz) Wireless LAN(WLAN) and Bluetooth Low Energy(BLE5.0) communication controller. It consists of a high performance MCU (Armv8-M,Cortex-M33 instruction set compatible)called Real-M300(or KM4 thereafter) and a lower MCU(Armv8-M,Cortex-M23 instruction set compatible) calledReal-M200(or KM0 thereafter),WLAN(802.11b/g/n)MAC,an1T1R capable WLAN baseband, RF Bluetooth and peripherals.
This compact module is a total solution for a combination of Wi-Fi 802.11b/g/n technologies with Microcontroller Processor. The module is specifically developed for embedded system devices. Detailed Instruction of WiFi+BLE module.
Hereby, GREE Electric Appliances,Inc. of Zhuhai, declares that this WIFI module is in compliance with the essential requirements and other relevant provisions of RE Directive 2014/53/EU. A copy of the full DoCis attached.

Technique Parameters

Table1. Module Parameters

Categories	Feature	Parameters
Wireless specification	Operating Bands	2.4G: FCC:2412 MHz to 2462 MHz for 802.11b/g/n(HT40) RED:2412MHz to 2472 MHz for 802.11b/g/n(HT40)2402MHz to 2480 MHz for BLE5G: 5810 MHz to 5825 MHz for 802.11 a/g/n(HT40)
	Protocol	IEEE 802.11 b/g/n
	frequency modulation mode	CCK OFDM GFSK
	Receive Sensitivity	802.11b<-90.5dBm@11Mbps 802.11a/g<-77.5dBm@54Mbps 802.11n<-72dBm@MCS7
	Data Rate	WIFI: 802.11b 1/2/5.5/11 Mbps 802.11a/g 6/9/12/18/24/36/48/54 Mbps 802.11n(HT20):6.5/13/19.5/26/39/52/58.5/65Mbps802.11n(HT40):13.5/27/40.5/54/81/108/121.5/135Mbps BLE rate: 1 Mbps
	Antenna gain	1.5 dBi
	Impedance	50-Ohm
electrical specification	Supply Voltage	+5V
	Connect	Internal Antenna
physical	Dimensions	42.6mm×25mm±0.2mm
Operating Temperature	—	-20-85 deg C

Circuit Description

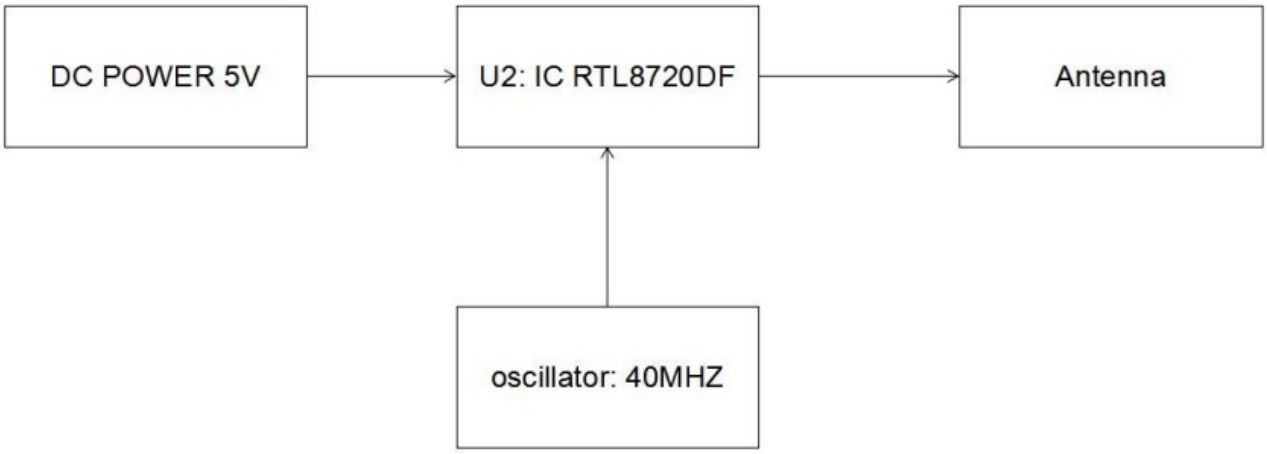

Figure1. Circuit Diagram

WIFI module has an independent power management system, and the system provides a high quality of power supply for the whole module. The Excellent matching circuit in RF-Front ensures that the signal has minimal signal loss and radiation. Oscillator X1providestheIC U2 with the required oscillation frequency to enable theICU2towork normally. The IC U2 provides the interfaces for a variety of peripherals (Timer, PWM, Interrupt, AD, the Debug) from the module to the baseboard. Each peripheral that connects to the MCUI/O pins can choose between two different I/O pin locations with the provided flexibility in various applications.

Hereby, [Name of manufacturer], declares that this [type of equipment] is in compliance with the essential requirements and other relevant provisions of RE Directive 2014/53/EU. A copy of the full DoCis attached.

Transmit frequency of EU:
WIFI: 2412-2472MHz / 5180-5825MHz
BLE: 2402-2480MHz
Maximum transmit power: <20dBm

Pin Definition

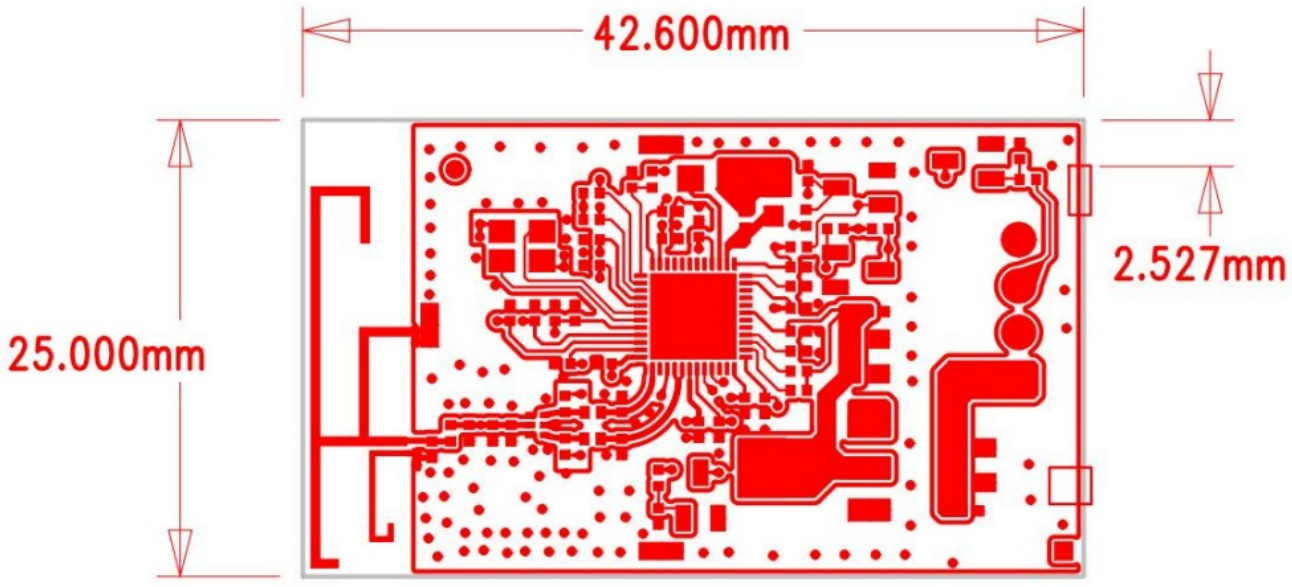

Figure2. Pin Definition

Table2. Pin Definition

PIN	Name	Mode
1	VCC	+5V
2	TX	UART_TX
3	RX	UART_RX
4	GND	Ground

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. Second label must be place on the outside of the final device that contains the following text:

"Contains FCC ID: 2ADAP-GRJWB04J4"
"Contains IC: 12478A-GRJWB04J4"
The FCC ID/IC ID can be used only when all FCC/IC compliance requirements are met.

This device complies with Part 15 of the FCC Rules and it contain slicence-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 harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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.

FCC& IC Radiation Exposure Statement:

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

Gree Electric Appliances Inc. of Zhuhai
Adresse:West Jinji Rd,Qianshan,Zhuhai,Guangdong,China, 519070

Documents / Resources

	**GREE GRJWB04-J4 WiFi Module** [pdf] User Manual GRJWB04J4, 2ADAP-GRJWB04J4, 2ADAPGRJWB04J4, GRJWB04-J4 WiFi Module, GRJWB04-J4, WiFi Module, Module