BLE V1.0-C Bluetooth module

2017/7/25

1. Overview

This module integrates Broadcom Bluetooth chip based on ARM® Cortex ™ -M3 core with CPU frequency up to 48MHz, UART support, high integration, low cost, low power consumption, superior Bluetooth performance, compatibility Better than other chip solutions. With OTA air upgrade function, easy maintenance. Support master and slave functions, to facilitate product interconnection.

2. Feature

- Complete Bluetooth data transparent solution
- Support Bluetooth 4.0 specification, sleep power consumption as low as 12uA, normal work less than 0.15mA (average , broadcast period 300ms) peak current less than 12mA
- CPU frequency up to 48MHz, the interface is rich in resources
- Standard HCI Port (UART)
- Supports air upgrade (OTA) firmware
- Module comes with serial pin, ROHS process
- Module fully integrated XTAL, LPO and other external components, simple design, low cost
- Built-in 2.4G PCB antenna
- Support Master and slave mode
- Adaptive frequency hopping technology, high-performance wireless transceiver system, in the open area, send and receive distance can reach 20 to 30 meters

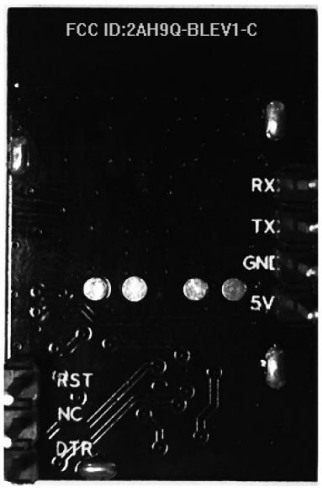
3. Application Fields

The module is used for short-range data wireless transmission,
It can be easily connected with wireless devices on the wireless terminal, such as PC, smart phones and so on.

※ Bluetooth joystick, Bluetooth game handle
※ Bluetooth remote control, remote control toys

4. Photo of module

Positive



Negative

5. Specifications

5.1 Physical characteristics

Operating Frequency Band	2.4GHz-2.48GHz unlicensed ISM band
Bluetooth Specification	BT4.0(Bluetooth Low Energy)
Output Power Class	Max. 4dBm
RX Sensitivity	-90dBm
Operating Voltage	5V
Main Digital Interface	UART
Other Interface	IO
Dimension	31mm(L) x 20.5mm(W) x 3.5mm(H)

5.2 Electrical characteristics

Absolute Maximum Ratings		
Rating	Min	Max
Storage Temperature	-40°C	+85°C
Operating Temperature	-20°C	+70°C
Supply Voltage: VDD	4.5V	5.5V
Other Terminal Voltages	VSS-0.3V	VDD+0.3V

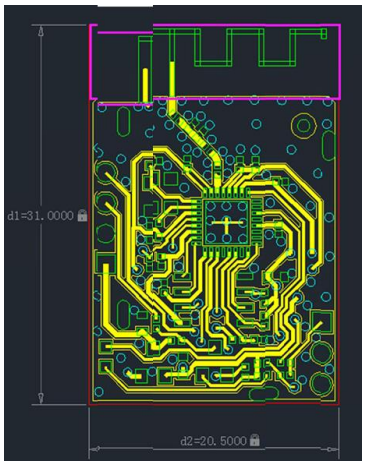
5.3 Interface specification

Power Supply	+5V/ +5.5V
Interface	UART

6. Pin definitions

Pin.No	Name	Type	Description
The left side of the module pin			
1	RXD	I/O	Serial input
2	TXD	I/O	Serial output
3	GND	Ground	GND
4	5V	Power	5V VCC
The right side of the module pin			
1	RST	I	Reset input
2	NC	NC	NNC
3	DTR	I	DDTR input

7. Module size



7. Others

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

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.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna. This product should not collocate with other radio. 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: 2AH9Q-BLEV1-C"or"Contains FCC ID: 2AH9Q-BLEV1-C".

The module's antenna is internal antenna, and the antenna can't be replaced.

(a) The module should not collocate with other wireless radio

(b) PCB antenna of antenna OEM should be use. Antenna Gain is 0dBi to connect with the antenna seat.

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.