

can obtain at least 200bytes transmission data and automatically send the data by separated packets, each wireless packet maximum load is 20byte. The data packet, which is sent to the module by mobile device side, must send subcontracting automatically(1-20byte/package), the module will forward to the MCU serial receiving port after receiving the data packet. Users can modify the module basic Bluetooth parameters serial AT commands. For details, please check "serial AT command" description.

- 6-1、 Serial hardware protocol: default 9600bps. 8, No verify bit 1, Stop bit
- 6-2、 "Enable" serial ports enable control, low level enable module serial port function making data communication with the client host MCU properly; high level closes the serial port function. At this time, the module Bluetooth can still transmit broadcast code, and can be paired connection, but you can not use the serial port functions;
- 6-3、 In order to save the size, the module uses the TXD / RXD double wire serial methods, without increasing the data flow control. So it is not recommended to set the serial rate too high, in case of packet loss or error code, recommend to use 9600bps or other baud rates like no higher than 38400bps;
- 6-4、 Bluetooth module default connection interval is 20ms, if you need to save power and adopt low-speed forwarding mode, you can adjust Bluetooth connection interval via the AT command, the longest interval Bluetooth connectivity is 2000ms;

## 7. Serial AT commands Description:

Module will automatically recognize and distinguish serial data, the data packet began with AT character will be defaulted as AT commands and parsing, and will return the process results, so the data under transparent transmission mode cannot begin with AT character.

### 7-1、 The test command

Command format: AT\r Syntax: AT \r

Returning value: OK\r Return value: OK \r

Content: send AT test commands, returning value OK indicates module AT commands tested successfully.

### 7-2、 MAC address Operation Command

Command Format: AT + ADDR \r?

Return Value: xxxxxxxxxxxx \r

Content: Return the module's current MAC address: xxxxxxxxxxxx

Command Format: AT + ADDR = 123456789ABC \r

Return value: OK \r

Content: modify the module MAC address again: 123456789ABC, return value OK indicates the success of reset MAC address.

**Note: If the Bluetooth module modified the module MAC address successfully under being connected state, but the module will not switch immediately to the new address , it needs to disconnect the module , then the module will be broadcast with a new MAC address.**

### 7-3、 Operation command of Serial Port Communication Baud-rate

Command format: AT + BAUD = 19200 \r

Return value: OK \r

ERROR \r

Content: Re-edit module communication baud rate to 19200bps, Return OK indicates the success of modification, Return ERROR indicates that the new baud rate modification fails, the reason is set point value is not common serial port baud rate value.

Command Format: AT + BAUD \ r?

Return Value: 19200 \ r

Content: Check the current module serial communication baud rate, the module returns the current setting of the baud rate 19200bps.

**NOTE: The module default baud rate is 9600bps, because if the serial port baud rate is too high, it need to increase RTS / CTS data flow control, otherwise there will be errors, it is recommended that the baud rate is no more than 57600bps. The serial port baud rates that current module supports :**

**1200/2400/4800/9600/14400/19200/28800/38400/57600/76800/115200/230400.**

#### 7-4、 Operation Command of the Device Name

Command Format: AT + NAME = Wireless-tag01 \ r

Return value: OK \ r

ERROR \ r

Content: Rename the module: Wireless-tag01, the length of a name must be no more than 20 bytes, the return value OK indicates the success of the rename, the return ERROR represents the renamed fails, you may have exceeded the limit length .

Command Format: AT + NAME \ r?

Return Value: Wireless-tag01 \ r

Content: Check the module's current device name, serial port return to the module's current device name: Wireless-tag01.

**NOTE: Modify the device name under the state of the Bluetooth being connected, the module will not modify immediately .It needs to disconnect the Bluetooth connection, and then the module will broadcast with a new device name.**

#### 7-5、 Read Command of Module Parameter

Command: AT + RX \ r

Return Value: NAME: Wireless-tag01 \ r

BAUD: 19200 \ r

MAC: 123456789ABC \ r

Contents: Check the module's current parameter, return to the module's current device name, serial port baud rate and device MAC address.

#### 7-6、 Set Command of Module Transmit Power

Command Format: AT + RFPM = 3 \ r

Return value: OK \ r

ERROR \ r

Content: Reset the modules transmit power, for example ,set the module transmission power to level 4 ,the transmit power is -8dbm, return OK indicates power reset successes, return ERROR indicates power reset fails, the reason may the set power level is not in the level list.

Command Format: AT + RFPM \ r?

Return Value: -8dbm \ r