Technical Specification

COKOINO HC-06 slave Bluetooth module

1.Overview

The COKOINO HC-06 slave Bluetooth module is compatible with the Arduino platform.

It allows you to use the serial port device to achieve wireless serial communication within 10 meters.

Please note this HC-06 Bluetooth module a 2.0 version Bluetooth module, which can communicate with Android phones, but does not support Apple phones.

At the same time, it can only be used as a slave. Before using it, we can set it by setting AT command, such as Bluetooth name and password.

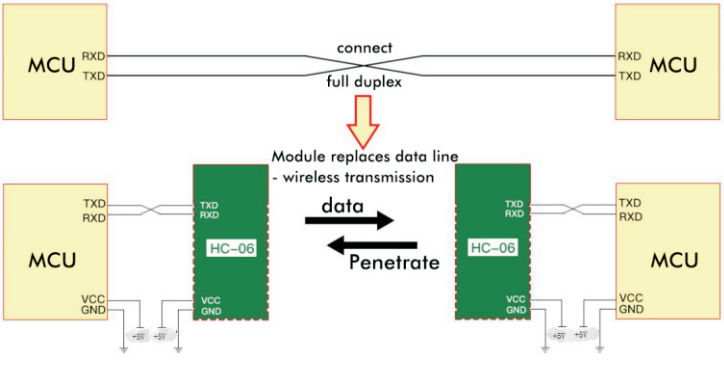
2.Specifications

Name	Value	Name	Value
Model	HC-06	Processor	BC417 (CSR)
Working	Frequency	2.4G Air rate	2Mbps
Communication Interface	UART 5VTTL level	Antenna interface	Built-in PCB antenna
Working voltage	DC3.6--6V	Communication current	40mA
RSSI support	Does not support	Receive Sensitivity	-85dBm@2Mbps
Communication level	3.3V	Working Temperature	10%~90%
Transmitting power	4dBm (maximum)	Storage temperature	-40°C~+85°C
Reference distance	10M	Operating temperature	-25°C~75°C

CKB0001

3.Connection instructions

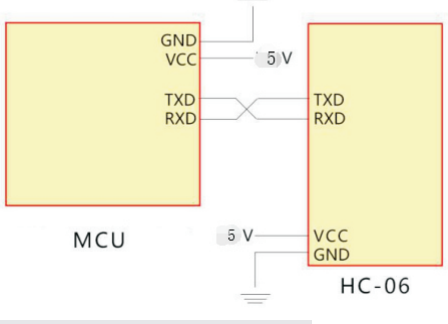
3.1 How to work?



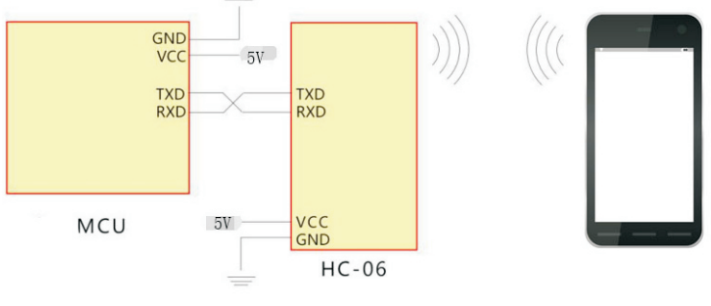
Note:

As shown in the figure above, the COKOINO HC-06 module is used to replace the physical connection when full-duplex communication. The device on the left sends the serial port data to the module. After receiving the serial port data, the RXD port of the module automatically sends the data to the air in the form of radio waves. The module on the right can automatically receive and restore the serial port data sent by the original left device from TXD. From right to left, the principle is the same.

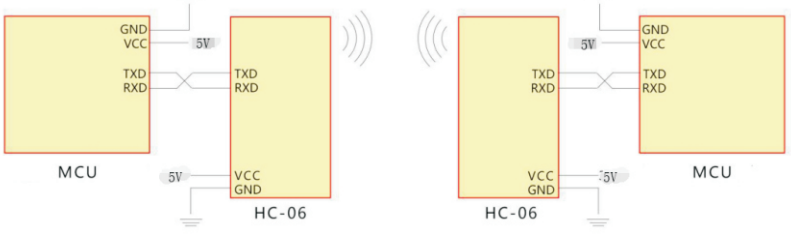
2.Connection between module and MCU and other devices



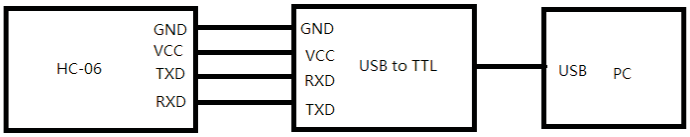
3.4 Connection communication between the module and the mobile phone



3 .Connection communication between modules



3.5 Module and PC direct communication



4. Module and PC direct communication

4.1 How to enter the AT command

When the module is powered on, if it is not paired, it is AT mode. Please control the time interval between the two instructions to 1S or above.

4.2 Default factory parameters

The baud rate is 9600N81, the Bluetooth name is HC-06, and the pairing password is 1234.

4.3 AT Command Collection

4.31 Test Communication

Instruction	Respond	Description
AT	OK	Test

4.32 Change the Bluetooth serial port communication baud rate

Instruction	Respond	Description
AT+BAUD1	OK	1200 The baud rate setting exceeds 115200 and cannot be used by the computer. It must be programmed by the MCU, and the baud rate higher than 115200 can be used.

After setting the baud rate with the AT command, you do not need to set it again after power-on. You can save the baud rate after power-off.

example:

Send: AT+BAUD2

Return: Ok2400

The baud rate code is as follows:

1--------- 1200

2--------- 2400

3--------- 4800

4--------- 9600 (default)

5--------- 19200

6--------- 38400

7--------- 57600

8--------- 115200

9--------- 230400

A--------- 460800

B--------- 921600

C--------- 1382400

4.33 Change the Bluetooth name

Instruction	Respond	Description
AT+NAMEname	Oksetname	Parameter name: The current name to be set, that is, the name that Bluetooth is searched for. Within 20 characters.

E.g:

Send: AT+NAMEbill_gates

Returns: Oksetname

At this time, the Bluetooth name is changed to bill_gates.

The parameters can be saved after power-off and only need to be modified once. When the PDA side refreshes the service you can see the changed Bluetooth name, remembering that the name cannot exceed 20 characters.

Note: When HC-06 is the host, setting the Bluetooth name is not supported.

4.34 Changing the Bluetooth Pairing Password

Instruction	Respond	Description
AT+PINxxxx	OKsetPIN	The default pairing password for the module at the factory is 1234. The parameters can be saved after power-off and only need to be modified once.

Parameter xxxx: It is the set pairing password, 4 digits, this command can be used for the slave or host.

The slave can manually enter this parameter to connect to the host when the adapter or phone pops up asking for the pairing password window.After the Bluetooth module host searches for the slave, if the password is correct, it will be automatically paired. The main module can be paired and connected to the slave module.If other products include the slave module, they can also be paired and connected with the main module, such as a digital camera with Bluetooth, Bluetooth GPS, Bluetooth serial printer, and so on. At this time, the Bluetooth pairing password may be changed to 8888.

E.g:

Send: AT+PIN8888

Return: OKsetPIN

4.35 Changing the module master-slave working mode

Instruction	Respond	Description
AT+ROLE=S/AT+ROLE=M	OK+ROLE:S/ OK+ROLE:M	S: Set the module to slave module Slave, (The module defaults to slave) M: Set the module as the master module Master

4.36 No check setting command

Instruction	Description
AT+PN	(The module defaults to no parity)

4.37 Even parity setting instruction

Instruction	Description
AT+PE	Module is even parity

4.38 odd check setting instruction

Instruction	Description
AT+PO	Module is even parity

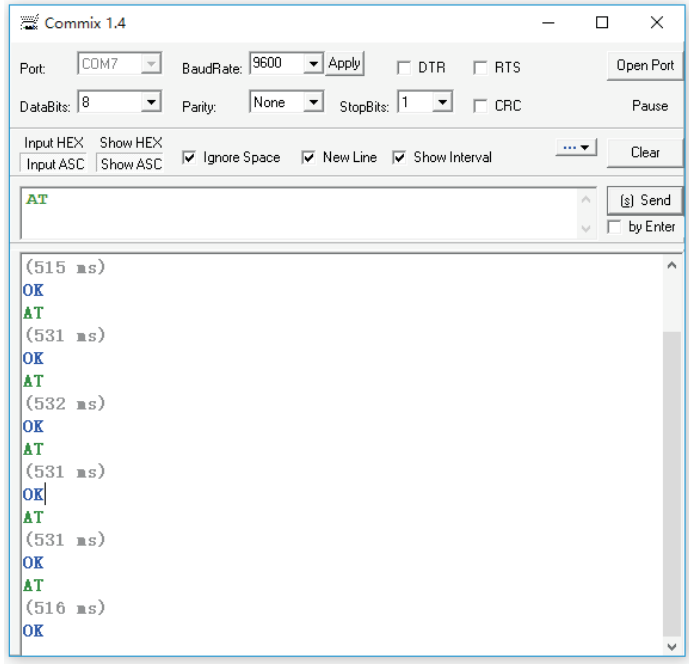
4.39 Obtaining the AT Command Version Command

Instruction	Response
AT+VERSION	Hc01.comV2.0

4.40 switch light command

Instruction	Respond	Description
AT+LED0/AT+LED1	LED OFF/ LED ON	AT+LED0 Off /AT+LED1 On

Note: The working mode of the above AT command is "3.5 module and PC direct communication", the serial port debugging software is installed on the PC, the USB serial port module is used to connect the Bluetooth serial port and the computer USB port, and the AT command is sent to the Bluetooth module through the serial port debugging software. As shown below:



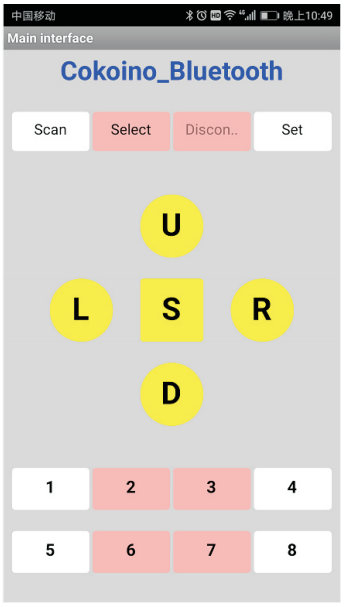
5.The use of Arduino and COKOINO HC-06

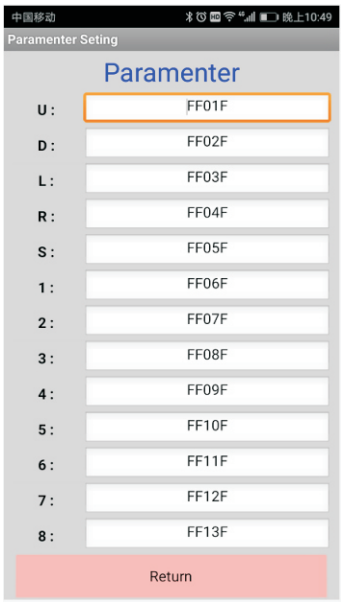
5.1 Arduino and COKOINO HC-06 wiring

UNO R3	HC-06 Bluetooth
GND	GND
5V	VCC
0(RX)	TXD
1(TX)	RXD

5.2 Android phone installation Cokoino Bluetooth APP:

Cokoino Bluetooth APP is a mobile app that we specially developed for HC-06 communication. Just copy the APP installation package provided by us to the Android phone. After installation and operation, you can enter the interface as shown below:





5.21 Bluetooth connection

When you open the app, if your phone does not have Bluetooth enabled, the software will automatically prompt you to enable Bluetooth. If your Bluetooth is enabled, please click the Scan button to enter the Bluetooth selection interface and select the Bluetooth you need to pair.

Take HC-06 as an example, the pairing password is 0000 or 1234, then return to the main interface, click the Select button to enter the Bluetooth connection interface, select the Bluetooth you need to connect, it will automatically return to the main interface, and the Disconnect tag will become Connect, and HC The light on the -06 module will be on constantly (when not connected, the light on the module will flash), then the phone can communicate with HC-06 Bluetooth.

5.22 Disconnecting Bluetooth

When Bluetooth is connected to the phone, if you want to switch Bluetooth, please click the Connect tab. If you want to pair it again, click the Select button again to select the connection.

5.23 Setting APP to Send Data

This app has 13 send buttons, each of which sends a variable key value. Just click the Set button on the main interface to enter the parameter setting interface.

As shown above, just fill in the data you need to send at the corresponding button label.

5.3 Cokoino Bluetooth APP communicates with UNO R3

5.31 Arduino test code

This app has 13 send buttons, each of which sends a variable key value. Just click the Set button on the main interface to enter the parameter setting interface.

As shown above, just fill in the data you need to send at the corresponding button label.

Code:

```
Int val;
Int ledpin=13; //Define UNO R3 13 feet for ledpin
Void setup() //Set the parameter function, only run once after the program starts.
{
Serial.begin(9600); //Set the baud rate of the serial port to 9600.
 pinMode (ledpin, OUTPUT); / / define ledpin as output pin
}
Void loop () / / main loop function, the program will continue to run in this function after this function is executed
{
Val=Serial.read(); //Read the serial port value to val
If(val=='a') //Check if the value of val is a, if it is a, execute the procedure in brackets, otherwise skip
 {
digitalWrite (ledpin,HIGH); / / ledpin output high level, UNO R3 motherboard L light
Delay(250); //delay 250ms
digitalWrite (ledpin, LOW); / / ledpin output low level, UNO R3 motherboard L light is off
Delay(250); //delay 250ms
Serial.println("Hello,world!"); //Download Hello, world on the IED serial port!
}
}
```

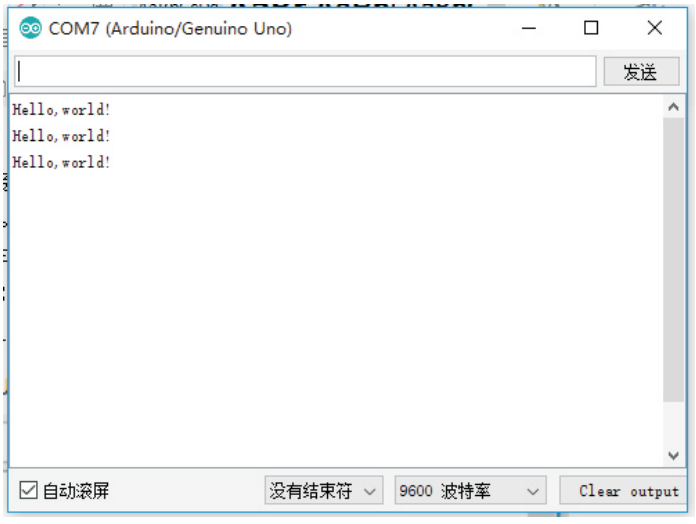
Copy the above code to the Arduino IDE, connect the PC to the UNO R3 motherboard with a USB cable, select the corresponding board type and port in the IDE, and upload the code to the UNO R3 motherboard.

Then open the serial port and set the baud rate to 9600 (attached: these steps can refer to CKD0001 UNO R3 black oil white word environmental use tutorial).

Then connect the Bluetooth and UNO R3 according to the 5.1 connection. Do not connect UNO R3 and Bluetooth before uploading the code. Otherwise, an error will be reported.

After the above operation is completed, connect the Bluetooth with the mobile phone according to step 5.2. After connecting, change the key value of the S key to a.

After finishing, return to the main interface, click the S button on the APP to send the key value a to Bluetooth. After receiving the a value, UNO R3 will print Hello, world! on the serial port of the IDE, and the L light on the UNO R3 board will flash.



Support/Service

Contact the following for support and/or repair service.
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COKOINO