RYBG21x AT COMMAND

Apply for

1. RYBG210。

2. RYBG211。

APP UUID

4880c12c-fdcb-4077-8920-a450d7f9b907

AT Command Set

It is required to key in "enter" or "0x0D 0x0A" in the end of all AT Command.
It is required to wait until the module replies +OK to execute the next AT command.

1. AT Test if the module can respond to Commands.

Syntax	Response
AT	+OK

2. Software RESET

Syntax	Response
AT+RESET	+RESET +READY

3. **AT+IPR** set the UART Baud rate

Syntax	Response
AT+IPR=<rate> <rate>is the UART Baud Rate: : 9600(default) 19200 38400 57600 Example: Set the Baud Rate as 9600： AT+IPR=9600 *The setting will be memorized in Flash. * It will work after RESET.	+OK
Inquire current setting AT+IPR?	+IPR=9600

4. AT+ADDR? Reading MAC address

Syntax	Response
AT+ADDR?	+ADDR=84:2E:14:A1:BD:6D

5. AT+NAME Modify Broadcast name

Syntax	Response
AT+NAME=< Length>,<Data> < Length>Name, maximin 20 bytes <Data>ASCII Data Format Example：Change the name to REYAX AT+NAME=5,REYAX * The setting will be memorized in Flash. * It will work after RESET.	+OK
Inquire current name AT+NAME?	+NAME=REYAX

6. AT+SEND Send data to specified connection

Syntax	Response
AT+SEND=<Connection>,< Length>,<Data> < connection >1~8, BLE connection number. < Length>Data, maximin 244 bytes (depending on cell phone) <Data>ASCII Data Format Example：Send "HELLO" to connection 1 AT+SEND=1,5,HELLO	+OK
Inquire the last transmitted data AT+SEND?	+SEND=1,5,HELLO

7. +RCV Receive data

Syntax	Response
+RCV=<Connection>,< <Data> < connection >1~8, BLE connection number <Data> ASCll Data Format	Example： +RCV=1,HELLO

8. **AT+CRFOP** to set the RF broadcasting output power

Syntax	Response
AT+CRFOP=<Power> <Power>range 20 to -20 20=20dBm 19=19dBm 10=10dBm(default) . . . -19=-19dBm -20=-20dBm Example：set the output power as 5dBm AT+CRFOP=5 *The setting will be memorized in Flash * It will work after RESET.	+OK
AT+CRFOP?	+CRFOP=10

9. **AT+CNE** to set the BLE can be connected or not

Syntax	Response
AT+CNE=<Connect> <Connect>set the BLE can be connected or not 0：Reject other Bluetooth devices connecting. 1：Accept other Bluetooth devices connecting. (default) Example：Reject other Bluetooth devices connecting. AT+CNE=0 * It will be memorized in Flash after setting and RESET.	+OK
AT+CNE?	+CNE=0

10. **AT+PERIOD** Setting the BLE broadcasting period

Syntax	Response
AT+PERIOD =<Parameter> <Parameter>range 32 to 65535 Time = <Parameter> x 0.625ms 32 : 20ms 80 : 50ms 160 : 100ms (default) 320 : 200ms 800 : 500ms 1600 : 1s 3200 : 2s 16000 : 10s Example：Setting the BLE broadcasting period Is 500ms in 1second. AT+PERIOD=800 * **The setting will be memorized in Flash** * **It will work after RESET.**	+OK
AT+PERIOD?	+PERIOD=160

11. **AT+CFUN** to set the BLE broadcast (Advertising) ON/OFF

Syntax	Response
AT+CFUN=<Advertising> <Advertising>is the switch of BLE broadcast 0：BLE broadcast off 1：BLE broadcast on (default Example：Setting the BLE broadcast off. AT+CFUN=0	+OK
AT+CFUN?	+CFUN=0

12. **AT+SCAN** to scan the Peripherals near by the Central

Syntax	Response
AT+SCAN Example : Scan the Peripherals nearby which can be connected with RYBG21x.	+Scanning +<NO.>,<MAC>,<rssi>, <Name> ... +Found <Quantity> <NO.>item number of Peripherals: 1~5 <MAC>MAC address <rssi> output power of Peripherals dBm <Name>name of Peripherals <Quantity> quantity of found Peripherals; the maximum is 5. +Scanning +1: 8471279CB541, -52, RYBG21x +Found 1

13. **AT+CON** the Central connect to a Peripheral by MAC address

Syntax	Response
AT+CON=<MAC> <MAC>MAC address Example：The Central connect to the Peripheral whose MAC address is 123456ABCDEF AT+CON=123456ABCDEF	+++++<Role><NO.> <Role> "H" represent "Host"； "C" represent "Client" <N0.> is the number of BLE connection +++++H1

14. **AT+CONT** The Central connect to a Peripheral by the item number from AT+SCAN

Syntax	Response
AT+CONT=<Scan Result No.> < Scan Result No.> number of the Peripherals Example：The Central connect to the Peripheral whose item number is 2 from AT+SCAN. AT+CONT=2	+++++<Role><NO.> <Role> "H" represent "Host"； "C" represent "Client" <N0.> is the number of BLE connection +++++H2

15. **AT+DCON** initiative disconnected

Syntax	Response
AT+DCON=<NO.> <NO.>is the number of BLE connection Maximin 8 Example：BLE protocol port 1 disconnected AT+DCON=1	+-----<Role><No> <Role>"H" represent "Host"； "C" represent "Client" <N0.>is the number of BLE connection +-----H1

16. **AT+CONNECT?** to inquire the connection status

Syntax	Response
AT+CONNECT?	+CONNECT=<L1>,<L2>…,<L8> <Ln> the status of BLE protocol port 0 : Unconnected 1 : Connecting, represent "Host" 2 : Connecting, represent "Client"
AT+CONNECT?	+CONNECT=1,0,0,0,0,0,0,0

17. **AT+VER?** Read FW version information

Syntax	Response
AT+VER?	+VER=RYBG21x_V0.0.2

18. Other response messages

Syntax	Response
After RESET	+RESET +READY
After BLE connection +++++<Role><Connection> +MTU:<Size> <Role> "H" represents "Host"; "C" represents "Client" <Connection> the connection number <Size> the maximum data size of a single packet Example: When iPhone APP built the connection, the role is Client, the data can be delivered by a single packet is 182 Bytes	+++++C1 +MTU:182
BLE disconnection -----#<Connection> <Connection> the connection number	-----#1

18. Error result codes

Syntax	Response
The head of AT command is not "AT" string	+ERR=2
Unknown command	+ERR=4
The parameter length is too long	+ERR=13
Connection failure	+ERR=14
Command parameter error	+ERR=18

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