

## Bluetooth AT commands Default:

### How to set the mode to server (master):

1. Connect PIO11 to high level.
2. Power on, module into command state.
3. Using baud rate 38400, sent the "AT+ROLE=1\r\n" to module, with "OK\r\n" means setting successes.
4. Connect the PIO11 to low level, repower the module, the module work as server (master).

### AT commands: (all end with \r\n)

1. Test command:

Command	Respond	Parameter
AT	OK	-

2. Reset

Command	Respond	Parameter
AT+RESET	OK	-

3. Get firmware version

Command	Respond	Parameter
AT+VERSION?	+VERSION:<Param> OK	Param : firmware version

Example:

```
AT+VERSION?\r\n
```

```
+VERSION:2.0-20100601
```

```
OK
```

4. Restore Default

Command	Respond	Parameter
AT+ORGL	OK	-

Default state:

Slave mode, pin code: 1234, device name: H-C-2010-06-01 ,Baud 38400bits/s.

5. Get module address

Command	Respond	Parameter
AT+ADDR?	+ADDR:<Param> OK	Param: address of Bluetooth module

Bluetooth address: NAP: UAP : LAP

Example:

AT+ADDR?\r\n

+ADDR:1234:56:abcdef

OK

6. Set/check module name

Command	Respond	Parameter
AT+NAME=<Param>	OK	Param: Bluetooth module name (Default :HC-05)
AT+NAME?	+NAME:<Param> OK (/FAIL)	

Example:

AT+NAME=HC-05\r\n set the module name to "HC-05"

OK

AT+NAME=ITeadStudio\r\n

OK

AT+NAME?\r\n +NAME: ITeadStudio

OK

7. Get the Bluetooth device name:

Command	Respond	Parameter
AT+RNAME?<Param1>	1. +NAME:<Param2> OK 2. FAIL	Param1,Param 2 : the address of Bluetooth device

Example: (Device address 00:02:72:od:22:24, name : ITead)

AT+RNAME? 0002, 72, od2224\r\n

+RNAME:ITead

OK

8. Set/Check module mode:

Command	Respond	Parameter
AT+ROLE=<Param>	OK	Param:
AT+ ROLE?	+ROLE:<Param>	0- Slave
	OK	1-Master 2-Slave-Loop

9. Set/Check device class

Command	Respond	Parameter
AT+CLASS=<Param>	OK	Param: Device Class
AT+ CLASS?	1. +CLASS:<Param> OK 2. FAIL	

Example:

AT+IAC=9e8b3f\r\n

OK

AT+IAC?\r\n

+IAC: 9e8b3f

OK

10. Set/Check GIAC (General Inquire Access Code)

Command	Respond	Parameter
AT+IAC=<Param>	1.OK 2. FAIL	Param: GIAC (Default : 9e8b33)
AT+IAC	+IAC:<Param> OK	

Example:

AT+IAC=9e8b3f\r\n

OK

AT+IAC?\r\n

+IAC: 9e8b3f

OK

11. Set/Check -- Query access patterns

Command	Respond	Parameter
AT+INQM=<Param>,<Param2>,<Param3>	1.OK 2. FAIL	Param: 0— inquiry_mode_standard 1— inquiry_mode_rssi
AT+ INQM?	+INQM : <Param>,<Param2>,<Param3> OK	Param2: Maximum number of Bluetooth devices to respond to Param3: Timeout (1-48 : 1.28s to 61.44s)

Example:

AT+INQM=1,9,48\r\n

OK

AT+INQM\r\n

+INQM: 1, 9, 48

OK

12. Set/Check PIN code:

Command	Respond	Parameter
AT+PSWD=<Param>	OK	Param: PIN code
AT+ PSWD?	+ PSWD : <Param> OK	(Default 1234)

13. Set/Check serial parameter:

Command	Respond	Parameter
AT+UART=<Param>,<Param2>,<Param3>	OK	Param1: Baud Param2: Stop bit
AT+ UART?	+UART=<Param>,<Param2>,<Param3> OK	Param3: Parity

Example:

AT+UART=115200, 1,2,\r\n

OK

AT+UART?

+UART:115200,1,2

OK

14. Set/Check connect mode:

Command	Respond	Parameter
AT+CMODE=<Param>	OK	Param: 0 - connect fixed address 1 - connect any address 2 - slave-Loop
AT+ CMODE?	+ CMODE:<Param> OK	

15. Set/Check fixed address:

Command	Respond	Parameter
AT+BIND=<Param>	OK	Param: Fixed address (Default 00:00:00:00:00:00)
AT+ BIND?	+ BIND:<Param> OK	

Example:

AT+BIND=1234, 56, abcdef\r\n

OK

AT+BIND?\r\n

+BIND:1234:56:abcdef

OK

16. Set/Check LED I/O

Command	Respond	Parameter
AT+POLAR=<Param1,<Param2>	OK	Param1: 0- PIO8 low drive LED 1- PIO8 high drive LED
AT+ POLAR?	+ POLAR=<Param1>,<Param2> OK	
		Param2: 0- PIO9 low drive LED 1- PIO9 high drive LED

17. Set PIO output

Command	Respond	Parameter
AT+PIO=<Param1>,<Param2>	OK	Param1: PIO number Param2: PIO level 0- low 1- high

Example:

1. PIO10 output high level

AT+PIO=10, 1\r\n

OK

18. Set/Check – scan parameter

Command	Respond	Parameter
AT+IPSCAN=<Param1>,<Param2>,<Param3>,<Param4>	OK	Param1: Query time interval
AT+IPSCAN?	+IPSCAN:<Param1>,<Param2>,<Param3>,<Param4> OK	Param2: Query duration Param3: Paging interval Param4: Call duration

Example:

AT+IPSCAN =1234,500,1200,250\r\n

OK

AT+IPSCAN?

+IPSCAN:1234,500,1200,250

19. Set/Check – SHIFF parameter

Command	Respond	Parameter
AT+SNIFF=<Param1>,<Param2>,<Param3>,<Param4>	OK	Param1: Max time Param2: Min time
AT+ SNIFF?	+SNIFF:<Param1>,<Param2>,<Param3>,<Param4> OK	Param3: Retry time Param4: Time out

20. Set/Check security mode

Command	Respond	Parameter
AT+SENM=<Param1>,<Param2>	1. OK 2. FAIL	Param1: 0---sec_mode0+off 1---sec_mode1+non_se
AT+ SENM?	+ SENM:<Param1>,<Param2>	
	OK	cure 2---sec_mode2_service 3---sec_mode3_link 4---sec_mode_unknow n Param2: 0---hci_enc_mode_off 1---hci_enc_mode_pt_t o_pt 2---hci_enc_mode_pt_t o_pt_and_bcast

#### 21. Delete Authenticated Device

Command	Respond	Parameter
AT+PMSAD=<Param>	OK	Param: Authenticated Device Address

22.

Example:

AT+PMSAD =1234,56,abcdef\r\n

OK

Delete All Authenticated Device

Command	Respond	Parameter
AT+ RMAAD	OK	-

#### 23. Search Authenticated Device

Command	Respond	Parameter
AT+FSAD=<Param>	1. OK 2. FAIL	Param: Device address

#### 24. Get Authenticated Device Count

Command	Respond	Parameter
AT+ADCN?	+ADCN: <Param> OK	Param: Device Count

25. Most Recently Used Authenticated Device

Command	Respond	Parameter
AT+MRAD?	+ MRAD: <Param> OK	Param: Recently Authenticated Device Address

26. Get the module working state

Command	Respond	Parameter
AT+ STATE?	+ STATE: <Param> OK	Param: "INITIALIZED" "READY" "PAIRABLE" "PAIRED" "INQUIRING" "CONNECTING" "CONNECTED" "DISCONNECTED" "NUKNOW"

27. Initialize the SPP profile lib

Command	Respond	Parameter
AT+INIT	1. OK 2. FAIL	-

28. Inquiry Bluetooth Device

Command	Respond	Parameter
AT+INQ	+INQ: <Param1> , <Param2> , <Param3> .... OK	Param1: Address Param2: Device Class Param3 : RSSI Signal strength

Example:

AT+INIT\r\n

OK

AT+IAC=9e8b33\r\n

OK

AT+CLASS=0\r\n

AT+INQM=1,9,48\r\n



```

At+INQ\r\n
+INQ:2:72:D2224,3E0104,FFBC
+INQ:1234:56:0,1F1F,FFC1
+INQ:1234:56:0,1F1F,FFC0
+INQ:1234:56:0,1F1F,FFC1
+INQ:2:72:D2224,3F0104,FFAD
+INQ:1234:56:0,1F1F,FFBE
+INQ:1234:56:0,1F1F,FFC2
+INQ:1234:56:0,1F1F,FFBE
+INQ:2:72:D2224,3F0104,FFBC
OK

```

### 29. Cancel Inquiring Bluetooth Device

Command	Respond	Parameter
AT+PAIR=<Param1>,<Param2>	1. OK 2. FAIL	Param1: Device Address Param2: Time out

### 30. Connect Device

Command	Respond	Parameter
AT+LINK=<Param>	1. OK 2. FAIL	Param: Device Address

Example:

```

AT+FSAD=1234,56,abcdef\r\n
OK
AT+LINK=1234,56,abcdef\r\n
OK

```

### 31. Disconnect

Command	Respond	Parameter
AT+DISC	1. +DISC:SUCCESS OK 2. +DISC:LINK_LOSS OK 3. +DISC:NO_SLC OK 4. +DISC:TIMEOUT OK 5. +DISC:ERROR OK	Param: Device Address

32. Energy-saving mode

Command	Respond	Parameter
AT+ENSNIFF=<Param>	OK	Param: Device Address

33. Exerts Energy-saving mode

Command	Respond	Parameter
AT+ EXSNIFF =<Param>	OK	Param: Device Address