



JN Huamao Technology Company

Dual mode Bluetooth module

Datasheet

- ✧ Professional bluetooth products suppliers.
- ✧ Remote control module provider
- ✧ data transmission module provider
- ✧ PIO state acquisition module provider
- ✧ Customizable bluetooth module and bluetooth solutions
- ✧ Jinan high and new technology enterprise
- ✧ SIG members

Address: D-4020, Qilu soft zone Jinan city, Shandong, China

Telephone: (86) 0531-85117999

Website: <http://www.jnhuamao.cn>

Website: <http://www.huamaosoft.com>

Mail: webmaster@jnhuamao.cn

**The most complete, most convenient, the most stable of
Bluetooth data transmission, remote control, PIO state
collects modules**

---- Master and slave roles in one

---- Remote control command without external MCU

13. Product parameters

- BT Version: Bluetooth Specification V4.0 & BLE V4.0
- UART send and receive max bytes is 512.
- Data package length in SPP mode: 60 /120 Bytes per packet
- Data package length in BLE mode: 20 Bytes per packet.
- Two data transmission mode, balance mode and high speed mode.
- Working frequency: 2.4GHz ISM band
- Modulation method: GFSK (Gaussian Frequency Shift Keying)
- RF Power: -23dbm, -6dbm, 0dbm, 6dbm.
- Speed: Asynchronous: 2-6K Bytes
Synchronous: 2-6K Bytes
- Security: Authentication and encryption
- Service: Slave SPP (RFCOMM), Peripheral BLE, UUID FFE0,FFE1
- Power: +3.3VDC 50mA
- Long range: SPP 30 meters, BLE 60 meters.
- Power: SPP 13.5mA, BLE 9.5mA.
- Working temperature: -5 ~ +65 Centigrade
- Size: HM-12 27mm x 13mm x 2.2 mm;
- Size: HM-13 18 x 13 x 2.2mm

2. Product overview

Thanks for you choose our products. If you want to know more, www.jnhuamao.cn can help you (Videos, New version datasheet, Module work flow, project Codes, etc.)

HM Bluetooth module use CSR or TI CC2540 or cypress chips, Master and slave roles in one, transmission version and remote control version and PIO state acquisition functions in one, Support the AT command modify module P1meters, Convenient and flexible.

Transmission version can be used to transmit data between two Bluetooth devices.

Remote Control version can be used to Control PIO ports output high or low level without any external MCU.

HM-01, HM-02, HM-03, HM-04, HM-05, HM-06, HM-07, HM-08, HM-09 is Bluetooth V2.1 version.

HM-10, HM-11 is Bluetooth V4.0 BLE version.

HM-12, HM-13 is Bluetooth Dual mode support EDR 4.0 and BLE 4.0

HM-16, HM-17 is Bluetooth V4.1 BLE version.

HM-18, HM-19 is Bluetooth V4.2 BLE version.

HM-01, HM-02, HM-09, HM-10, HM-16, HM-18 is Pins to Pins.

HM-05, HM-06, HM-07, HM-11, HM-17, HM-19 is Pins to Pins.

3. Product model

Modules	VDD	Size(mm)	Flash	Chip	BT Version
HM-01	2.5-3.7V	27 * 13 * 2.2	8M	BC417143	V2.1+EDR
HM-02A	2.5-3.7V	27 * 13 * 2.2	6M	BC31A223	V2.1
HM-02B	2.5-3.7V	27 * 13 * 2.2	6M	BC41C671	V2.1+EDR
HM-03A	2.5-3.7V	27 * 12.5 * 4.3	6M	BC31A223	V2.1
HM-03B	2.5-3.7V	27 * 12.5 * 4.3	6M	BC41C671	V2.1+EDR
HM-04A	2.5-3.7V	Not for sale			
HM-04B	2.5-3.7V	Not for sale			
HM-05/06A	2.5-3.7V	18 * 13 * 2.2	6M	BC31A223	V2.1
HM-05/06B	2.5-3.7V	18 * 13 * 2.2	6M	BC41C671	V2.1+EDR
HM-07	2.5-3.7V	18 * 13 * 2.2	8M		V2.1+EDR
HM-08	2.5-3.7V	27 * 13 * 2.5	8M	Class 1	V2.1+EDR
HM-09	2.5-3.7V	27 * 13 * 2.2	8M		V2.1+EDR
HM-10	2.2-3.7V	27 * 13 * 2.2	256Kb	CC2540/1	V4.0 BLE
HM-11	2.2-3.7V	18 * 13 * 2.2	256Kb	CC2540/1	V4.0 BLE
HM-12	2.5-3.9V	27 * 13 * 2.2	64KB	Dual mode	EDR 40 + BLE 40
HM-13	2.5-3.9V	18 * 13 * 2.2	64KB	Dual mode	EDR 40 + BLE 40
HM-14	2.2-4.0V	13 * 12 * 2.0		Dual mode	EDR40 + BLE 40
HM-15	5V	65 * 32 * 16	256Kb	CC2540	BLE V4.0
HM-16	2.5-3.7V	27 * 13 * 2.2	128KB		BLE V4.2/V5.0
HM-17	2.5-3.7V	18 * 13 * 2.2	128KB		BLE V4.2/V5.0
HM-18	2.5-3.7V	27 * 13 * 2.2	256KB		BLE V4.2/V5.0
HM-19	2.5-3.7V	18 * 13 * 2.2	256KB		BLE V4.2/V5.0

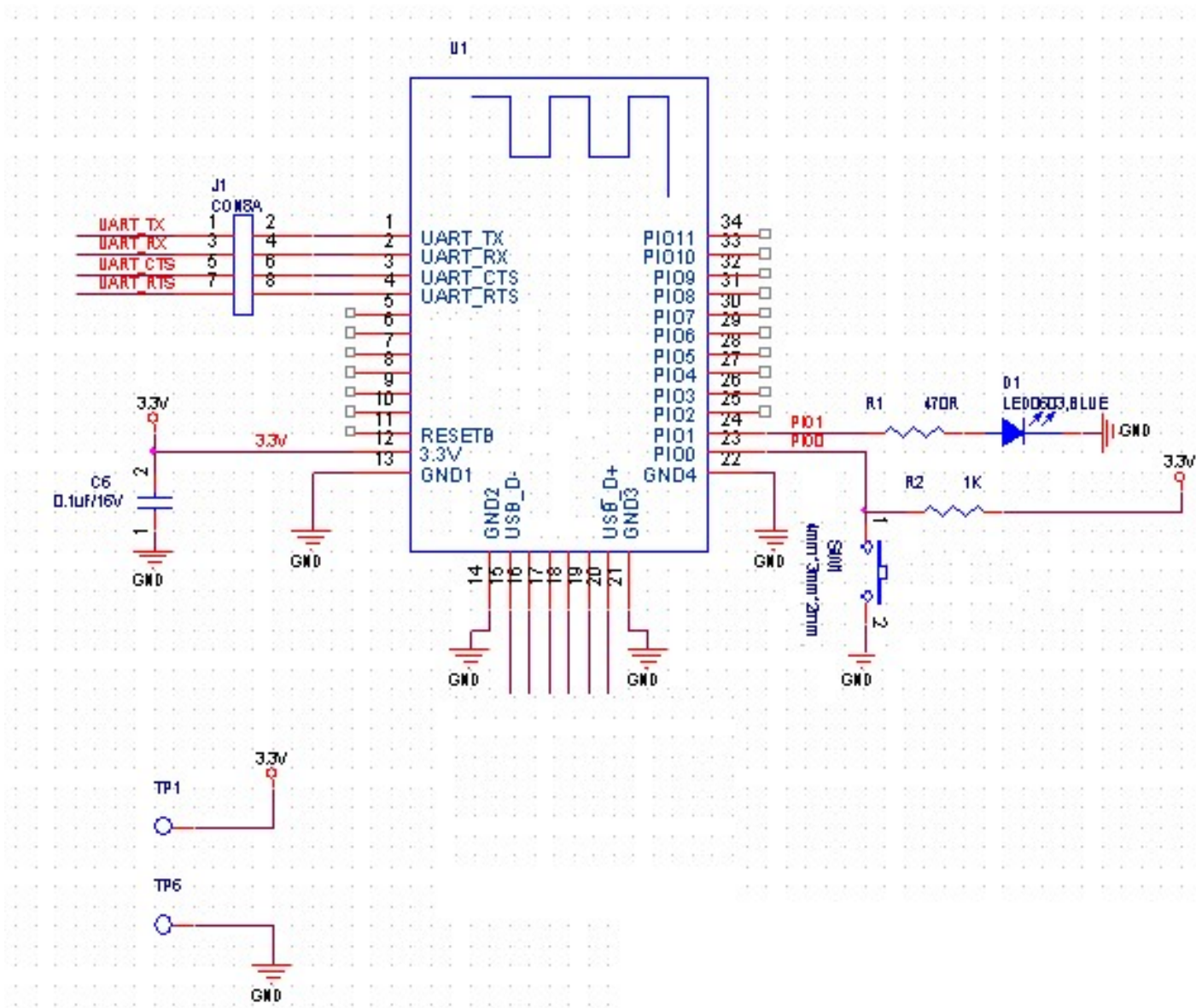
4. Product certificate

Please download certification from www.jnhuamao.cn or www.huamaosoft.com

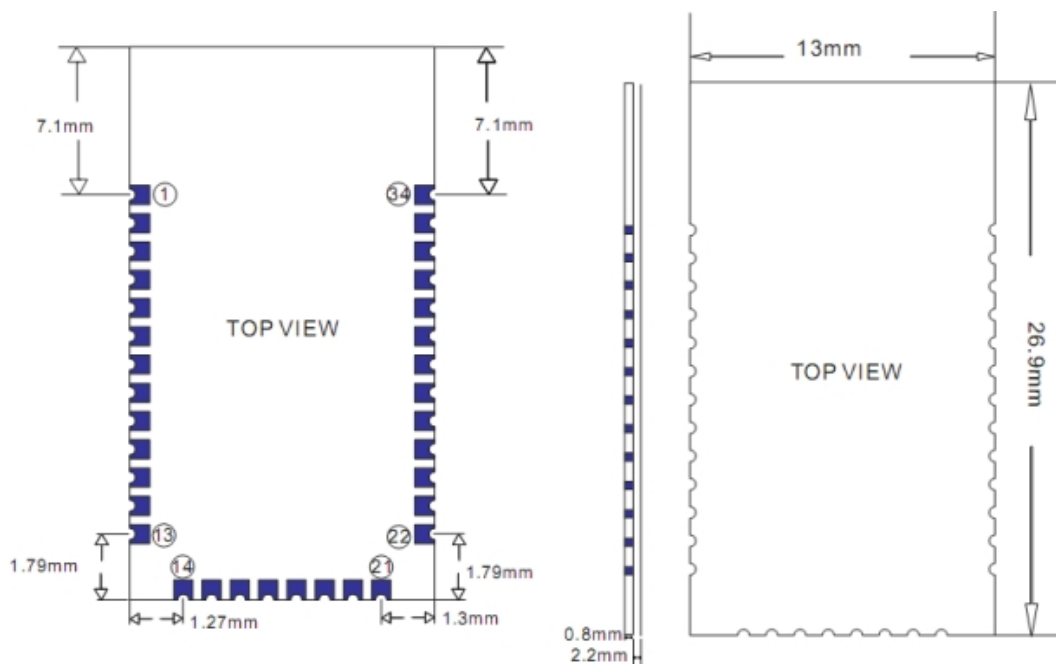
5. Master role

6. Product technical specifications

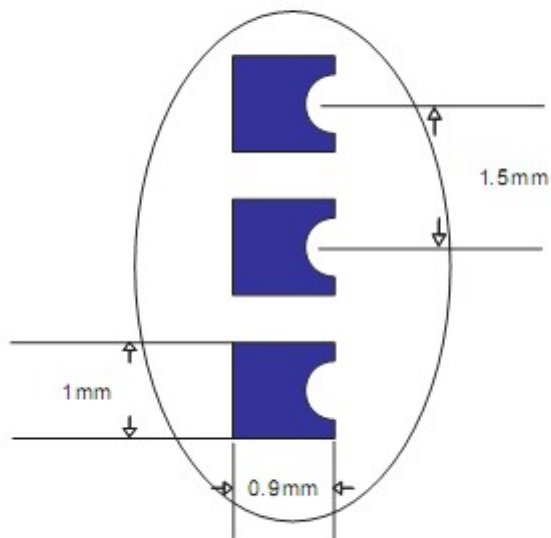
6.1 HM-12 Schematic



6.2 HM-12 Size



6.3 HM-12 package information



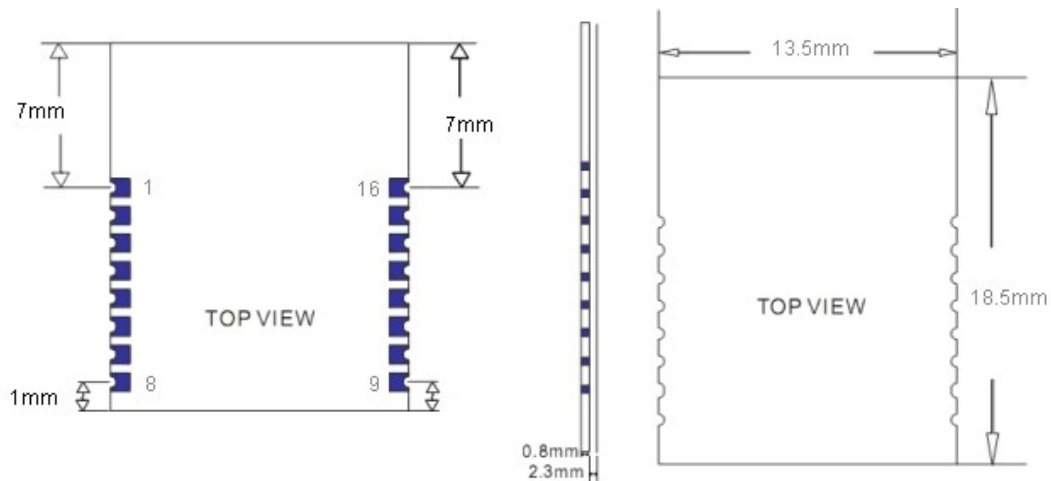
6.4 HM-12 Device Terminal Functions

No	Name	Description	Note
1	UART_TX	UART interface	
2	UART_RX	UART interface	
3	UART_CTS	UART interface	

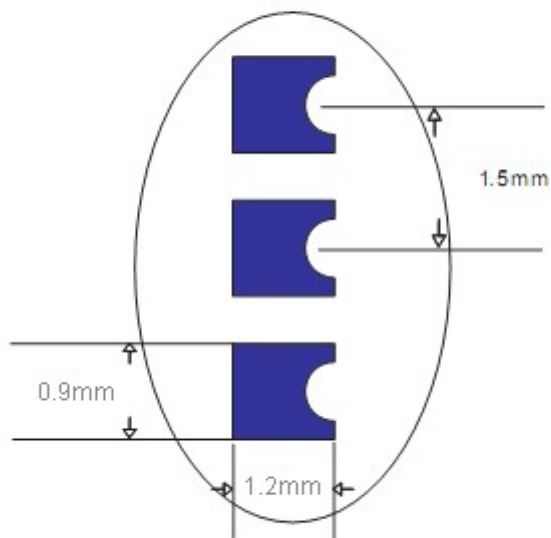
4	UART_RTS	UART interface	
5	NC	NC	
6	NC	NC	
7	NC	NC	
8	NC	NC	
9	NC	NC	
10	NC	NC	
11	RESETB	Reset if low >1000ms.	
12	VCC	3.3V	
13	GND	Ground	
14	GND	Ground	HM-12C doesn't have
15	NC	NC	HM-12C doesn't have
16	NC	NC	HM-12C doesn't have
17	NC	NC	HM-12C doesn't have
18	NC	NC	HM-12C doesn't have
19	NC	NC	HM-12C doesn't have
20	NC	NC	HM-12C doesn't have
21	GND	Ground	HM-12C doesn't have
22	GND	Ground	
23	PIO0	System Key	
24	PIO1	System LED	
25	PIO2	input/output pin	
26	PIO3	input/output pin	
27	PIO4	input/output pin	
28	PIO5	input/output pin	
29	PIO6	input/output pin	
30	PIO7	input/output pin	
31	PIO8	input/output pin	
32	PIO9	input/output pin	

33	PIO10	input/output pin	
34	PIO11	input/output pin	

6.5 HM-13 Size



6.6 HM-13 Package information



6.7 HM-13 Device Terminal Functions

No	Name	Description	Note
1	UART_RTS	UART interface	
2	UART_TX	UART interface	

3	UART_CTS	UART interface	
4	UART_RX	UART interface	
5	NC	NC	
6	NC	NC	
7	NC	NC	
8	NC	NC	
9	VCC	V3.3	
10	NC	NC or VCC	
11	RESETB	Reset if low <1000ms	
12	GND	Ground	
13	PIO3	input/output pin	
14	PIO2	input/output pin	
15	PIO1	System LED	
16	PIO0	System KEY	

7. System function

System KEY function (PIO0) (Added since V208)

Press if Low > 1000ms:

7.3.1 If Module has already connected to remote device

Module will disconnect from remote device.

7.3.2 If Module is standby mode

Module will reset to default configuration. Then restart.

System MAC address

Each dual mode module contains two IEEE addresses, like follow:

00: 0E: 0E: XX: XX: XX (00: 0E: 0E is SPP address)

00: 0E: 0B: XX: XX: XX (00: 0E: 0B is BLE address)

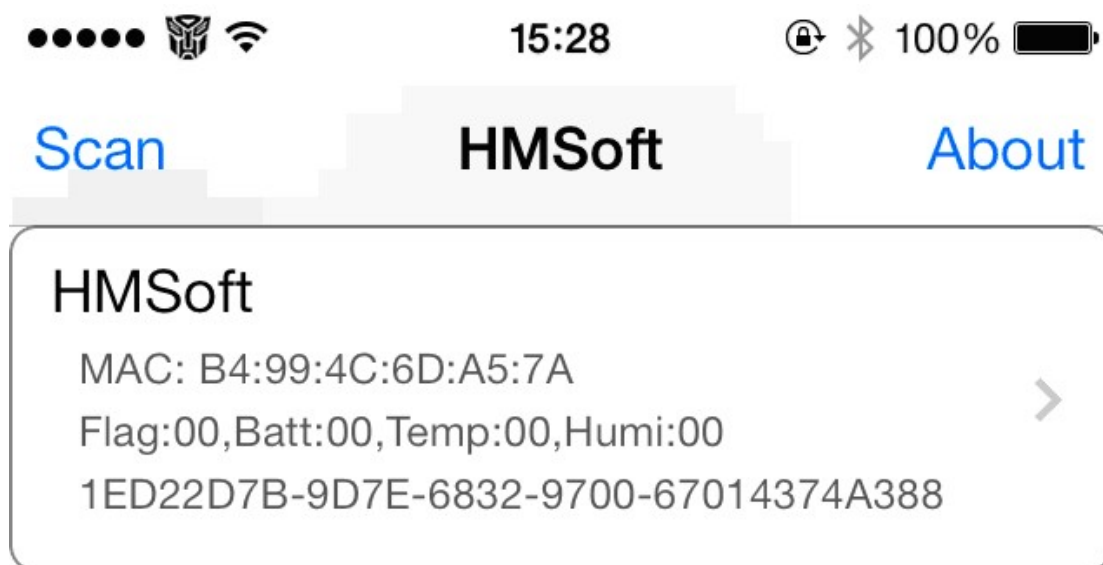
In BLE mode, we also put address information into the advert package.

Under iOS, you can use `CBAvertisementDataManufactureDataKey` property to get it, string format like follow:

0x48, 0x4D, 0x00, 0x0E, 0x0B, 0xXX, 0xXX, 0xXX

0x48 and 0x4D is "HM" string.

0x00: 0x0E: 0x0B: 0xXX: 0xXX: 0xXX is BLE MAC Address.



System LED function (PIO1)

If "AT+PIO10" is setup

Unconnected status: Output High 500 ms, Low 500 ms

Connected status: Output High

If AT+PIO11 is setup

Unconnected status: Output Low.

Connected status: Output High.

8. AT Commands

Factory default setting:

EDR Name HMSoft, Slave role, PinCode 1234

BLE Name HMSoft, Slave role, PinCode 000000

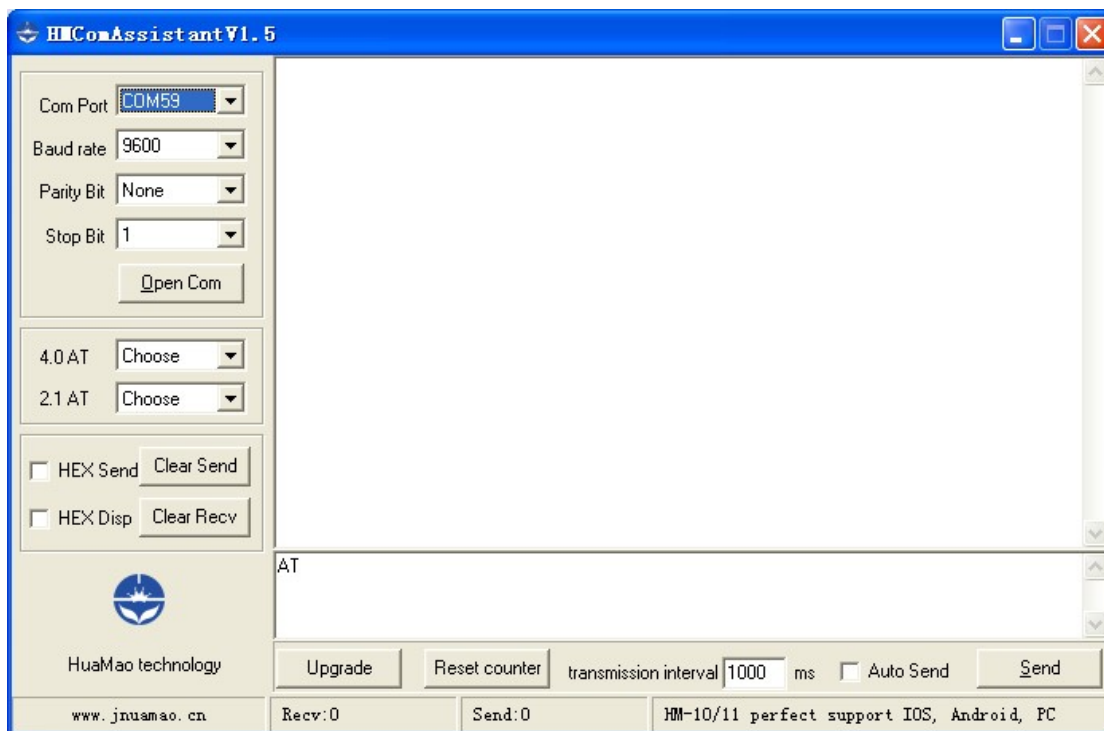
Baud: 115200, N, 8, 1;

Before V216: Key function is open as default settings. You must pull up.

Since V216: Key function is off as default settings. PIO0 could be NC.

AT Command format:

Uppercase AT command format. string format, without any other symbol. (e.g. \r or \n).



1. Test Command Or Disconnect Command

Send	Receive	Parameter
AT	OK/ER/Disconnect link	None

If module is not connected to remote device will receive: "OK"

If module has an error, will receive: "ER"

If Module has connected, module will be disconnected from remote device, if "AT + NOTI" is setup to 1, will receive information string

2. Query module EDR address

Send	Receive	Parameter
AT+ADDE?	OK+ Get: MAC	None

3. Query module BLE address

Send	Receive	Parameter
AT+ADDB?	OK+ Get: MAC	None

4. Query/Set Authentication mode

Send	Receive	Parameter
Q: AT+AUTH?	OK+ Get:<P1>	P1: 0, 1, (Default: 0) 0 – Simple pairing off 1 – Simple pairing on
S: AT+AUTH<P1>	OK+ Set:<P1>	

5. Query/Set A to B mode

Send	Receive	Parameter
Q: AT+ATO B?	OK+ Get:<P1>	P1: 0, 1, (Default: 0) 0 – Not Open ATOB 1 – Open ATOB mode
S: AT+ATO B<P1>	OK+ Set:<P1>	

This command must work with AT+MODE0(In V209 AT+MODE command change to AT+DUAL command) command.

When A device (SPP mode) connect to the module and B device (BLE mode) is also connect to the module, the data package from A device send to the module will send to B device. The data package from B device send to the module is also send to the A device.

AT+ATO B1 command required AT+DUAL0.

6. Query/Set baud rate

Send	Receive	Parameter
Q: AT+BAUD?	OK+ Get:<P1>	P1: 1~7, (Default: 6). 1 - 4800 2 – 9600 3 – 19200 4 – 38400 5 – 57600 6 – 115200 7 - 230400
S: AT+BAUD<P1>	OK+ Set:<P1>	

e.g.

Query baud:

Send: AT+BAUD?

Receive: OK+Get:0

Setup 4800 baud:

Send: AT+BAUD1

Receive: OK+Set:1

7. Clear bond information

Send	Receive	Parameter
AT+BONDE	OK+BONDE	Clear EDR bond info
AT+BONDB	OK+BONDB	Clear BLE bond info

BLE mode not support this command yet.

8. Clear Last Connected EDR Device Address

Send	Receive	Parameter
AT+CLEAE	OK+CLEAE	None

* Added since V211

9. Clear Last Connected BLE Device Address

Send	Receive	Parameter
AT+CLEAB	OK+CLEAB	None

* Added since V211

10. Query/Set Module Class of Device (COD)

Send	Receive	Parameter
Q: AT+COFD?	OK+ Get:<P1>	P1: 000000~FFFFFFE
S: AT+COFD<P1>	OK+ Set:<P1>	Default: 001F00 Note: Hex format

*Added since V311

11. Query/Set The switch of update connection parameter (BLE protocol)

Send	Receive	Parameter
Q: AT+COUP?	OK+ Get:<P1>	P1: 0: Doesn't update
S: AT+COUP<P1>	OK+ Set:<P1>	1: Update

		Default: 0
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This command is used by slave role, when BLE connection is made, if AT+COUP1 is setup; module will try to update connection parameter as follow:

Interval Max 40ms

Interval Min 20 ms

Slave Latency 0

Connection Supervision Timeout 6 seconds

*Added in V316

12. Connect to an EDR(SPP) salve device use MAC address.

Send	Receive	Parameter
AT+CONE<P1><P2>	OK+CONE<P1><P2> OK+CONE OK+CONEF	P1: 0, 1, 2, Device type P2: MAC address 12 Bytes.

P1 could get from AT+DISE? Command.

This command is sub command of AT+ROLE1.

This command only worked in master role.

*Added since V323

13. Connect to an BLE salve device use MAC address.

Send	Receive	Parameter
AT+CONB<P1><P2>	OK+CONB<P1><P2> OK+CONB OK+CONBF	P1: 0, 1, 2, Device type P2: MAC address 12 Bytes.

P1 could get from AT+DISB? Command.

This command is sub command of AT+ROLE1.

This command only worked in master role.

*Added since V323

14. Connect to an EDR(SPP) salve device that was successfully connected last time.

Send	Receive	Parameter
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AT+CONEL	OK+CONEL OK+CONE OK+CONEF	NONE
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This command is sub command of AT+ROLE1.

This command only worked in master role.

*Added since V323

15. Connect to an BLE salve device that was successfully connected last time.

Send	Receive	Parameter
AT+CONBL	OK+CONBL OK+CONB OK+CONBF	NONE

This command is sub command of AT+ROLE1.

This command only worked in master role.

*Added since V323

16. Search SPP slave devices.

Send	Receive	Parameter
AT+DISE?	OK+DISES OK+DIS<P1>:<P2><P3> OK+DISEE	P1: Device type P2: Device MAC P3: Device COD

This command is sub command of AT+ROLE1.

This command only worked in master role.

*Added since V323

17. Search BLE slave devices.

Send	Receive	Parameter
AT+DISB?	OK+DISBS OK+DIS<P1>:<P2><P3><P4> OK+DISBE	P1: Device type P2: Device MAC P3: Device RSSI P4: Device name

This command is sub command of AT+ROLE1.

This command only worked in master role.

If AT+SHOW1 setup, then P4 will show slave device name in scanned list.

*Added since V323

18. Query/Set Module DUAL Work Mode

Send	Receive	Parameter
Q: AT+DUAL?	OK+ Get:<P1>	P1: 0, 1, (Default: 0)
S: AT+DUAL<P1>	OK+ Set:<P1>	0 – Allow dual connect. 1 – Allow one connect.

AT+DUAL0: allow two connections at same time (SPP and BLE).

AT+DUAL1: Only allow one connection at same time (SPP or BLE)

AT+ATOB command must work with AT+DUAL0.

*Added since V208.

19. Query/Set hardware flow control switch

Send	Receive	Parameter
AT+FIOW?	OK+ Get:<P1>	P1: 0, 1,(Default: 0)
AT+FIOW<P1>	OK+ Set:<P1>	0: Hardware flow control off 1: Hardware flow control on

Add since V211.

20. Query/Set module data transmission speed mode

Send	Receive	Parameter
AT+HIGH?	OK+ Get:<P1>	P1: 0, 1, (Default: 0)
AT+HIGH<P1>	OK+ Set:<P1>	0: Balance mode 1: High speed mode

In balance mode, we balanced SPP and BLE with a steady speed.

In high speed mode, we don't control speed, so SPP mode will got high speed.

*Added since V212.

*Removed since V317

21. System Help Information

Send	Receive	Parameter
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AT+HELP?	Help Information	None
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22. Query/Set module EDR work type

Send	Receive	Parameter
AT+IMME?	OK+ Get:<P1>	P1: 0, 1,?, (Default: 0)
AT+IMME<P1>	OK+ Set:<P1>	0: Automatic work 1: Use AT+STARE start work

This command will take effect after next power on.

If AT+IMME1 setup, the module will start work until receive AT+STARE.

*Added since V301.

Since V323, AT+IMME1 command only worked for slave role.

23. Query/Set module BLE work type

Send	Receive	Parameter
AT+IMMB?	OK+ Get:<P1>	P1: 0, 1,?, (Default: 0)
AT+IMMB<P1>	OK+ Set:<P1>	0: Automatic work 1: Use AT+STARB start work

This command will take effect after next power on.

If AT+IMMB1 setup, the module will start work until receive AT+STARB.

*Added in V301.

Since V323, AT+IMME1 command only worked for slave role.

24. Query/Set module loaded notify

Send	Receive	Parameter
AT+INIT?	OK+ Get:<P1>	P1: 0, 1 (Default: 0)
AT+INIT<P1>	OK+ Set:<P1>	0: Loaded notify Off 1: Loaded notify on

When “AT+INIT1” is setup, after module loaded, module will output “OK+INIT” string through UART.

*Added since V211 .

25. Query/Set Module iBeacon switch

Send	Receive	Parameter
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AT+IBEA?	OK+Get:<P1>	P1: 0, 1 0: Turn off iBeacon 1: Turn on iBeacon Default: 0
AT+IBEA<P1>	OK+Set:<P1>	

Default iBeacon UUID is: 74278BDA-B644-4520-8F0C-720EAF059935.

This command is added since V309 version.

26. Query/Set iBeacon UUID

Send	Receive	Parameter
AT+IBE0?	OK+Get:<P1>	P1: 00000001~ FFFFFFFFE Default: 74278BDA
AT+IBE0<P1>	OK+Set:<P1>	

iBeacon UUID is: 74278BDA-B644-4520-8F0C-720EAF059935.

This command can change red color string in iBeacon UUID.

This command is added since V309 version.

e.g.: Send: AT+IBE012345678 to change iBeacon UUID red color string to "12345678"

27. Query/Set iBeacon UUID

Send	Receive	Parameter
AT+IBE1?	OK+Get:<P1>	P1: 00000001~ FFFFFFFFE Default: B6444520
AT+IBE1<P1>	OK+Set:<P1>	

iBeacon UUID is: 74278BDA-B644-4520-8F0C-720EAF059935.

This command can change red color string in iBeacon UUID.

This command is added since V309 version.

e.g.: Send: AT+IBE112345678 change iBeacon UUID red color string to "12345678"

28. Query/Set iBeacon UUID

Send	Receive	Parameter
AT+IBE2?	OK+Get:<P1>	P1: 00000001~

AT+IBE2<P1>	OK+Set:<P1>	FFFFFFFE Default: 8F0C720E
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iBeacon UUID is: 74278BDA-B644-4520-8F0C-720EAF059935.

This command can change red color string in iBeacon UUID.

This command is added since V309 version.

e.g.: Send: AT+IBE112345678 change iBeacon UUID red color string to "12345678"

29. Query/Set iBeacon UUID

Send	Receive	Parameter
AT+IBE3?	OK+Get:<P1>	P1: 0000001~
AT+IBE3<P1>	OK+Set:<P1>	FFFFFFFE Default: AF059935

iBeacon UUID is: 74278BDA-B644-4520-8F0C-720EAF059935.

This command can change red color string in iBeacon UUID.

This command is added since V309 version.

e.g.: Send: AT+IBE112345678 change iBeacon UUID red color string to "12345678"

30. Query/Set Module iBeacon Marjor version

Send	Receive	Parameter
AT+MAJO?	OK+Get:<P1>	P1: 0001~FFFE
AT+MAJO[P1]	OK+Set:[P1]	Default: FFE0

E.g. Change marjor version to 0102

Send: AT+MARJ0102, if all is okay, module will send back OK+Set: 0102

This command is added since V309 version.

31. Query/Set Module iBeacon minor

Send	Receive	Parameter
AT+MINO?	OK+Get:<P1>	P1: 0001~FFFE
AT+MINO<P1>	OK+Set:<P1>	Default: FFE1

This command is added since V309 version.

32. Query/Set Module iBeacon Measured power

Send	Receive	Parameter
AT+MEAS?	OK+Get:<P1>	P1: 00~FF
AT+MEAS<P1>	OK+Set:<P1>	Default: C5

This command is added since V309 version.

33. Query/Set Module MTU Size

Send	Receive	Parameter
AT+MTUS?	OK+Get:<P1>	P1: 0: 60 Bytes
AT+MTUS <P1>	OK+Set:<P1>	1: 120 Bytes Default: 0

Please read <HM-12_HM-13 MTU Size.pdf> get more information

This command is added in V316 version

34. Query/Set Module Work Mode

Send	Receive	Parameter
Q: AT+MODE?	OK+ Get:<P1>	P1: 0, 1, (Default: 0)
S: AT+MODE<P1>	OK+ Set:[para1]	0 – Data transmission. 1 – Remote control.

AT+MODE0: Only transfer data when connection establishment.

AT+MODE1: Transfer data and response AT commands.

This command is changed in V209. Before V209 this command is used to change DUAL work mode(please see AT+DUAL command).

35. Query/Set Notify information

Send	Receive	Parameter
Q: AT+NOTI?	OK+ Get:<P1>	P1: 0, 1, (Default: 0)
S: AT+NOTI<P1>	OK+ Set:<P1>	0: Don't Notify 1: Notify

After AT+NOTI1, module will send connect or disconnect string through UART when module state is change:

OK+CONE ===== EDR connect

OK+LSTE ===== EDR disconnect

OK+CONB===== BLE connect

OK+LSTB ===== BLE disconnect

OK+LSTA ===== except disconnect, module will reset after 500 ms.

36. Query/Set notify mode

Send	Receive	Parameter
Q: AT+NOTP?	OK+ Get<P1>	P1: 0, 1; default: 0
Q: AT+NOTP<P1>	OK+ Set<P1>	0: without address 1: with address

This command must work with “AT+NOTI1”, if this switch is open, when the module connect to disconnect, the prompt string will include the remote address.

OK+CONB:001122334455, OK+LSTB:001122334455

OK+CONE:001122334455, OK+LSTE:001122334455

Added since V213

37. Query/Set Module EDR name

Send	Receive	Parameter
Q: AT+NAME?	OK+ Get<P1>	P1: module EDR name,
Q: AT+NAME<P1>	OK+ Set<P1>	Max length is 28. Default: HMSoft

e.g.

change module name to bill_gates

S: AT+NAMEbill_gates

R: OK+Set:bill_gates

38. Query/Set Module BLE name

Send	Receive	Parameter
Q: AT+NAMB?	OK+ Get:<P1>	P1: module BLE name,
S: AT+NAMB<P1>	OK+ Set:<P1>	Max length is 28. Default: HMSoft

39. Query/Set Whether to use BLE MAC address

Send	Receive	Parameter
Q: AT+ONEM?	OK+ Get<P1>	P1: 0, 1; default: 0 0: Use BLE address 1: Doesn't use
Q: AT+ONEM<P1>	OK+ Set<P1>	

If you want use BLE mode in android system, then doesn't use this command.

After setup "AT+ONEM1", BLE and EDR will use same MAC address.

Added since V311

40. Query/Set PIO0 function (System Key)

Send	Receive	Parameter
Q: AT+PIO0?	OK+ Get:<P1>	P1: 0, 1,(default: 0) 0: Key function is off. 1: Key function is open.
S: AT+ PIO0<P1>	OK+ Set:<P1>	

Added since V216

41. Query/Set PIO1 output status (System LED)

Send	Receive	Parameter
Q: AT+PIO1?	OK+Get:<P1>	P1: 0, 1 0: Unconnected Output 500ms High 500ms Low, Connected output High. 1: Unconnected output Low, Connected output High. Default: 0
S: AT+ PIO1 <P1>	OK+Set:<P1>	

42. Query/Set PIO output status

Send	Receive	Parameter
Q: AT+PIO<P1>?	OK+ Get:<P1>[P2]	P1: 2~B (HM-12) P2: 2~3 (HM-13) 0: Output Low
S: AT+ PIO<P1>[P2]	OK+ Set:<P1>[P2]	

		1: Output High ?: Query
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Note: Add in V209

43. Query/Set EDR Pin Code

Send	Receive	Parameter
Q: AT+PINE?	OK+ Get:<P1>	P1: module EDR Code
S: AT+PINE<P1>	OK+ Set:<P1>	Max length: 6 Default: 1234

44. Query/Set BLE Pin Code

Send	Receive	Parameter
Q: AT+PINB?	OK+ Get:<P1>	P1: module BLE Code
S: AT+PINB<P1>	OK+ Set:<P1>	000000~999999 Default: 000000

45. Query/Set UART parity bit

Send	Receive	Parameter
Q: AT+PARI?	OK+ Get:<P1>	P1: 0, 1, 2, (Default: 0)
S: AT+PARI<P1>	OK+ Set:<P1>	0: Parity None 1: Parity even 2: Parity odd

Added in V211.

46. Restore all setup value to factory setup

Send	Receive	Parameter
AT+RENEW	OK+RENEW	None

47. Restart module

Send	Receive	Parameter
AT+RESET	OK+RESET	None

48. Query/Set BLE work method

Send	Receive	Parameter
AT+RESP?	OK+ Get:<P1>	P1: 0, 1 (default: 0)

AT+RESP<P1>	OK+ Set:<P1>	0: WriteWithoutResponse 1: WriteWithResponse & WriteWithoutResponse
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This command will take effect after module next power on or reset.

Added in V313

49. Query BLE RSSI value

Send	Receive	Parameter
AT+RSSB?	OK+RSSB: <P1>	P1: RSSI value 9999: No connection 9998: Try later 9997: Read error Xxxx: RSSI value

This command must use after “AT+MODE1” is setup.

This command is only used by remote Bluetooth device.

Added in V215

50. Query EDR RSSI value

Send	Receive	Parameter
AT+RSSE?	OK+RSSE: <P1>	P1: RSSI value 9999: No connection 9998: Try later 9997: Read error Xxxx: RSSI value

This command must use after “AT+MODE1” is setup.

This command is only used by remote Bluetooth device.

Added in V215

51. Query Last Connected EDR Device Address

Send	Receive	Parameter
AT+RADE?	OK+Get:MAC Address	None

Added in V211

52. Query Last Connected BLE Device Address

Send	Receive	Parameter
AT+RADB?	OK+ Get:MAC Address	None

Added in V211

53. Query/Set EDR Master and Slaver Role

Send	Receive	Parameter
AT+ROLE?	OK+ Get:<P1>	P1: 0, 1 (default: 0)
AT+ROLE<P1>	OK+ Set:<P1>	0: Salve 1: Master

This command will take effect after module next power on or reset.

This command doesn't work with AT+ROLB1.

Added in V312

54. Query/Set BLE Master and Slaver Role

Send	Receive	Parameter
AT+ROLB?	OK+ Get:<P1>	P1: 0, 1 (default: 0)
AT+ROLB<P1>	OK+ Set:<P1>	0: Peripheral 1: Central

This command will take effect after module next power on or reset.

This command doesn't work with AT+ROLE1.

*Added since V214

*Removed since V323, since V323, if AT+ROLE1 setup, module will into SPP master mode and BLE master mode at same time.

55. EDR mode start work command

Send	Receive	Parameter
Q: AT+STARE	OK+ STARE	NONE

This command is sub command of AT+IMME1.

This command will let module start work.

Added in V301

56. BLE mode start work command

Send	Receive	Parameter
Q: AT+STARB	OK+ STARB	NONE

This command is sub command of AT+IMMB1.

This command will let module start work.

Added in V301

57. EDR mode stop work command

Send	Receive	Parameter
Q: AT+STOPE	OK+ STOPE	NONE

This command is sub command of AT+IMME1.

This command will let module pause work.

Added in V304

58. BLE mode start work command

Send	Receive	Parameter
Q: AT+STOPB	OK+ STOPB	NONE

This command is sub command of AT+IMMB1.

This command will let module pause work.

Added in V304

59. Query/Set EDR Advert type

Send	Receive	Parameter
Q: AT+SCAN?	OK+ Get:<P1>	P1: 0, 1, (Default: 0)
S: AT+SCAN<P1>	OK+ Set:<P1>	0: Discovery and connectable 1: Only connectable

60. Query/Set module safe mode

Send	Receive	Parameter
Q: AT+SAFE?	OK+ Get:<P1>	P1: 0, 1, (Default: 0)
S: AT+SAFE<P1>	OK+ Set:<P1>	0: Don't use safe mode 1: Use safe mode

*Added since V311

This command will let module reset when link is disconnected.

61. Query/Set if show BLE device name in AT+DISB? command

Send	Receive	Parameter
Q: AT+SHOW?	OK+ Get:<P1>	P1: 0, 1, (Default: 0) 0: Don't show name 1: Show name
S: AT+SHOW<P1>	OK+ Set:<P1>	

*Added since V323

62. Query/Set UART stop bit

Send	Receive	Parameter
Q: AT+STOP?	OK+ Get:<P1>	P1: 0, 1, (Default: 0) 0: 1 stop bit 1: 2 stop bits
S: AT+STOP<P1>	OK+ Set:<P1>	

Added in V211

63. Query Software Version

Send	Receive	Parameter
AT+VERR? AT+VERS?	Version Information	None