HM-19 Bluetooth Module 4.2 BLE and 5.0 BLE USB Dongle

Type: HM-19

Size: 13 * 18 * 2.2 mm

BT Version: V4.2 BLE & V5.0

Firmware: V120

Status: In production

Bluetooth Module 4.2 & 5.0 BLE Datasheet

* Professional bluetooth products suppliers.

* Remote control module provider

* Data transmission module provider

* PIO state acquisition module provider

* Customizable bluetooth module and bluetooth solutions

* High and new technology enterprise

* SIG members

The most complete, most convenient, the most stable of bluetooth data transmission, remote control, PIO

acquisition module

---- Master and slave role in one

---- Remote control without other MCU

---- The PIO data acquisition without other MCU

1. Product Parameters

* BT Version: Bluetooth Specification V4.2 BLE

* Send and receive no bytes limit.

* Working frequency: 2.4GHz ISM band

* Modulation method: GFSK(Gaussian Frequency Shift Keying)

* RF Power: -18dbm ~ 3dbm, can be modify through AT Command AT+POWE.

* Speed: Asynchronous: 1-8K Bytes

* Synchronous: 1-8K Bytes

* Security: Authentication and encryption

* Service: Central & Peripheral

* FFE0 is service UUID (could modify by AT+UUID command)

* FFE1 is Char1 UUID (could modify by AT+CHAR command)

*Default property : Read, Write Without Response, Notify Property could modify by AT+RESP command

* FFE2 is Char2 UUID (Could open by AT+FFE2 command)

If you use AT+CHAR command to change Char1 value, then Char2 value will be Char1 value + 1.

* Power: +1.9~5.5 VDC 50mA

* Long range: Open space have 100 Meters range

* Power: Low Power Mode 50uA~500uA, Standby mode 6mA, Active mode 10mA.

* Working temperature:–40 ~ +85 Centigrade

* Size: HM-18 27mm * 13mm * 2.2 mm

* Size: HM-19 18mm * 13mm * 2.2mm

2. Product Overview

Thanks for you choose our products. If you want to know more, please contact us to help you (Videos, New version datasheet, Module work flow, project Codes, etc.)

HM Bluetooth module use CY Press IC, Master and slave roles in one, transmission version and remote control version in one, Support the AT command modify module parameters, 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 other MCU.

HM-01, HM-02, HM-03, HM-04, HM-05, HM-06, HM-07, HM-08, HM-09 is bluetooth V2.1 version. Use CSR Chip.

HM-10, HM-11, HM-12 is Bluetooth V4.0 BLE version. Use TI Chip. HM-16, HM-17 is Bluetooth V4.1 BLE version. Use CYPRESS Chip.

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

HM-01, HM-09, HM-10, HM-12, HM-16, HM-18 have same size and same pins.

HM-06, HM-07, HM-11, HM-13, HM-17, HM-19 have same size and same 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	2.1-5.5V	27 * 13 * 2.2	128KB		BLE V4.1
HM-17	2.1-5.5V	18 * 13 * 2.2	128KB		BLE V4.1
HM-18	2.1-5.5V	27 * 13 * 2.2	256KB		BLE V4.2
HM-19	2.1-5.5V	18 * 13 * 2.2	256KB		BLE V4.2

4. Product certificate

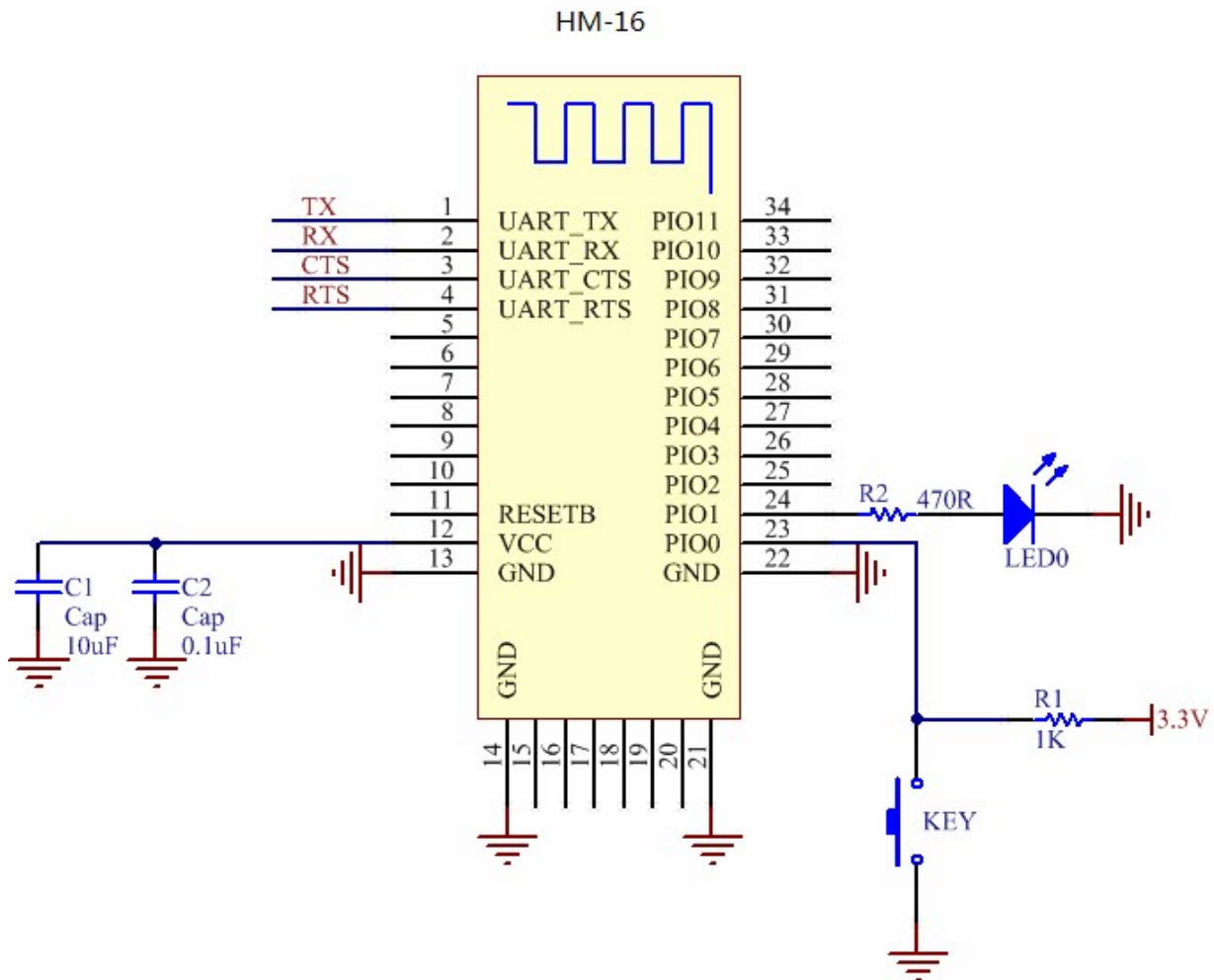Most products have FCC-ID, CE, RoHS.

5. Product pictures

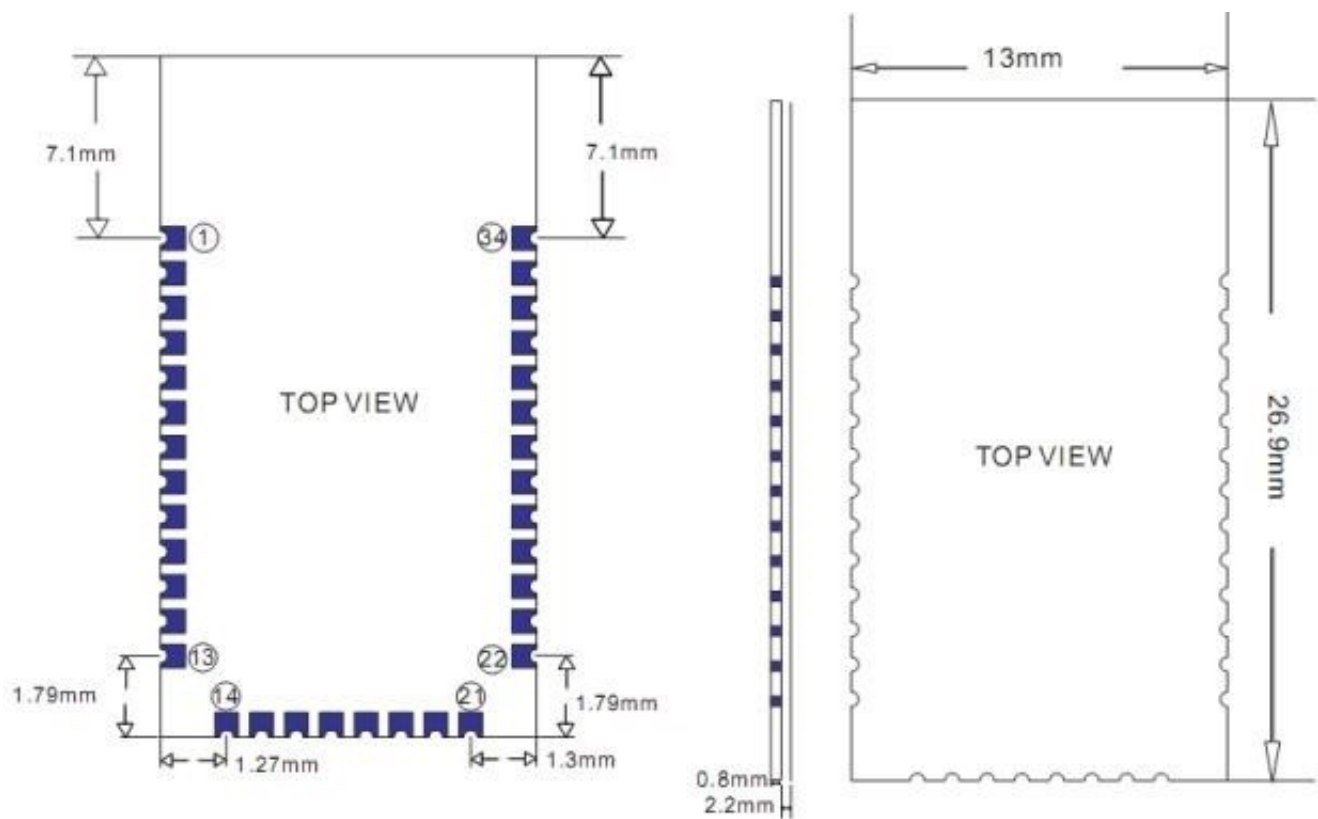|		
Bluetooth Module HM-10	Bluetooth Module HM-11	HM-12T Dual (EDR 4.0 & BLE 4.0)
		HMSoft V311
HM-13 Dual (EDR 4.0 & BLE 4.0)	HM-14 Dual (EDR 4.0 & BLE 4.0)	HM-16 BLE 4.1
HMSoft V313	HMSoft V218	HMSoft V108
Bluetooth Module HM-17	HM-18 BLE 4.2	HM-19 BLE 4.2 BLE 5.0 Coming soon
	HMSoft V108	HMSoft V108
HM-15 BLE 4.0 USB Dongle	HM Beacon BLE 4.0	Bluetooth Module Packing
HMSoft V530	HMBeacon V524	Status: Stop production
WIFI Testing Coming soon	WIFI+BLE Testing Coming soon	
HM-20	HM-21	HM-01, HM-06, HM-18

6. Product technical specifications

This document only include Bluetooth BLE 4.2 document, please contact us to get Bluetooth V2.1 version datasheet.

That document include: HM-01, HM-02, HM-03, HM-04, HM-05, HM-06, HM-07, HM-08, HM-09.
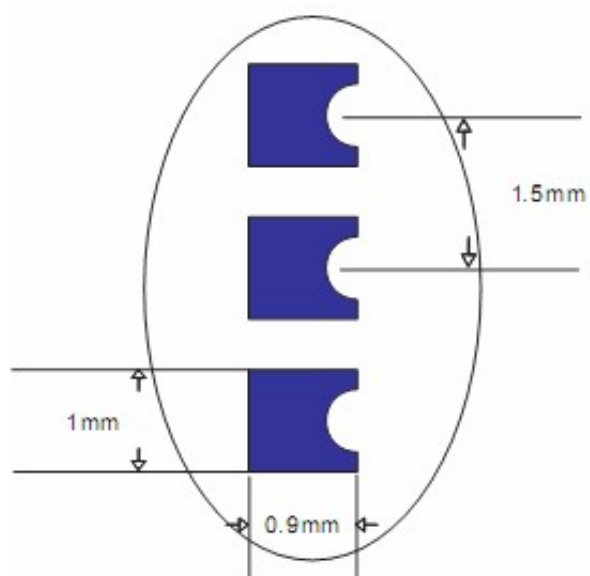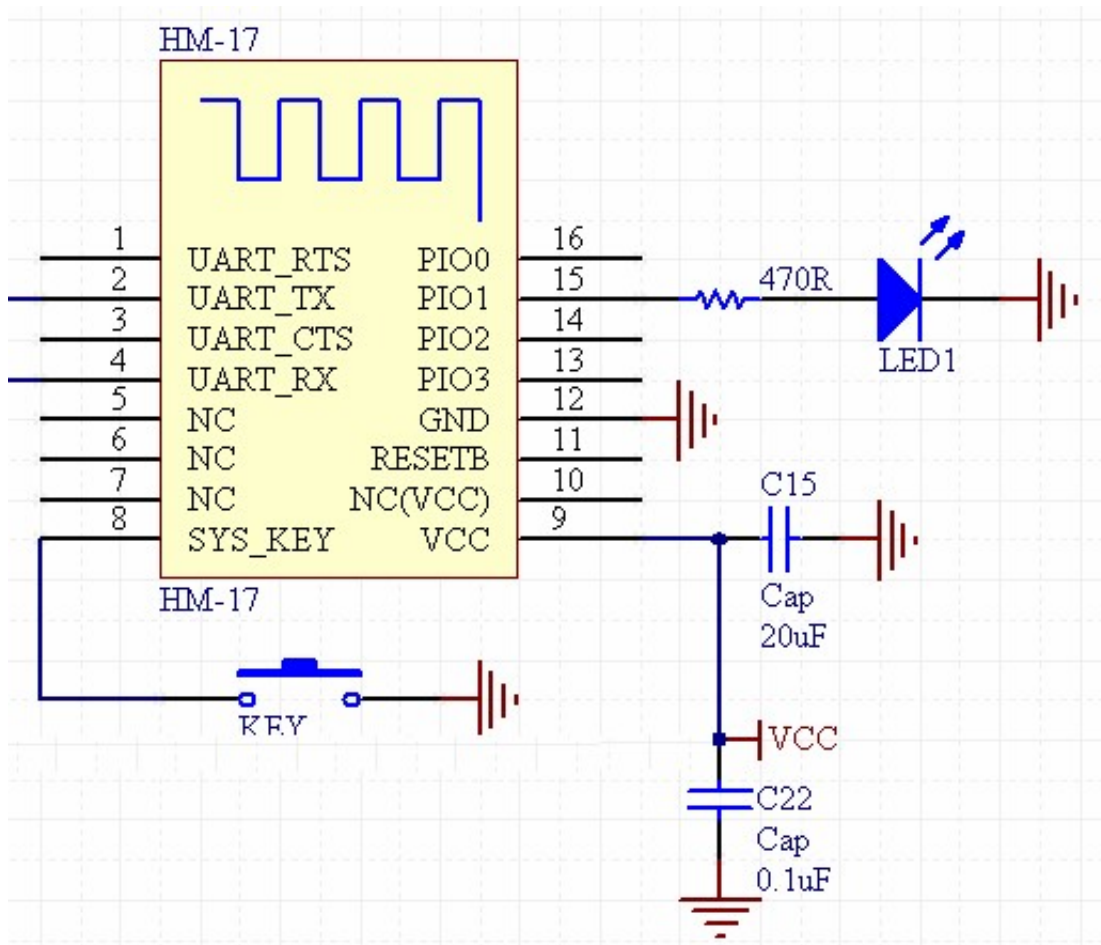
6.1 HM-16 Schematic
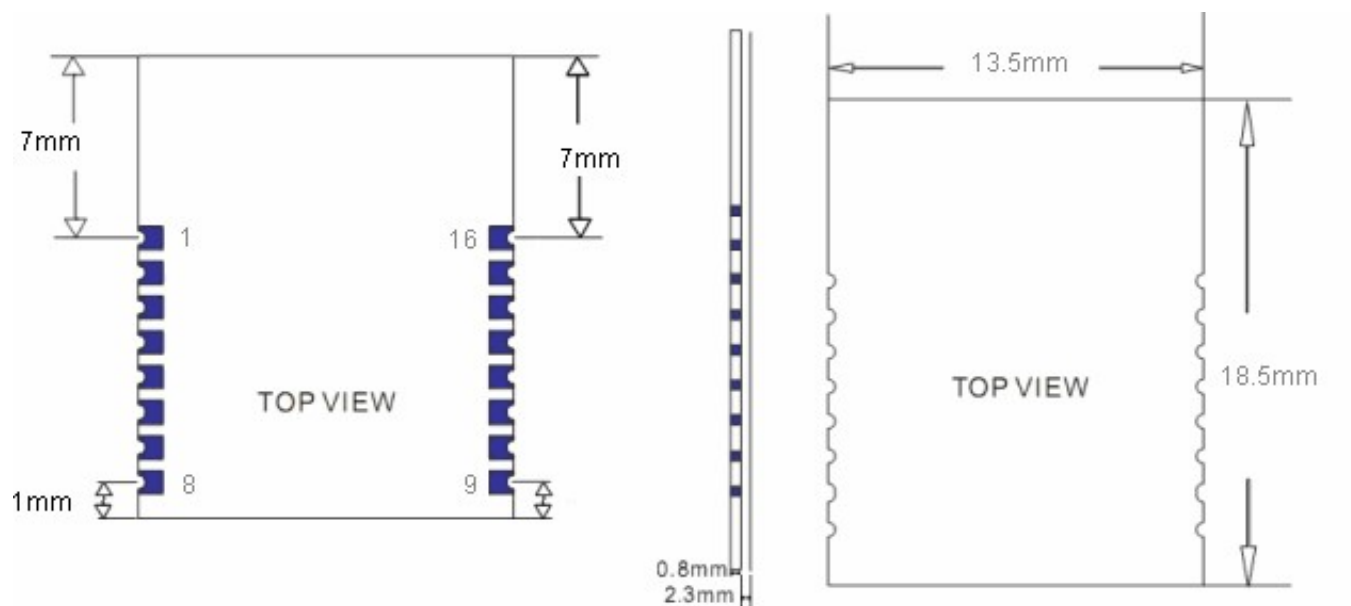

6.2 HM-16 Size

6.3 HM-16 package information

6.4 HM-16 Device Terminal Functions

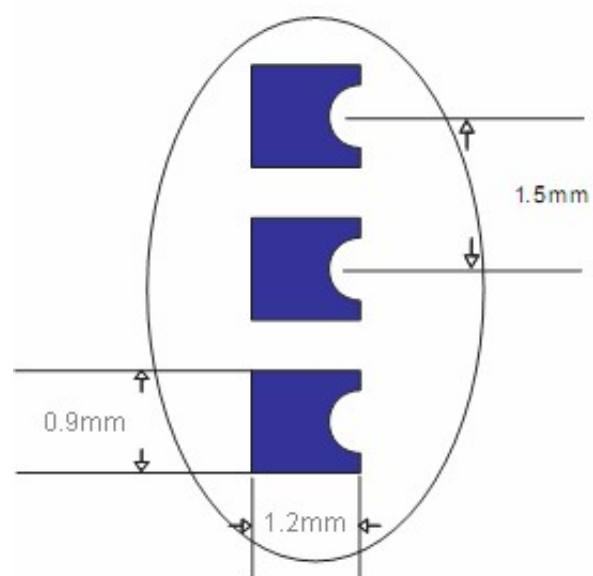| Pin NO.	Name	Description	CYBL
1	UART_TX	UART interface	PIN20
2	UART_RX	UART interface	PIN19
3	UART_CTS	UART interface	PIN22
4	UART_RTS	UART interface	PIN21
5	NC	NC	PIN27
6	NC	NC	PIN26
7	NC	NC	PIN41
8	NC	NC	PIN42
9	NC	NC	NC
10	NC	NC	NC
11	RESETB	Reset if low >100ms.	RESET
12	VCC	VCC	VCC
13	GND	Ground	Groud
14	GND	Ground	Groud
15	NC	NC	NC
16	NC	NC	NC
17	NC	NC	NC
18	NC	NC	NC
19	NC	NC	NC
20	NC	NC	NC
21	GND	Ground	Ground
22	GND	Ground	Ground
23	PIO0	System Key	PIN47
24	PIO1	System LED	PIN48
25	PIO2	input/output pin.	PIN49
26	PIO3	input/output pin	PIN50
27	PIO4	input/output pin	PIN51
28	PIO5	input/output pin	PIN52
29	PIO6	input/output pin	PIN53
30	PIO7	input/output pin	PIN54
31	PIO8	input/output pin	PIN5
32	PIO9	input/output pin	PIN6
33	PIO10	input/output pin	PIN7
34	PIO11	input/output pin	PIN8

6.5 HM-19 Schematic

6.6 HM-19 Size

6.7 HM-19 Package information

6.8 HM-19 Device Terminal Functions

No	Name	Description	CYBL
1	UART_RTS	UART interface	PIN21
2	UART_TX	UART interface	PIN20
3	UART_CTS	UART interface	PIN22
4	UART_RX	UART interface	PIN19
5	NC	NC	PIN27
6	NC	NC	PIN26
7	NC	NC	PIN39
8	KEY	System KEY	PIN47
9	VCC	V3.3	VCC
10	NC	NC or VCC	
11	RESETB	Reset if low <100ms	RESET
12	GND	Ground	Ground
13	PIO3	input/output pin	PIN5
14	PIO2	input/output pin	PIN6
15	PIO1	System LED	PIN7
16	PIO0	input/output pin	PIN8

Product link : http://www.trading228.com/?p=3798