

User Manual

JBT24M module is a low energy (Bluetooth Low Energy BLE), low cost, and high performance Bluetooth 4.0 wireless transceiver module based on TI CC2540/CC2541 Single-Chip solution.

The JBT24M module runs both Application and BLE protocol Stack, includes peripheral interfaces with various sensors and controls; suitable for Smart Phone (Android/iPhone) enabled wireless sensor and control applications such as security and alarm, remote data sensing and acquisition, healthcare monitor, industrial control, etc.

JBT24M can widely be applied to data transmitting, signal control and those specified as preferred components in remote control garage, roller curtain, door locks, remote sensing, telemetry, industrial control and wireless security alarm industry.

JBT24M module is built based on Texas Instruments CC2541 2.4-GHz Bluetooth® System-on-Chip (SoC) which is a power-optimized true SoC solution for both Bluetooth low energy and proprietary 2.4-GHz applications. TI CC2541 enables robust network nodes to be built with low total bill-of-material costs. CC2541 combines the excellent performance of a leading RF transceiver with an industry-standard enhanced 8051 MCU, in-system programmable flash memory, 8KB RAM, and many other powerful supporting features and peripherals. CC2541 is highly suited for systems where ultralow power consumption is required. This device is specified by various operating modes. Short transition times between operating modes further enable low power consumption.

Pin Configuration

Pin Description General Configuration

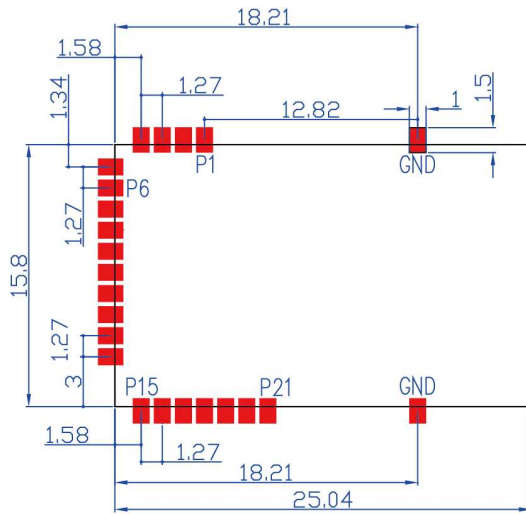
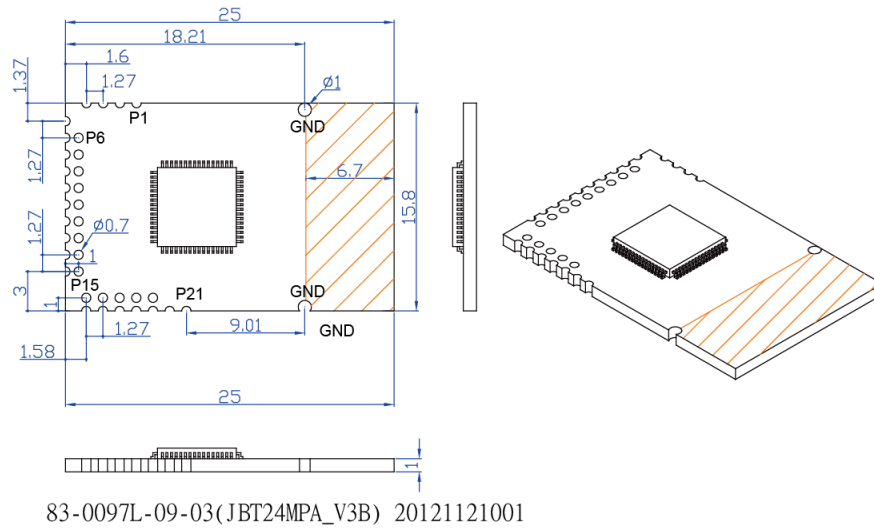
(I: input; O: output; I/O: input/output P: Power)

J1:

Pin No.	Symbol(uP)	I/O	Function Description	Notes
1	USB P1	I/O	USB P(cc2540)/SCL(cc2541)	
2	USB_N1	I	USB N(cc2540)/SDA(cc2541)	
3	VBUS	P	USB 5.0V output	
4	P1_5	I/O	GPIO/TX(Alternative)	
5	P1_4	I/O	GPIO/RX(Alternative)	
6	GND	P	GND	
7	P1_6	I/O	GPIO/TX(Alternative)	
8	3.3Vdc	I/O	Power Input 2Vdc to 3.6Vdc	
9	P1_7	I/O	GPIO/RX(Alternative)	
10	P2_0	I/O	GPIO/PWM0	
11	P1_3	I/O	GPIO	
12	P1_2	I/O	GPIO	
13	P1_0	I/O	GPIO/Drive 20mA current	
14	P1_1	I/O	GPIO/Drive 20mA current	
15	P0_6	I/O	GPIO/ADC6/PWM	
16	P0_3	I/O	GPIO/ADC3/TX0	
17	P0_2	I/O	GPIO/ADC2/RX0/OP_OUT	
18	P0_1	I/O	GPIO/ADC1/OP-/Key2	
19	P0_0	I/O	GPIO/ADC0/OP+/Key1	
20	P0_7	I/O	GPIO/ADC7/OP+	
21	RESET_N	I	Reset, Active Low	

Module Mechanical Data

JBT24MPA : 15.8mm x 25mm



JBT24MPA Layout footprint

FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Radiation Exposure Statement

This modular complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID: 2ANTLJBT24M-PA Or Contains FCC ID:

2ANTLJBT24M-PA"

When the module is installed inside another device, the user manual of the host must contain below warning statements;

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.

(2) This device must accept any interference received, including interference that may cause undesired operation.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product.

Any company of the host device which install this modular with limit modular approval should perform the test of radiated emission and spurious emission according to FCC part 15C : 15.247 and 15.209 requirement, Only if the test result comply with FCC part 15C : 15.247 and 15.209 requirement, then the host can be sold legally.