

User Guide

BLUETOOTH MODULE

Model: MS-BT002

1. Device Features

- Bluetooth standard device.
- Own power regulator **3.3V (Typical)**
- Minimum External Components
- UART interface
- Support for 8Mbit External Flash Onboard
- Support for 802.11Co-Existence
- RoHS Compliant

2. Applications

This BT Modular is a highly integrated solution which is a Request for Limited Modular Approval application. It includes a 2.4GHz digital transmit and receive, a base-band processor, Band Pass Filter, 16MHz Crystal, and 8Mbit Flash memory. The BT Module implements base-band processing supporting GFSK, $\pi/4$ -DQPSK, 8-DPSK. This BT Module also provides a user interfaces including UART, External interface supports LED.

Only data communication functions support according to BT standard device.

3. Key Features

Operating Frequency Band: 2.402GHz -2.480GHz ISM band

Bluetooth Specification: V4.0 low energy which Compatible
with previous Bluetooth V3.0+EDR

Theoretical range in open field: Bluetooth Class II

Transmitter Power: +4dBm (Typical)

Host Interface: UART

Power Supply: 3.3V(Typical)

Dimension: 26.9mm (L) x 13 (W) mm x 2.2mm (H)

4. Electrical Characteristic

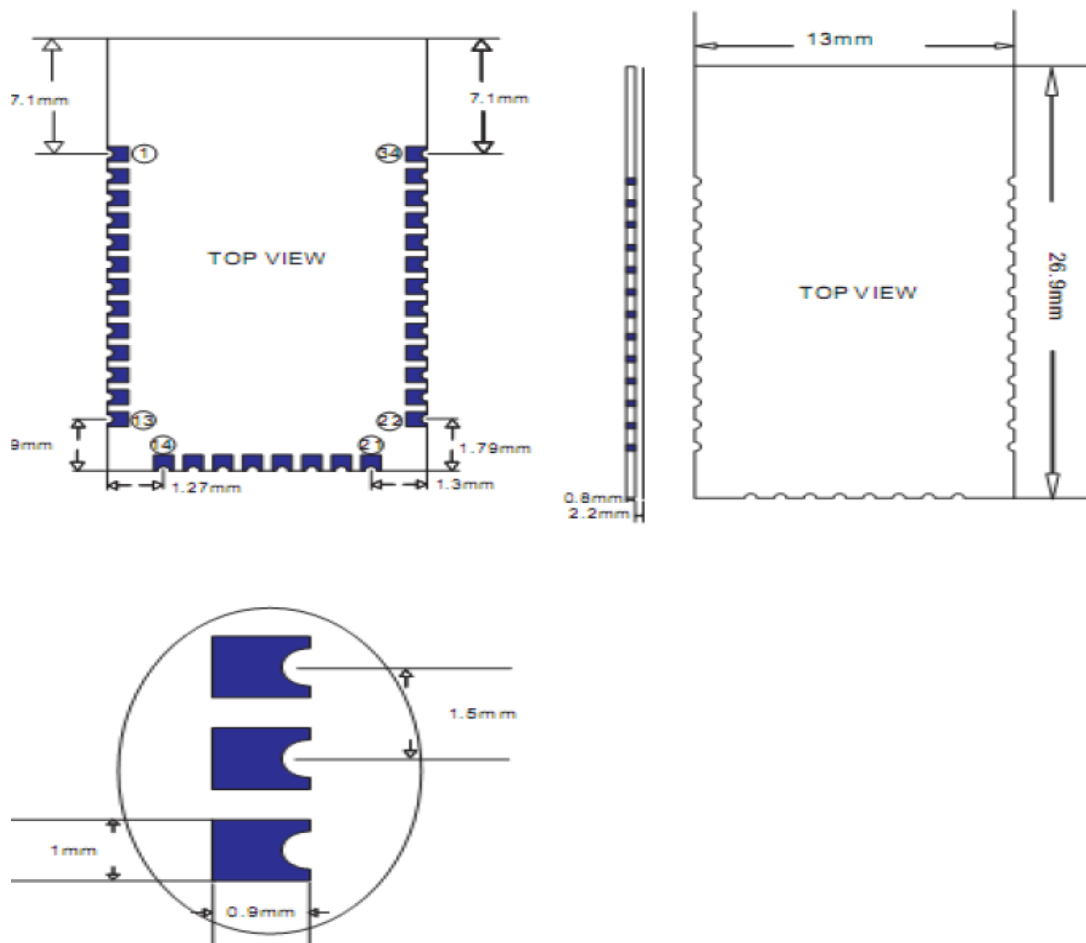
Absolute Maximum Ratings

Rating	Min	Max
Storage temperature	-40°C	+150°C
Supply voltage: VBAT	-0.4V	5.6V
Other terminal voltages	VSS-0.4V	VDD+0.4V

Recommend operation conditions

Rating	Min	Typ	Max
VDD_IO_x,	3.2V		3.63V
SW_BTN	3.2V		4.3V
BAT_IN	3.2V		4.3V

5. Mechanical Dimensions



7. Pin Definition Descriptions

Pin NO.	Pin Name	Pin Descriptions
1	UART_TX	UART data output active High
2	UART_RX	UART data input active High
11	RESETB	Reset if low.Input debounced so must be low for>5ms to cause a reset
12	3.3V	Power supply voltage 3.3V
13	GND	Power Ground
14	GND	Power Ground
21	GND	Power Ground
22	GND	Power Ground

FCC Statement:

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.

FCC Radiation Exposure Statement:

This Bluetooth Module complies with FCC radio-frequency exposure guidelines set forth for an uncontrolled environment.

This device is intended only for OEM integrators under the following conditions:

- (1) According to FCC Part 15 Subpart C Section 15.212, the radio elements of the modular transmitter must have their own shielding. However, due to there is no shielding for this Bluetooth Module, this module is granted as a Limited Modular Approval.
- (2) This module itself may not be marketed without the base board that contains the antenna. This device has been designed to operate with an PCB antenna built-in the base board having a maximum gain of 2dBi. Only this type of antenna may be used.
- (3) Integration is typically strictly restricted to Grantee himself or dedicated OEM integrators under control of the Grantee.

As long as 3 conditions above are met, further transmitter test will not be required.

However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

IMPORTANT NOTE: In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

This module is intended for OEM integrator. The OEM integrator is still responsible for the FCC compliance requirement of the end product, which integrates this module. Due to missing shielding the module is strictly limited to integration by the Grantee himself or his dedicated OEM Integrator.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Declaration the Restriction of this Limited Module Approval:

According to FCC Part 15 Subpart C Section 15.212, the radio elements of the modular transmitter must have their own shielding. However, due to there is no shielding for this Bluetooth Module, this module is granted as a Limited Modular Approval. When this Bluetooth Module is installed into the end product, a Class II Permissive Change or a New FCC ID submission is required to ensure the full compliance of FCC relevant requirements.

USER MANUAL OF THE END PRODUCT:

In the user manual of the end product, the end user has to be informed that the equipment complies with FCC radio-frequency exposure guidelines set forth for an uncontrolled environment.

LMA, professional installation, radiated emission measurements Module inside Host A Class II Permissive Change or New Certification is not in general required here.

The end user has to also be informed that any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

If the size of the end product is smaller than 8x10cm, then additional FCC part 15.19 statement is required to be available in the user manual: This device complies with Part 15 of 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.

LABEL OF THE END PRODUCT:

The final end product must be labeled in a visible area with the following " Contains TX FCC ID: AZK-BT002 ". If the size of the end product is larger than 8x10cm, then the following FCC part 15.19 statement has to also be available on the label: This device complies with Part 15 of 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.

Hereby, Meet (China) Ltd. declares that this Radio-Frequency peripheral is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.