

Product Introduction

BTM0305 is a BLE module with a master-slave feature. The module is based on nRF52832 with an ARM Cortex-M4F processor from Nordic Semiconductor. Therefore, the BTM0305 features Bluetooth 5.0, high performance and ultra-low power(ULP).

The user's MCU is connected to the module through a serial port (UART), so that it enables bidirectional communication of data with the mobile device. After receiving the data from the serial port of the user MCU, the module will automatically send it to the mobile device; The mobile device can write data to the module by the APP, and then the module sends the data it received to the user's MCU through the serial port.

Module features (such as serial port baud rate, broadcast interval, etc.) support both local and air configuration modes. Various parameters of the module can be configured by "AT Command", and parts of the "AT Command" can be stored in flash to ensure the configuration does not get lost when the module is power-off.

With the mentioned feature, users may spend less time and cost to developing products by using BTM0305. Development becomes easier.

Feature

- Support Bluetooth 5.0 protocol, high-speed transmission.
- Support a wide range of supply voltage from 1.8V to 3.6V.
- Support all of Bluetooth role(master and slave),easy to switch to different roles.
- Support multi-link architecture with one master and multiple slaves
- Support information encryption to improve transmission security
- Support low power advertising mode
- Support to modify the 128-bit UUID
- Support local and on-air configuration to adapt to different needs.
- Support to configure GPIO as input and output.
- Support access key to improve the reliability of connection

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.

Note: 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 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: **2AWQH-BTM0305** Or

Contains FCC ID: **2AWQH-BTM0305**"

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.

Note: 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.

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 & conducted emission and spurious emission, etc. according to FCC part 15C : 15.249 and 15.209 & 15.207 ,15B Class B requirement, Only if the test result comply with FCC part 15C : 15.249 and 15.209 & 15.207 ,15B Class B requirement, then the host can be sold legally.

The FCC rule/s for this module are CFR 47 Part 15 Subpart C.

This modular transmitter is only FCC authorized for the specific rule parts listed on its grant. The host product manufacturer is responsible to any other FCC rules that apply to the host not covered by the modular transmitter grant of certification. The final host product will require Part 15 Subpart B compliance when the modular transmitter is installed.

The module may be operated only with the integral chip antenna with which it is authorized.

Additional testing and certification may be necessary when multiple modules are used.

Any modifications made to the module will void the Grant of Certification, this module is limited to OEM installation only and must not be sold to end-users, end-user shall have no manual instructions to remove or install the device, only software or operating procedure shall be placed in the end-user operating manual of final products.