

User Manual

Bluetooth Transfer Adapter Module

Model:W010-10011224

Document Version: V1.0

For ISED IC ID Certification Application Only

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1. Product Overview

Our company develops a simple Bluetooth transfer adapter module. The core wireless component adopted is RF-BM-BG22A1I BLE module supplied by RF-Star (Xinchi Da).

No extra electronic circuits, RF matching circuits, signal processing circuits or radio frequency modification circuits are designed on our PCB board. The PCB only realizes simple pin lead-out and signal transfer function. A plastic housing is configured for mechanical protection and fixed installation.

This adapter module communicates with the device mainboard via matched wire harness to realize bidirectional wireless data receiving and transmitting.

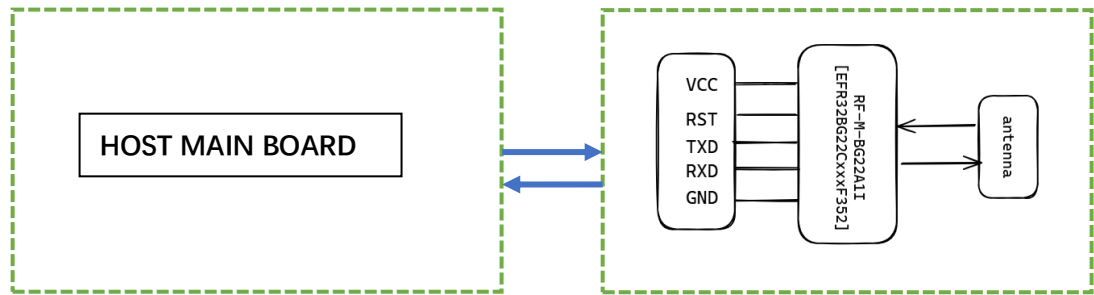
Important Declaration: The matched mainboard is excluded from the detection and certification scope of this product. All RF emission performance indicators are completely determined by the original certified RF-BM-BG22A1I Bluetooth module.

2. System Block Diagram

Our transfer board only plays the role of physical signal wiring extension, without changing any radio frequency characteristics of the original Bluetooth module.

3. Technical Specifications

All radio frequency parameters inherit the original official parameters of RF-BM-BG22A1I module completely.



P1. Connection Block Diagram

Parameter Item	Technical Index
Bluetooth Standard	Bluetooth 5.0 BLE
Operating Frequency Band	2402-2480MHz
Maximum Transmitting Power	Default parameter of original RF-BM-BG22A1I
Communication Interface	UART
Operating Supply Voltage	1.8 V ~ 3.3 V
Working Temperature Range	-40 °C ~ +85 °C
Antenna Mode	External Antenna

4. Hardware & Structural Description

1. PCB Board: Double-layer ordinary routing board, only pin breakout and transfer wiring, no RF optimized layout design.
2. Shell: Injection molding plastic shell, used for dust prevention, collision prevention and product fixing installation.
3. Connection Mode: The transfer board is connected to the external mainboard through customized wire harness.

4. **Modification Description:** The antenna layout, ground design, power supply circuit and firmware program of the original RF-BM-BG22A1I module are not modified in any form.

5. Working Principle

1. Power supply signal and serial data signal output from the mainboard are transmitted to RF-BM-BG22A1I module through wire harness and our transfer PCB;
2. All functions including Bluetooth radio signal modulation, transmission, reception and demodulation are completed by the built-in RF-BM-BG22A1I module independently;
3. Our transfer structure only conducts physical transmission of electrical signals and will not affect or change any RF index of the Bluetooth module.

6. Installation Guide

1. Fix the Bluetooth transfer module on the equipment through the reserved fixing holes of the plastic shell;
2. Insert the matched wire harness into the pin header of the transfer PCB correctly;
3. Connect the other end of the wire harness to the reserved interface of the device mainboard;
4. After the mainboard is powered on, the Bluetooth module runs according to the factory default configuration automatically without any configuration operation on our transfer module.

FCC Warning Statement

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

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co - located for operating in conjunction with any other antenna or transmitter.

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.

ISED Canada Statement:

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.**
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.**

Radiation Exposure: This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment.

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located for operating in conjunction with any other antenna or transmitter.

Déclaration d'ISED Canada:

Cet appareil contient des émetteurs/récepteurs exemptés de licence qui sont conformes aux RSS exemptés de licence d'innovation, sciences et développement économique Canada. Le fonctionnement est soumis aux deux conditions suivantes:

- (1) ce dispositif ne peut pas causer d'interférence.**
- (2) ce dispositif doit accepter toute interférence, y compris l'interférence qui peut causer un fonctionnement indésirable du dispositif.**

Exposition aux radiations: Cet équipement est conforme à la réglementation canadienne sur les radiations. limites d'exposition établies pour un environnement non contrôlé. Les antennes utilisées pour cet émetteur doivent être installées de manière à assurer une distance de séparation d'au moins 20 cm au moins de toute personne et ne doivent pas être co-localisés pour fonctionner en conjonction avec autre antenne ou émetteur.