

RFID Manual
[BRF-A001]



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1. About This Manual

This manual explains how to use BACS™ BRF-A001 and its key features.

Be sure to read carefully and thoroughly understand this manual before using the product. Be sure to keep this manual at hand for future reference.

This manual can be used as a reference for customers who purchase products of CrucialTrak or as training material for employees.

The content and the specification in this manual are subject to change without notice to improve performance of the product. CrucialTrak is not responsible for any inaccuracies or typographical errors in this manual

2. Copyrights

All programs, data files, and content of BACS™ BRF-A001 and this manual are protected by a non-disclosure agreement. Usage, copy, and distribution to third parties are strictly prohibited unless it is allowed explicitly by CrucialTrak.

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3. Key Features

BACS™ BRF-A001 is 13.56Mhz RFID Reader.

4. Safety Precautions

Warning

- Check the installation environment and performance of the product before using. To utilize the product effectively, read this manual first. Proceed to install and use accordingly.
- Poor handling can damage the product. Handle with care when using or moving the product. This can result in electric shock, fire, failure, and injury. If the product gets damaged or needs repair, contact the customer service center.
- Do not place under direct sunlight, near fire or in a place that generates heat. Heat may damage the product or cause it to catch on fire.

- Do not use if the cable is damaged, and do not disconnect the power while using the product.
- This can result in electric shock, fire, failure, and injury.
- Be sure to keep conductive foreign substances, such as liquid, dust, or metal debris, away from the power supply or from collecting on the cable. Do not use excessive force or anything sharp on the power connector. The connection terminal may be corroded, or short-circuited temporarily and result in an explosion or fire.
- Be sure to check the right battery type and replace a run-down battery with a new battery. Wrong handling may damage the product or cause explosion. Dispose of the worn-out battery properly in an appropriate way.
- If there are any problems with the product, stop using immediately and contact the customer service center.

Caution

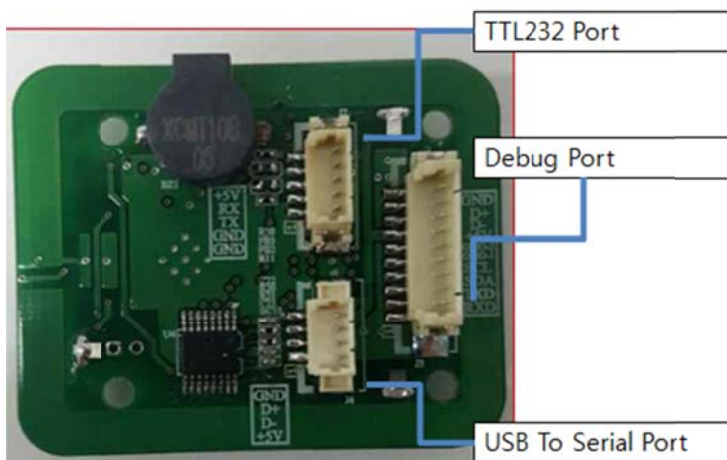
- Unauthorized installation, remodeling, repair, and disassembling are not recommended. This may result in damage to the product, and malfunctions due to unauthorized actions will void your warranty.
- If installation assistance or repair are required, contact the customer service center.
- Do not install or use the product in a dusty or dirty area. This may result in damage to the product or deteriorate performance.
- Do not install or use the product in a place with magnetic strips or electromagnetic interference. This may result in damage to the product or deteriorate performance.
- Check the wiring information and use appropriate cables. Do not attempt to connect a cable by force. This may result in damage to the product, cable, and the connector.
- Do not install or use the product in a place with strong light exposure or direct sunlight.
- The product's quality might be reduced due to sunlight, halogen, or strong light exposure.
- This product is not waterproof. Take precautions to avoid exposure to moisture.
- Do not put things on top of the product or connect any unnecessary devices. Do not paint or place any stickers on this product. This may deteriorate performance or result in the product not functioning properly.
- Do not scratch the surface, and keep it clean at all times.

5. Product Components

RFID body



Back



6. Installation

Install the product in a proper place where the conditions and environment are appropriate for installation and usage.

Interface cable should less than 3m.

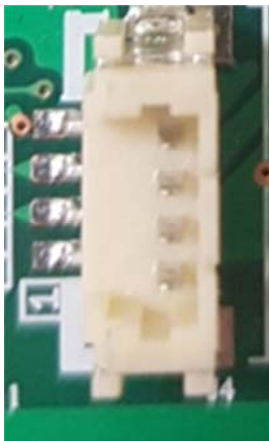
Connector Pin

J2 – TTL232 Port



1	GND
2	GND
3	TX
4	RX
5	5V

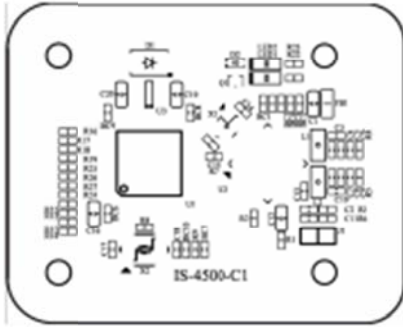
J4 – USB to Serial Port



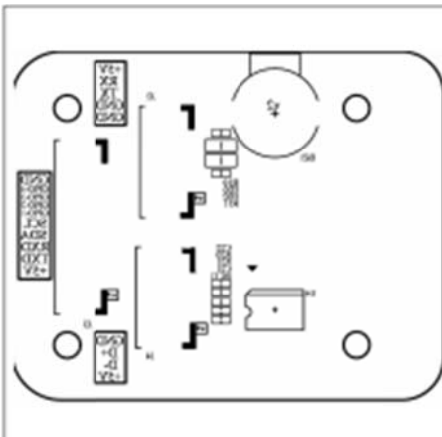
1	5V
2	D-
3	D+
4	GND

Product Components

- PCB Top



- PCB Bottom



Use the Product

Tap the adequate card to the product, the data of the card will be transferred to the host.

7. Maintenance

To keep the product in optimal condition, regular maintenance is recommended. Manage your product following the instructions below.

- It is recommended that you clean the product regularly. If the surface is dirty, it may affect the performance.

8. Product Specification

RF Frequency	13.56MHz
Power Supply	4.5 to 5.5V DC Operation
Supply Current	40mA @ 5V
Dimensions	43 * 35 * 6 mm
RF Protocol	ISO14443-A/B, ISO15693 Mifare Classic, Mifare UltraLight, Mifare Plus, Mifare NTAG, ICODE SLIX1, ICODE SLIX 2
Host Interface	TTL232, USB To Serial(FTDI USB Chip)
Antenna	50-ohm Internal antenna
RF Power	57.48dBuV/m
Read Range	50mm internal ant
Anticollision	Support(1tags)

Please contact CrucialTrak CS team(cs@crucialtrak.com) for product details and inquires.

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

CAUTION: 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.