

RFID Module
Model number: RI23B
User Manual (For USA and Canada)

1. Introduction

GENERAL

The RI23B is a highly integrated transceiver module for contactless reader/writer communication at 13.56 MHz.

Integration to the end product

1. RI23B module is mounted in the FZ-VNF552 RFID Reader (to be installed in the FZ-55 Personal Computer).
2. Insert Antenna unit into Antenna connectors of RI23B module.

Technical Specification

- | | |
|-----------------------------|---|
| a) Dimensions (H x W x D): | 17.6mm x 40.15mm x 1.0mm |
| b) Supported RF protocols : | ISO/ IEC14443 Type A, Type B, Felica
ISO/ IEC15693 |
| c) Operating Temperature: | -10 to 50 degrees Celsius |
| d) Host interface: | Serial Peripheral Interface |

2. Integration instruction for FCC / ISED

2.1 General

This user manual describes the integration procedure per Sec 2.2 to 2.12 of KDB 996369 D03. This is Limited Modular approval as this module is limited to installation by the grantee into the grantee's host systems. The module is not intended for sale to the general public.

2.2 List of applicable rules and specifications

This device complies with the following rules and specifications:

- Part 15 Subpart C §15.225 of the FCC Rules
- ISED RSS-210

2.3 Summarize the specific operational use conditions

This module is exclusively for use in the host device FZ-VNF552 RFID Reader, which is available both as a pre-installed and user-attachable accessory solely designed to be inserted into an expansion slot of the host system FZ-55 Personal Computer.

FZ-VNF552 consists of this module (R123B) and an antenna.

Incorporating this module into a host device/system other than the combination of FZ-VNF552 and FZ-55 will require a separate reassessment through a class II (FCC)/class IV (ISED) permissive change or new certification. Full testing is required for a new specific host.

2.4 Limited module procedures

This module is certified as limited modular approval under the conditions integrated within the host device FZ-VNF552 RFID Reader installed in the host system FZ-55 Personal Computer.

2.5 Trace antenna designs

Not applicable.

2.6 RF exposure considerations

This equipment complies with FCC/ISED radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines/RSS-102 of the ISED radio frequency (RF) Exposure rules as this equipment has very low levels of RF energy.

2.7 Antennas

The following antenna has been certified for use with this module.

Antenna Model	FZ-VNF552_RFID
Antenna Type	Loop antenna
Antenna Connector	Connector for FPC/FFC

2.8 Label and compliance information

Following information must be indicated on the host device of the module.

Contains FCC ID:ACJ9TGRI23B

Contains IC: 216H-CFRI23B

2.9 Information on test modes and additional testing requirements

Any co-located or simultaneous transmission with other transmitter(s) or portable use will require a separate class II (FCC)/class IV (ISED) permissive change re-evaluation or new certification. Full testing is required for a new specific host.

2.10 Additional testing, Part 15 Subpart B disclaimer

This transmitter module is tested as a subsystem and its certification does not cover the FCC Part 15 Subpart B (unintentional radiator) rule requirement applicable to the final host. The final host will still need to be reassessed for compliance to this portion of rule requirements if applicable.

As long as all 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.

2.11 Additional testing, Part 15 Subpart B disclaimer

We recommend to use "best practice" RF design engineering testing and evaluation in case non-linear interactions generate additional non-compliant limits due to module placement to host components or properties by following KDB 996369 D04 Module Integration Guide.

The host manufacturer is responsible for ensuring compliance with the applicable FCC rules for the transmitters operating individually and simultaneously. This includes compliance for the summation of all emissions from all outputs occupying the same or overlapping frequency ranges, as defined by the applicable rules.

2.12 How to make changes

Only the grantee is permitted to make permissive changes.

Please contact us at Panasonic.

2.13 Miscellaneous

The compliance statements required in §15.19 and 15.105 of the FCC Rules must be included in the host user manual.

3. Regulatory Information

For USA

Federal Communication Commission Interference 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.

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 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 transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

For Canada

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.