RFID Module
Model number: RI23D
User Manual

1. Introduction

GENERAL
The RI23D is a highly integrated transceiver module for contactless reader/writer communication at 13.56 MHz.

Integration to the end product
1. RI23D module is mounted in the Host CF-33.
2. Insert Antenna unit into Antenna connectors of RI23D module.

Technical Specification

a)	Dimensions (H x W x D):	33.25mm x 49.8mm x 0.8mm (approx)
b)	Supported RF protocols :	ISO/ IEC14443 Type A, Type B, Felica ISO/ IEC15693
c)	Operating Temperature:	-10 to 50 degree Celsius
	Host interface:	USB

2. Integration instruction

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 FCC rules

This device complies with below part 15 of the FCC Rules.
Part 15 Subpart C.

2.3 Summarize the specific operational use conditions

This module is exclusively for use in the host device CF-33.
CF-33 incorporates this module (RI23D) and an antenna.
Incorporating this module into other host devices than CF-33 will require a separate reassessment through a class II permissive change or new certification.

2.4 Limited module procedures

This module is certified as limited modular approval under the conditions integrated within the host product CF-33.

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 antennas have been certified for use with this module; antennas of the same type may also be used with this module.

Antenna Type	Loop antenna

2.8 Label and compliance information

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

Contains FCC ID:ACJ9TGRI23D
Contains IC: 216H-CFRI23D

2.9 Information on test modes and additional testing requirements

This transmitter is tested in a standalone mobile RF exposure condition and any co-located or simultaneous transmission with other transmitter(s) or portable use will require a separate class II permissive change re-evaluation or new certification.

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 Sections 15.19 and 15.105 must be included in the host user manual.

3. Federal Communications Commission Radio Frequency 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.

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

Module with no shield Class Ⅱ Permissive Change (C2PC) Guidance:

The test plan shall confirm and demonstrate compliance with the following:

a. Confirm and document the continued compliance for the fundamentals for band 13.56 MHz under Part15 Subpart C, Paragraph 15.225 granted for the module.
b. The test shall demonstrate the worst-case of band 13.56 MHz with modulation type ASK.
c. Test Band edge compliance for the widest and narrowest bandwidths for channel 13.56 MHz.
d. Include radiated spurious emissions with the antenna connected(Antenna permanently attached). Testing shall be performed for modulation type ASK, and middle channel: 13.56 Mhz. In all cases, a test of each modulation is required for channels over the frequency range defined in 15.33(a) for unlicensed transmitters and 2.1057(a) for licensed transmitters.
e. Confirm and demonstrate with the radiated test that no additional parasitic, non-compliant emissions exist due to ingress (parasitic oscillations, radiation of stray signals within a host, etc.) are present.
f. These tests can be based on C63.10 and C63.26 as guidance:

4. Regulatory Information 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.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage;

2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.