

Table of contents

Metra Reader Module RFID ISO <i>Technical Manual</i>	3
Final product labelling.....	4
Product description.....	4
Direct integration.....	4
Integration via 10 pole flat cable	5
Electrical integration	5
Pin-out.....	6
Technical data	6
Appendix 1	7
Dimensions	7
Appendix 2	7
Block Scheme.....	7

Metra Reader Module RFID ISO Technical Manual

Manufacturer: Metra inženiring d.o.o.
IOC Trzin
Špruha 19
SI-1236 Trzin, Slovenia

phone: +386 1 56 10 740
fax: +386 1 56 10 744
web: www.metra.si

Trade Mark: Metra MEW System
Model/Type ref.: Metra Reader Module RFID ISO
Part Number: 939
FCC ID: 2ABT80005P939
Year of Construction: 2015

NOTE

Metra inženiring d.o.o. integrates this product (Metra Reader Module RFID ISO) into different final products and is responsible for proper labelling of the final product, therefore final product's label must include a statement "Contains FCC ID: 2ABT8003P939".

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Metra inženiring d.o.o. is responsible for product's compliance.



This product is in conformity with the essential requirements and other relevant requirements of the following EU Directives:

- Radio and Telecommunications Terminal Equipment (R&TTE) Directive 2014/53/EU
- RoHS Recast (RoHS2) Directive 2011/65/EU of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronics equipment.
- Low Voltage Directive (LVD) 2014/35/EU that ensures that electrical equipment within certain voltage limits provides a high level of protection for European citizens.



Model/Type ref.: Metra Reader Module RFID ISO
Part Number: 939
FCC ID: 2ABT80005P939

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 device 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.

Metra Reader Module RFID ISO Technical Manual [rev.0-031116]

©2016 Metra inženiring d.o.o.

All Rights reserved.

No part of this manual may be reproduced in any form or by any means without prior written permission of Metra inženiring d.o.o.

The contents of this manual are subject to change without notice.

All efforts have been made to ensure the accuracy of the contents of this manual, however, should any errors be detected, Metra inženiring would greatly appreciate being informed of them. Metra inženiring d.o.o. can assume no responsibility for any errors in this manual.

- Final product labelling



FCC Label is printed on the PCB because this is an OEM product for Metra inženiring d.o.o and not for the final customer.

Metra inženiring d.o.o. integrates this product (Metra Reader Module RFID ISO) into different final products and is responsible for proper labelling of the final product, therefore final product's label must include also a statement "Contains FCC ID: 2ABT8003P939".

- Product description



Metra Reader Module RFID ISO is designed to be build-in different Metra products. Reads ISO 15693, ISO 1443A and ISO 14443 B and compatible RFID media. It has two build-in blue LEDs for user signalization.

- Direct integration



Example shows "Metra Reader Module RFID ISO" soldered directly onto the device's main PCB. Instead of using 10-pole flat cable the connector PINs are soldered directly (as if the cable length is equal 0). It was tested as such during compliance tests.

- Integration via 10 pole flat cable

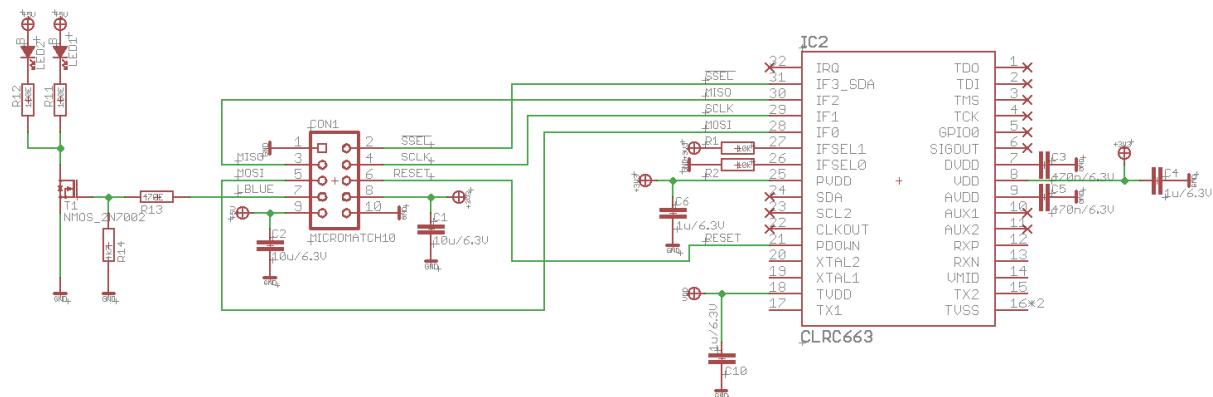


Example shows “Metra Reader Module RFID ISO” connected via 10 pole flat cable to host processor board. The cable length is limited to 20 cm. It was tested as such during compliance tests.

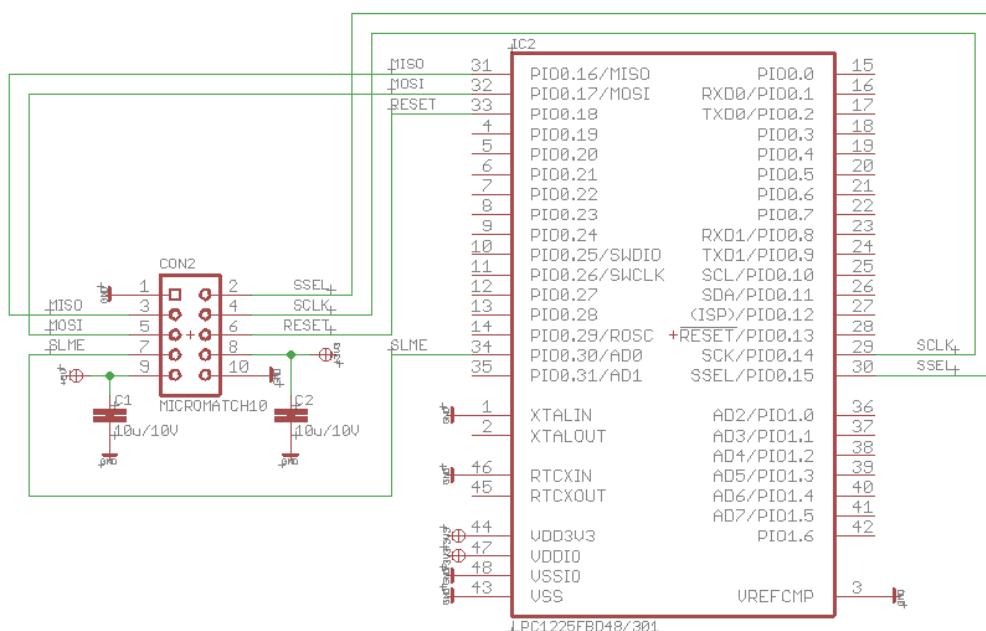
- Electrical integration

Electrical integration to host processor:

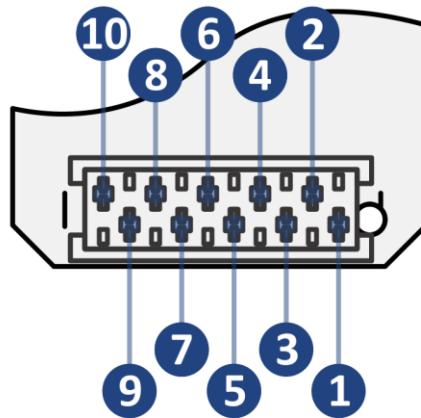
- Connections on Metra Reader Module



- Connections on Host CPU side – Example LPC1225



- Pin-out



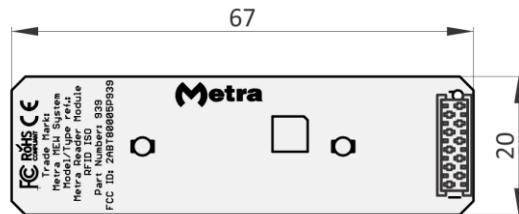
Pin number	Signal	Description
1	GND	Ground
2	SSEL	SPI: Slave Select
3	MISO	SPI: Master IN; Slave OUT
4	SCLK	SPI: Slave Clock
5	MOSI	SPI: Master OUT, Slave IN
6	RESET	Reset
7	LBLUE	LED Blue
8	+3V3	+ 3.3V Power Supply Input (Test Only)
9	+5V	+ 5V Power Supply Input
10	GND	Ground

- Technical data

Operating voltage	5V DC over 10-pole flat cable
Current consumption	0.07A average / 0.2A max.
Operating temperature range	-10 to +50 °C
Visual signalization	2x blue LEDs.
Built-in RFID reader	Reads ISO 15693, ISO 1443A and ISO 14443 B compatible RFID media.
RFID Antenna	Passive PCB antenna tuned to 13.56 MHz.
Connectors	1x SPI
Dimensions in mm (w/h)	67/20

• Appendix

- Dimensions



• Appendix 2

- Block Scheme

