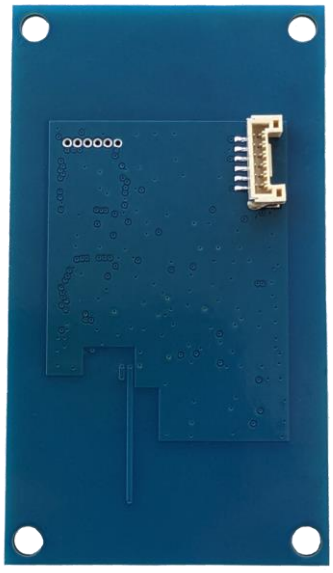
REYAX
TECHNOLOGY CORPORATION, LTD

24-May-2023 V1.0

RYRR20D

Multiprotocol Fully Integrated 13.56MHz RS-232 Interface RFID Antenna Module

Datasheet



PRODUCT DESCRIPTION

The RYRR20D module is a 13.56-MHz RFID. Built-in programming options make the device suitable for a wide range of applications for proximity and vicinity identification systems.

FEATURES

- Completely Integrated Protocol Handling for ISO14443A/B, ISO15693, FeliCa and ISO18092.
- ISO14443A support functions :
  1. Mifare Ultraligh UID/memory block reading & memory block writing.
  2. Mifare Classic, Plus, Desfire UID reading.
- ISO14443B support functions : UID reading
- ISO15693 support functions : UID/memory block reading & memory block writing.
- Felica support functions : UID reading.
- ISO18092 support functions : UID reading.
- RF Field Detector.
- Complete and customizable firmware command set.
- Operation Temperature range: -40 to +85°C.

APPLICATIONS

- RFID cards Reader
- Access Control
- EV charger
- Secure Pairing (Bluetooth, Wi-Fi, Others)
- Event Ticketing

CERTIFICATION

- FCC
- NCC
- CE and SRRC comply

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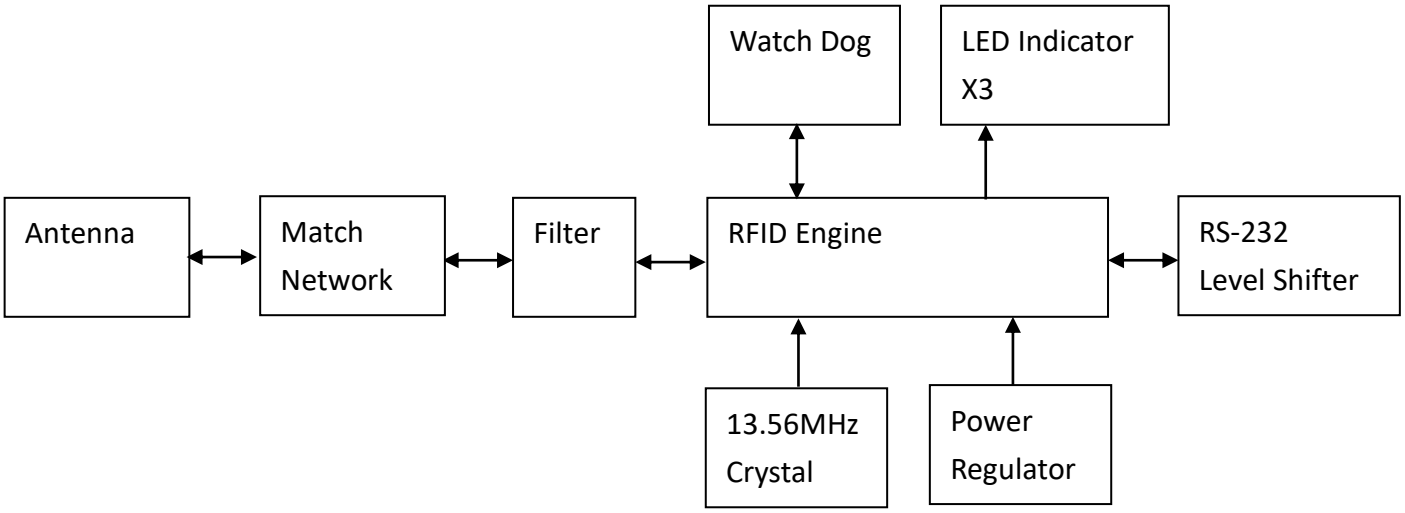
BLOCK DIAGRAM



SPECIFICATION

Item	Min.	Typical	Max.	Unit	Condition
Operation Voltage	4.7	5	6	V	VDD
RS-232 Interface Hi level		+5.4		V	
RS-232 Interface Low level		-5.4		V	
Indicator,/RTS/NMI Interface level		3.3V			
RF Output Power		20		dBm	
RF transmit current		90		mA	
Communication Range		4		cm	Standard card
RESET_N low duration		100		ms	
Baud Rate		19200		bps	8,N,1
RF Frequency Range	13.553	13.56	13.567	MHz	
Storage temperature	-40	25	+85	˚C	
Operating Temperature	-40	25	+85	˚C	
Humidity			90	%	
Antenna					Internal PCB Antenna

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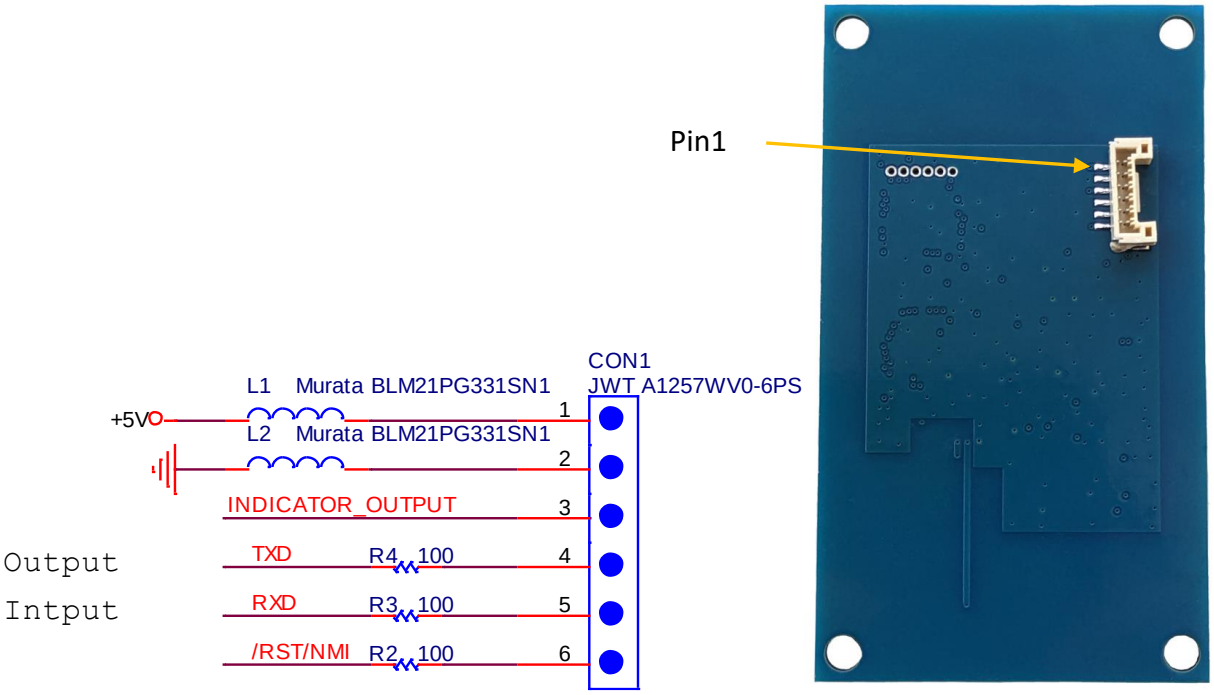
PIN DESCRIPTION



Pin	Name	I/O	Condition
1	VCC	P	+5V Power Supply
2	GND	P	Ground
3	Indicator	O	When read RFID card the pin will output Hi. +3.3V level
4	TXD	O	UART Data Output RS-232 level
5	RXD	I	UART Data Input RS-232 level
6	/RTS/NMI	I	Low reset +3.3V level

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CERTIFICATIONS

- **NCC Taiwan compliance**

低功率電波輻射性電機管理辦法:

第十二條 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

CCAK23Y10020T3

- **FCC compliance**

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.

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

LABEL OF THE END PRODUCT:
The final end product must be labeled in a visible area with the following " Contains TX FCC ID : QLY-RYB080I ". If the size of the end product is larger than 8x10cm, then the following FCC part 15.19 statement has to also be available on the label: This device complies with Part 15 of 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.

QLYRYRR20D

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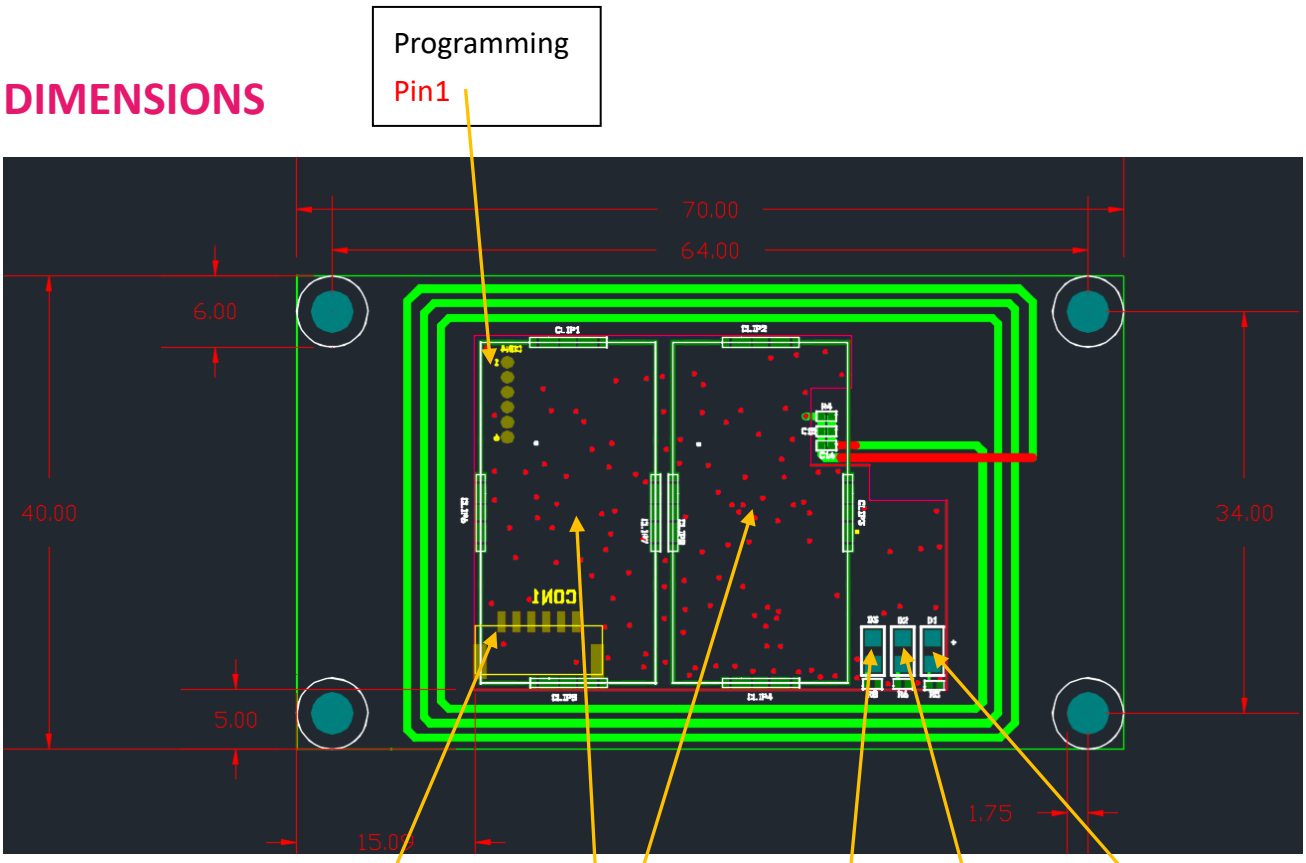
DIMENSIONS



PCB Thickness 1.6mm

unit : mm

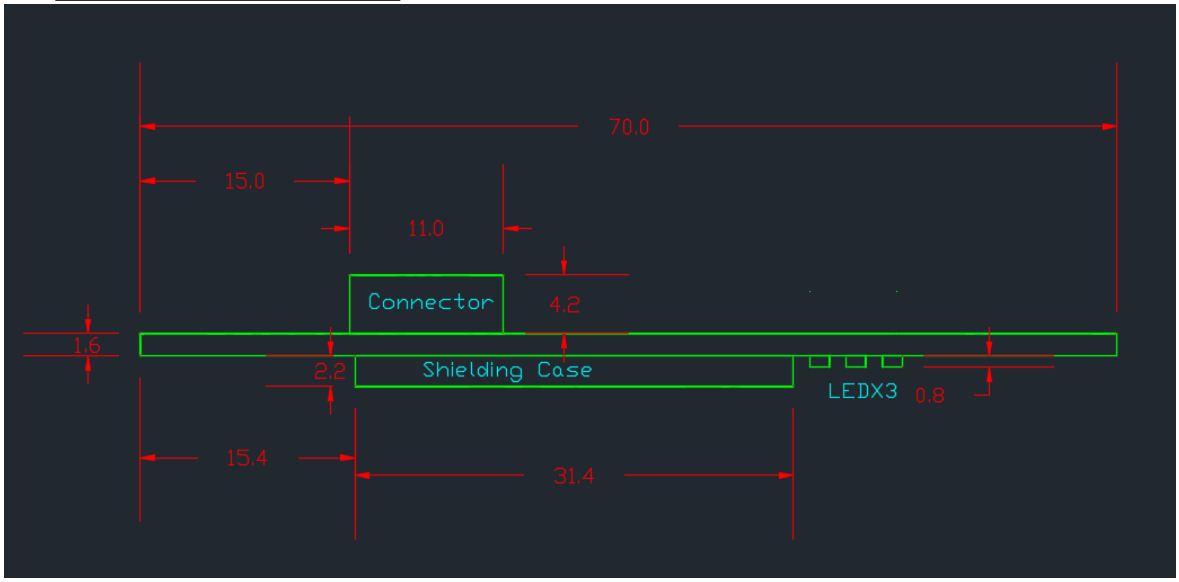
Connector Pin1
JST® BM06B-GVHS-TB
JWT® A1257WV0-6PS

Shielding case

Felica
LED

IOS15693
LED

IOS14443A
LED



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