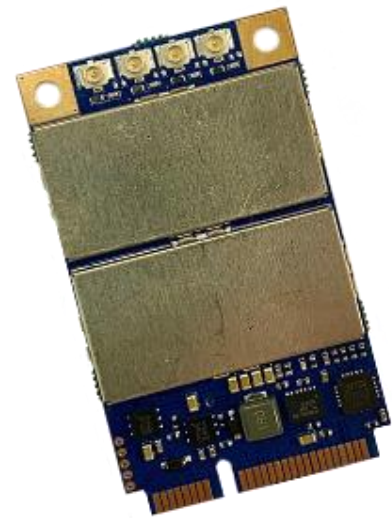


# RYRR39U

**4 Port USB/ UART Interface UHF RFID Reader  
mini PCIe card form factor**

**Datasheet**



## PRODUCT DESCRIPTION

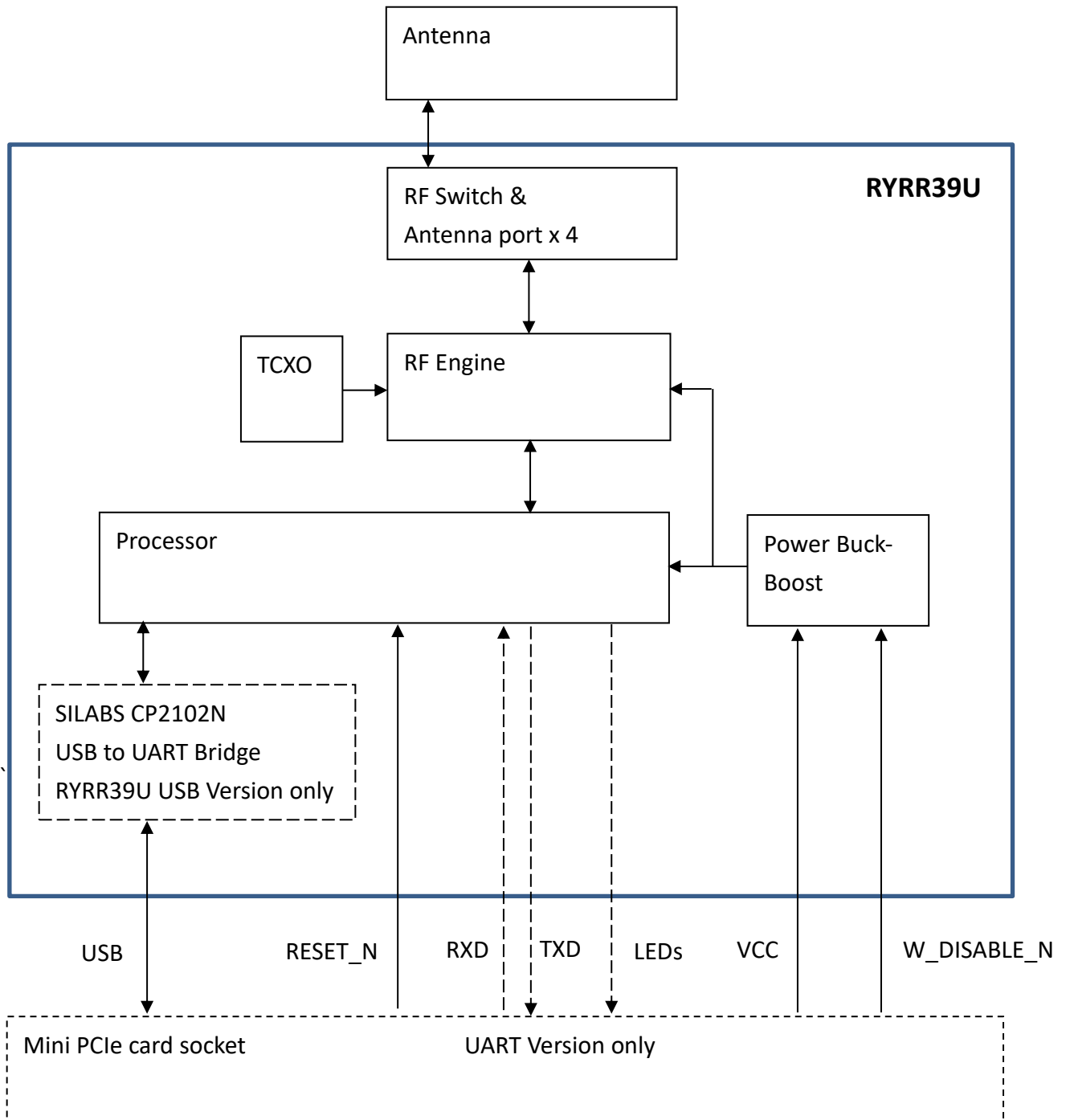
The RYRR39U is an EPC Class 1 Gen 2 RFID reader product that implements all the relevant protocols. It offers a complete set of RFID features and support for frequency-hopping, low-level transmission coding, low-level decode, data framing and CRC checking.

## FEATURES

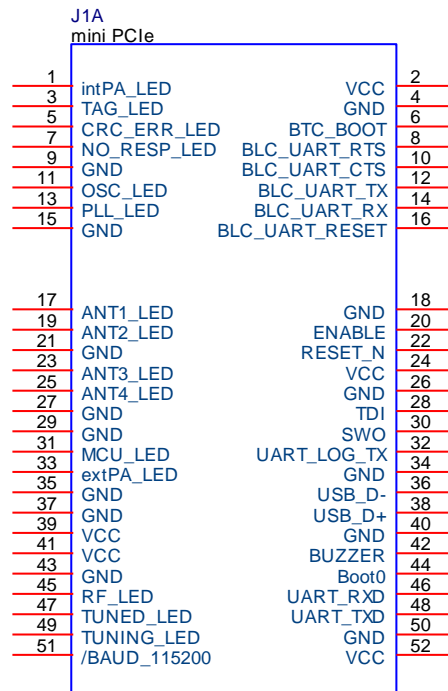
- Protocol support for: ISO 18000-6C (EPC Class1 Gen2), ISO 29143 (Air interface for mobile RFID), ISO 18000-6A/B through direct mode.
- Temperature range: -40 °C to 85 °C
- Standard mini PCIe and plug PCB design.
- Mini PCIe Signal Type USB2.0.
- Support USB / UART Interface.
- Data transfer up to 921600bps baud rate.
- USB Drivers for Windows, Linux, Android, Mac OS.

The CP2102 driver can be downloaded from the Silabs website. <https://www.silabs.com/>

## BLOCK DIAGRAM



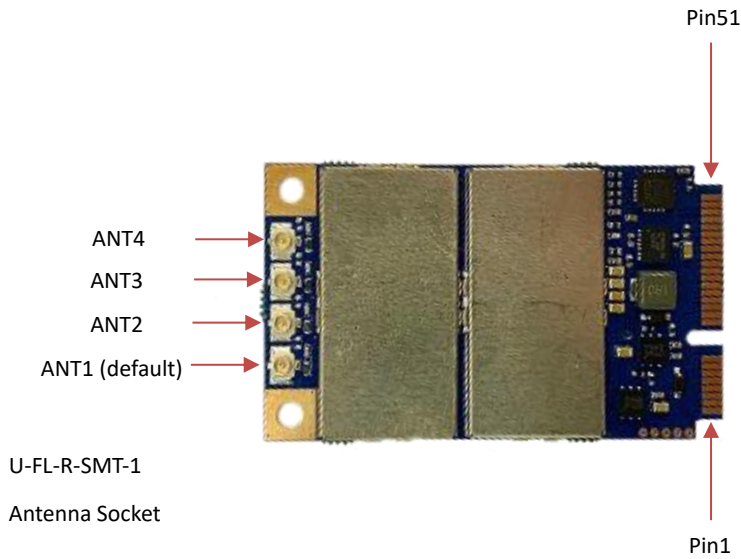
## PIN DESCRIPTION



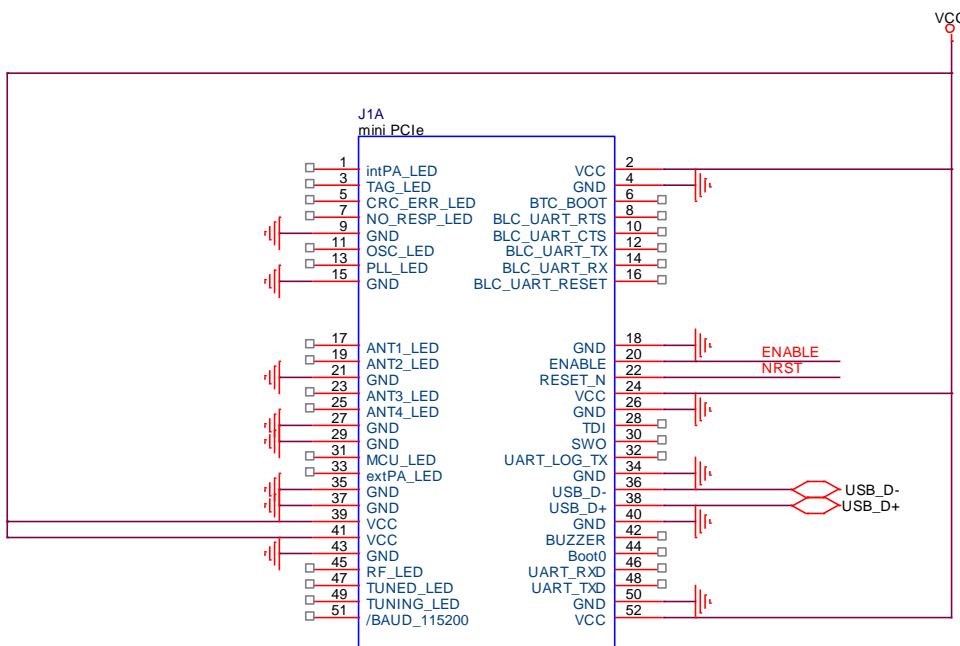
Pin	Name	I/O	USB version Description	UART version Description
1	GPIO	I/O	Not Connected	GPIO Reserved
2	VCC	Power	Power Input	Power Input
3	GPIO	I/O	Not Connected	GPIO Reserved
4	GND		Power Ground	Power Ground
5	GPIO	I/O	Not Connected	GPIO Reserved
6	GPIO	I/O	Not Connected	GPIO Reserved
7	GPIO	I/O	Not Connected	GPIO Reserved
8	GPIO	I/O	Not Connected	GPIO Reserved
9	GND		Power Ground	Power Ground
10	GPIO	I/O	Not Connected	GPIO Reserved
11	GPIO	I/O	Not Connected	GPIO Reserved
12	GPIO	I/O	Not Connected	GPIO Reserved
13	GPIO	I/O	Not Connected	GPIO Reserved
14	GPIO	I/O	Not Connected	GPIO Reserved
15	GND		Power Ground	Power Ground
16	GPIO	I/O	Not Connected	GPIO Reserved
17	GPIO	I/O	Not Connected	GPIO Reserved
18	GND		Power Ground	Power Ground
19	GPIO	I/O	Not Connected	GPIO Reserved

20	ENABLE	I	H : Enable or Open L : Disable	H : Enable or Open L : Disable
21	GND		Power Ground	Power Ground
22	RESET_N	I	External low reset.	External low reset.
23	GPIO	I/O	Not Connected	GPIO Reserved
24	VCC	Power	Power Input	Power Input
25	GPIO	I/O	Not Connected	GPIO Reserved
26	GND		Power Ground	Power Ground
27	GND		Power Ground	Power Ground
28	GPIO	I/O	Not Connected	GPIO Reserved
29	GND		Power Ground	Power Ground
30	GPIO	I/O	Not Connected	GPIO Reserved
31	GPIO	I/O	Not Connected	GPIO Reserved
32	GPIO	I/O	Not Connected	GPIO Reserved
33	GPIO	I/O	Not Connected	GPIO Reserved
34	GND		Power Ground	Power Ground
35	GND		Power Ground	Power Ground
36	USB_DN	I/O	USB Data Negative	Not Connected
37	GND		Power Ground	Power Ground
38	USB_DP	I/O	USB Data Positive	Not Connected
39	VCC	Power	Power Input	Power Input
40	GND		Power Ground	Power Ground
41	VCC	Power	Power Input	Power Input
42	GPIO	I/O	Not Connected	GPIO Reserved
43	GND		Power Ground	Power Ground
44	GPIO	I/O	Not Connected	GPIO Reserved
45	GPIO	I/O	Not Connected	GPIO Reserved
46	UART_RXD	Input		UART data input
47	GPIO	I/O	Not Connected	GPIO Reserved
48	UART_TXD	Input		UART data Output
49	GPIO	I/O	Not Connected	GPIO Reserved
50	GND		Power Ground	Power Ground
51	/BAUD_115200	I	When the pin is Low, baud rate will be fixed at 115200	When the pin is Low, baud rate will be fixed at 115200
52	VCC	Power	Power Input	Power Input

# PIN CONNECTOR

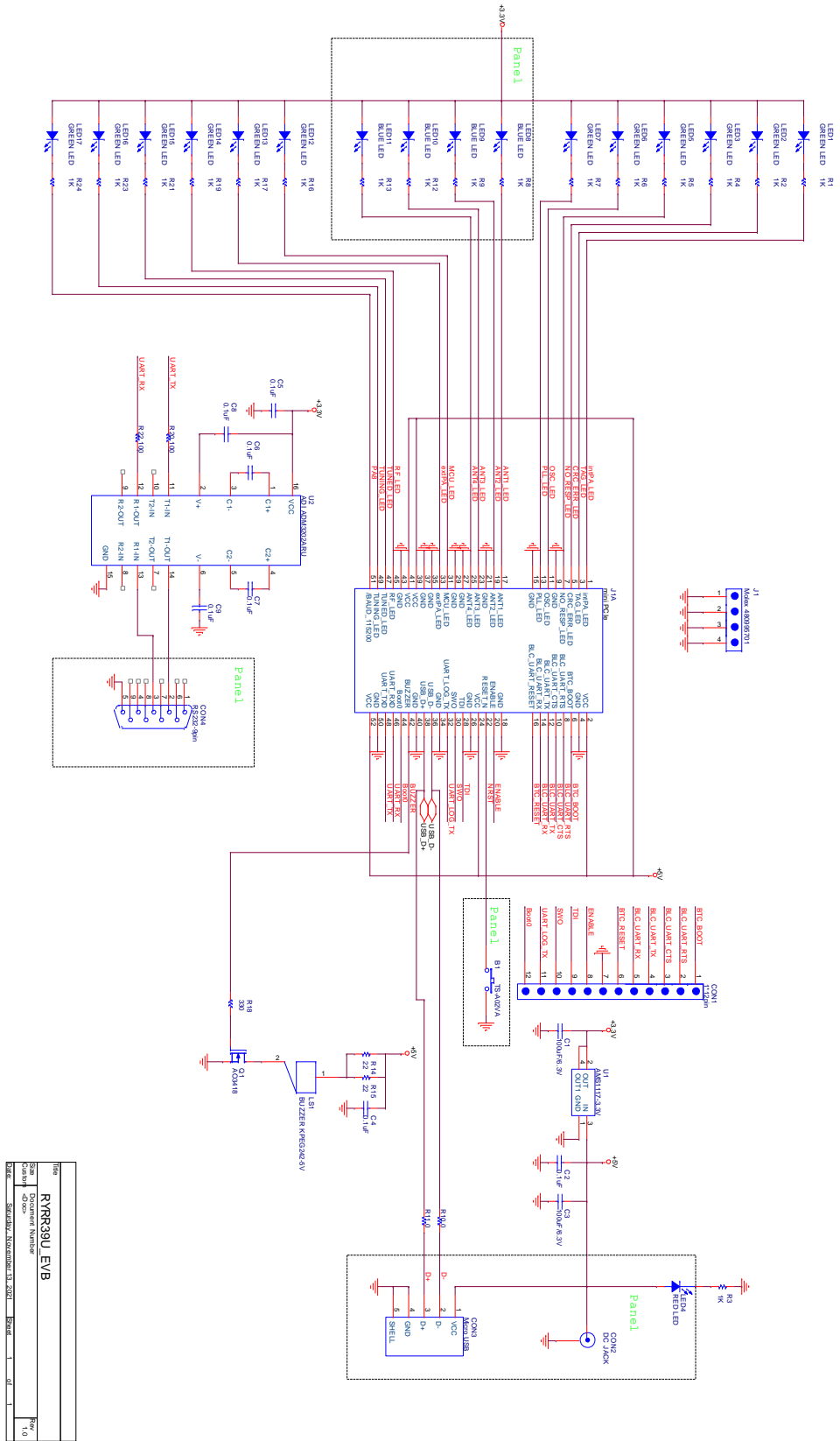


# RYRR39U USB VERSION APPLICATION SCHEMATIC



Title		
RYRR39U_USB_APPLICATION		
Size	Document Number	Rev
Custom	<Doc>	1.0
Date:	Friday, December 17, 2021	Sheet 1 of 1

# RYRR39U\_UART VERSION APPLICATION SCHEMATIC



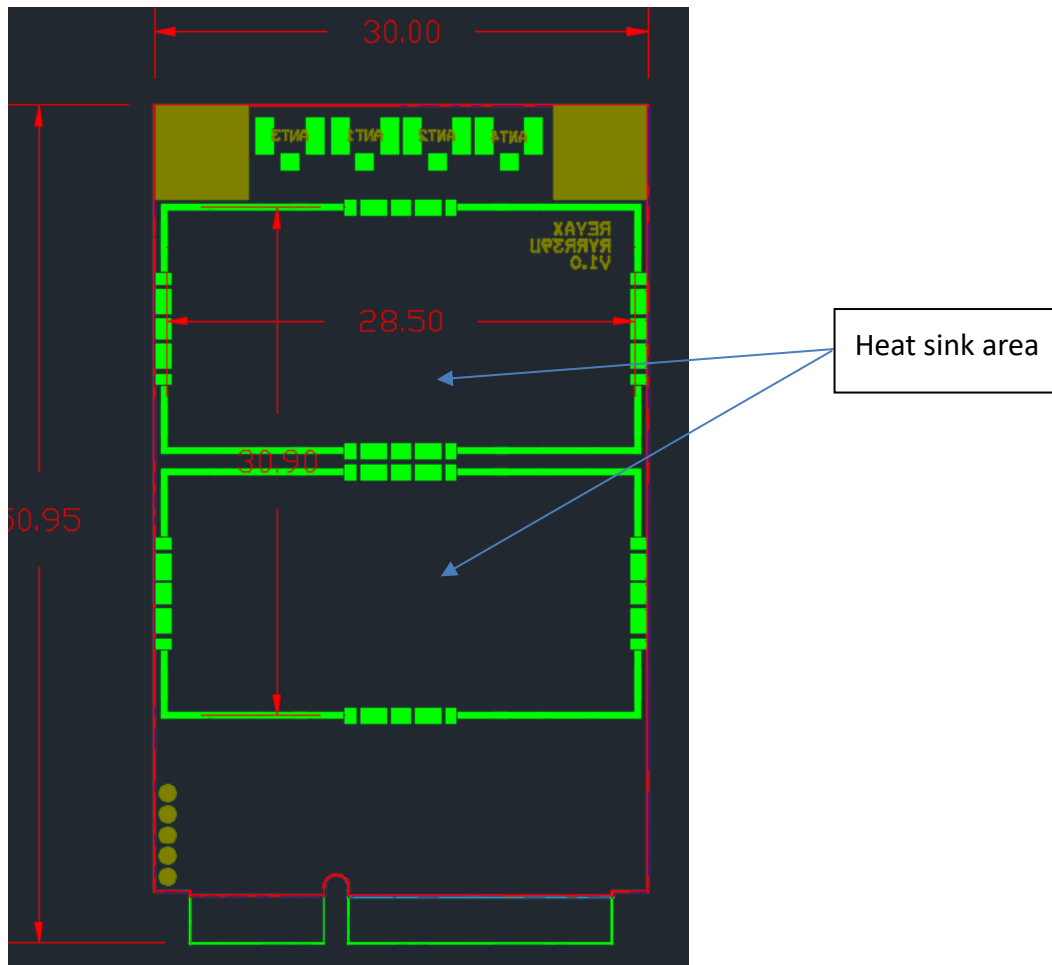
Doc No	RYRR39U EVB
Doc Name	Document Name
Doc Ver	1.0
Doc Date	2021.01.10
Doc Author	Shengyan
Doc Checker	
Doc Approver	
Doc Status	
Doc Type	
Doc Category	
Doc Sub-category	
Doc Keywords	
Doc Description	

## SPECIFICATION

Item	Min.	Typical	Max.	Unit	Condition
Power Supply Voltage	3	3.3	5.5	V	VCC
Transmit average current		800		mA	VCC=5V ,+IVPERI=1, +CRFOP=H
Transmit average current		450		mA	VCC=5V ,+IVPERI=5 +CRFOP=H
Standby current		130		mA	VCC=5V
Default Baud Rate	57600	115200	921600	bps	8,N,1
Digital input level high	0.7*VDD		VDD+0.3	V	VIH
Digital input level low	-0.3		0.3*VDD	V	VIL
Digital output level high	0.8*VDD		VDD	V	VOH 2mA
Digital output level low	0		0.2*VDD	V	VOL 2mA
RF Output power		27		dBm	
RF Sensitivity		-90		dBm	
Read tag time	10	50	1000	ms	Use AT+IVPERI to setup.
Communication Range		9		M	9dBi Gain Antenna
Frequency Range	840	868/915	960	MHz	
Antenna port impedance		50		Ω	
Antenna port		1	4	port	Use AT+ANTPORT to setup. <b>The activated antenna port must equip the antenna, otherwise the high power signal reflection will cause damage to the module.</b>
USB Interface					V2.0
Operating Temperature	-40	25	+85	°C	Core Temperature
Dimension				mm	mini PCIe Standard 50.95mm*30mm
Weight		5		g	



## DIMENSIONS



unit : mm

## ORDER INFORMATION

Ordering No.	Interface version
RYRR39U	USB 2.0
RYRR39U_UART	UART

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