

RVB2000 Series

4G LTE & GNSS & Wi-Fi mini PCIe Card

Datasheet



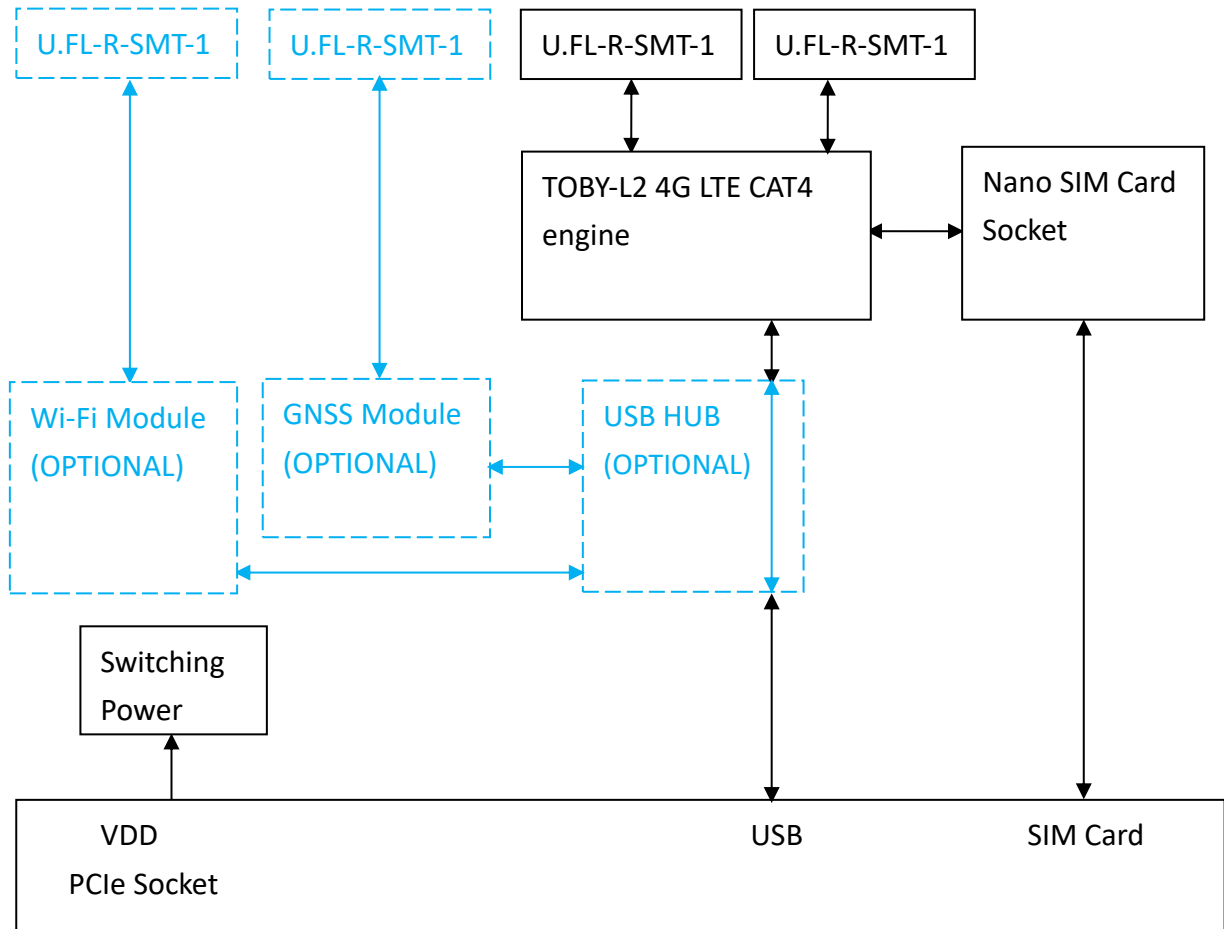
PRODUCT DESCRIPTION

The RVB2000 series is based on the PCI Express Mini Card standard with a USB 2.0 interface.

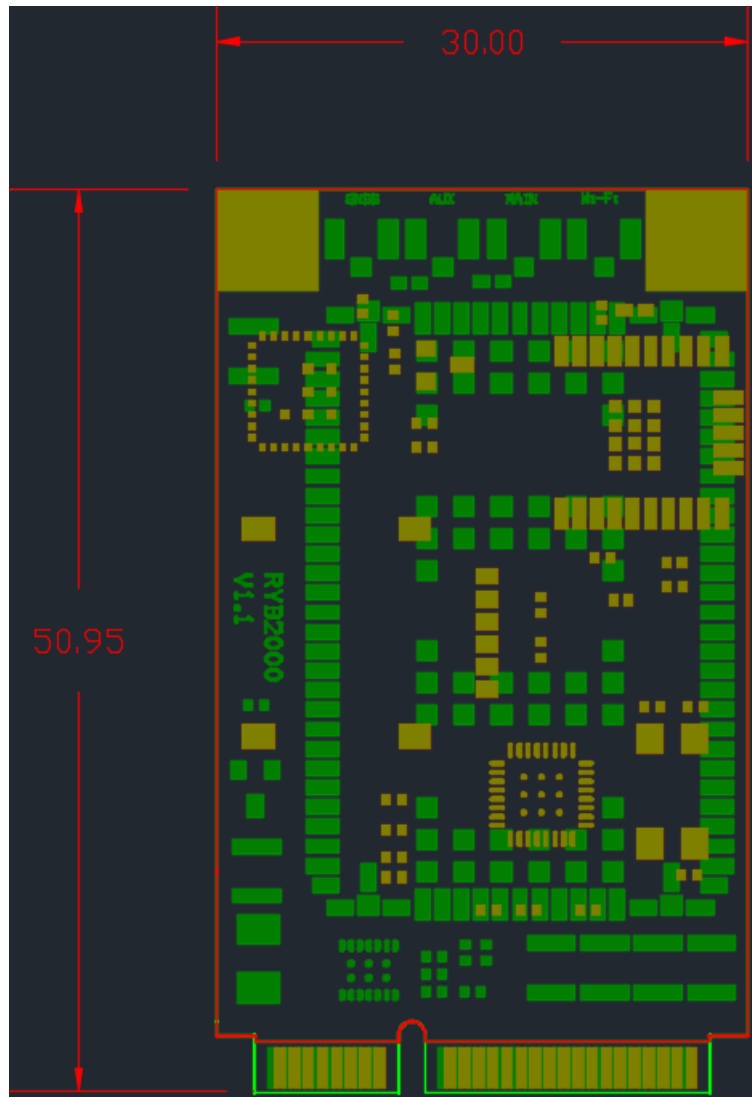
FEATURES

- TOBY-L2 Series 4G LTE engine.
- Build-in nano SIM card holder.
- 72-channel EVA-M8M-0 GNSS.(OPTIONAL)
- LILY-W131 2.4GHz 802.11 b/g/n Wi-Fi.(OPTIONAL)
- Standard mini PCIe and plug PCB design.
- Temperature range: -40 to +85°C.
- Manufactured in ISO/TS 16949 certified production sites.
- Mini PCIe Signal Type USB2.0.

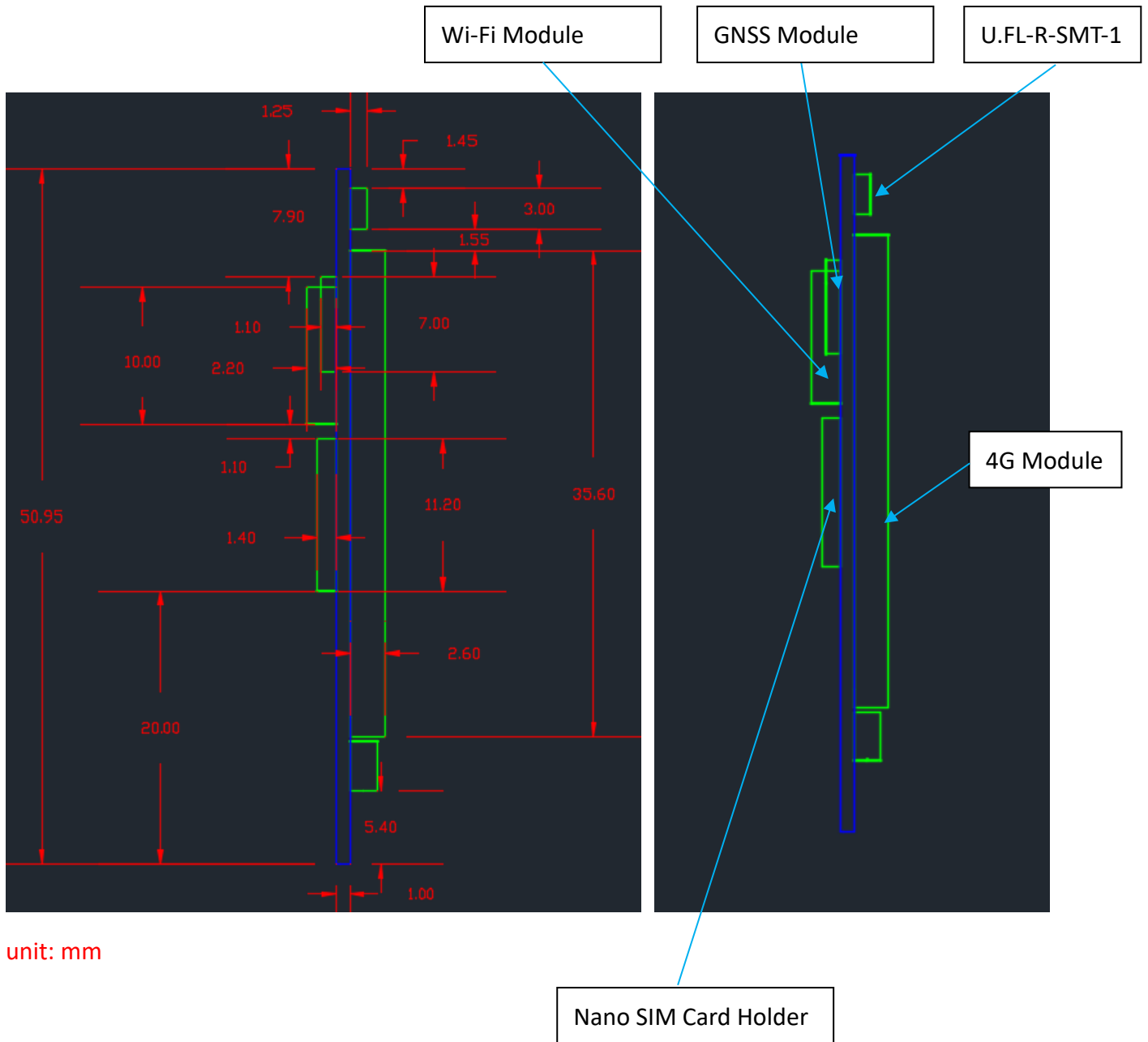
BLOCK DIAGRAM



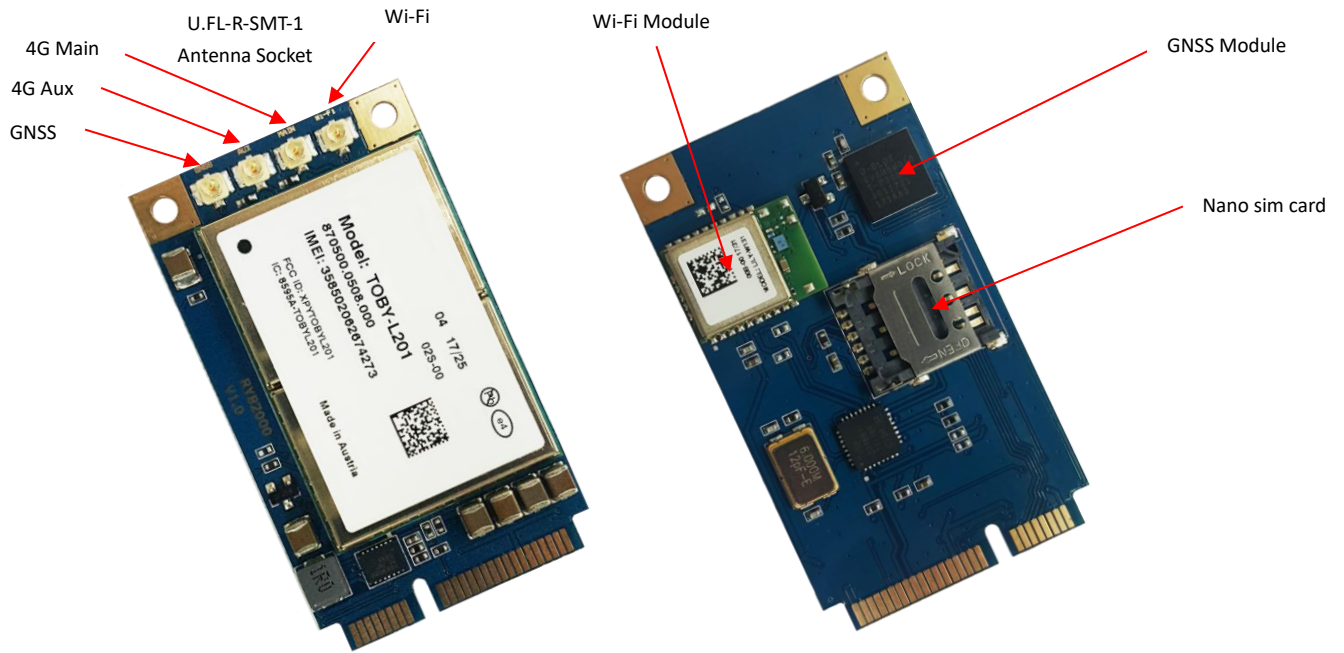
DIMENSIONS



unit: mm



PIN CONNECTOR



PIN DESCRIPTION

Pin	Name	Input/Output	Description
1	NC		Not connected
2	VCC	Power	Power Input
3	NC		Not connected
4	GND		Power Ground
5	NC		Not connected
6	NC		Not connected
7	NC		Not connected
8	SIM_VCC		External SIM signal – Power supply for the SIM
9	GND		Power Ground
10	SIM_IO	Input/Output	External SIM signal – Data I/O
11	NC		Not connected
12	SIM_CLK	Output	External SIM signal – Clock
13	NC		Not connected
14	SIM_RST	Output	External SIM signal – Reset
15	GND		Power Ground
16	NC		Not connected
17	NC		Not connected
18	GND		Power Ground
19	NC		Not connected
20	W_DISABLE_N	Input	H : Enable L : Disable If this pin is unused, keep open.
21	GND		Power Ground
22	RESET_N	Input	External reset input
23	NC		Not connected
24	VCC	Power	Power Input
25	NC		Not connected
26	GND		Power Ground
27	GND		Power Ground
28	NC		Not connected
29	GND		Power Ground
30	NC		Not connected
31	NC		Not connected
32	NC		Not connected

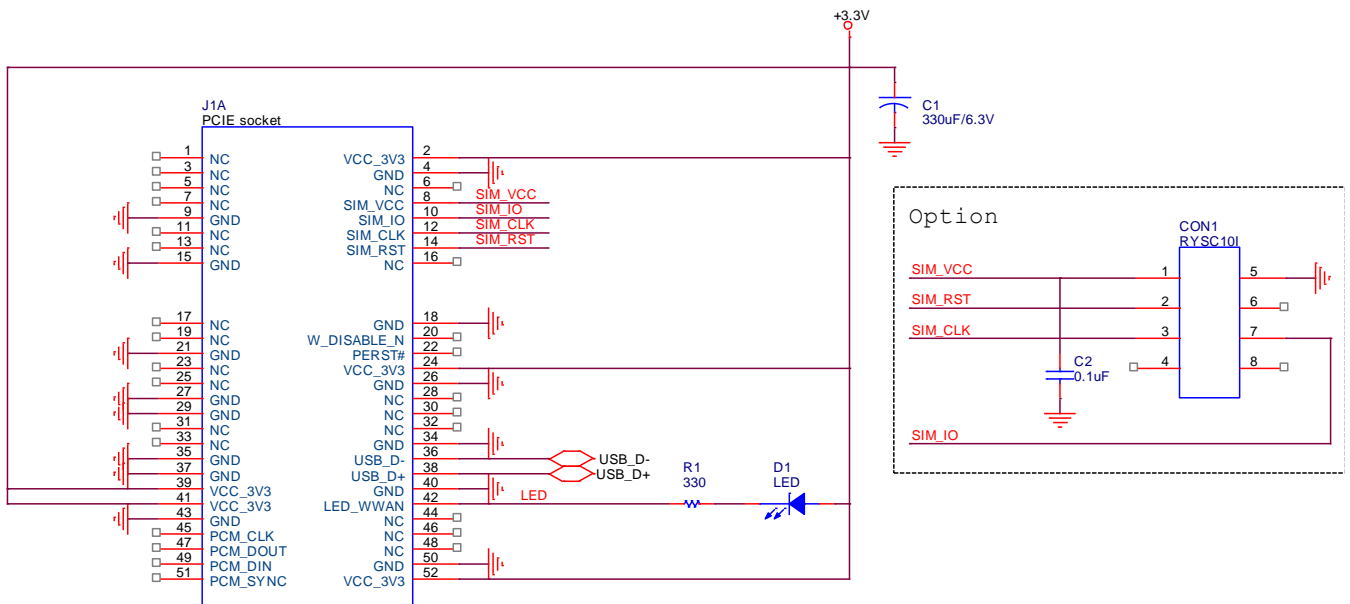
33	NC		Not connected
34	GND		Power Ground
35	GND		Power Ground
36	USB_DN	Input/Output	USB Data Negative
37	GND		Power Ground
38	USB_DP	Input/Output	USB Data Positive
39	VCC	Power	Power Input
40	GND		Power Ground
41	VCC	Power	Power Input
42	LED_WWAN	Output	Default: high impedance; LED setting flash via AT command port AT+UGPIOC=16,2,1
43	GND		Power Ground
44	NC		Not connected
45	NC		Not connected
46	NC		Not connected
47	NC		Not connected
48	NC		Not connected
49	NC		Not connected
50	GND		Power Ground
51	NC		Not connected
52	VCC	Power	Power Input

SPECIFICATION

Item	Min.	Typ.	Max.	Unit	Description
4G TOBY-L2 Series					
LTE Bands		2,4,5,7,17			TOBY-L200
		2,4,5,13,17			TOBY-L201
		1,3,5,7,8,20			TOBY-L210
		1,3,5,8,19			TOBY-L220
		1,3,5,7,8,28			TOBY-L280
LTE FDD Category		4			
Downlink Speed		150		Mb/s	
Uplink Speed		50		Mb/s	
GNSS EVA-M8M-0					
GNSS Center Frequency		1575.42 1602.5625		MHz	GPS Glonass
Navigation Update Rate		1	18	Hz	Configurable
Accuracy		2.5		M	CEP
Cold Starts		27		Sec.	
Aided Starts		4		Sec.	
Reacquisition		1		Sec.	
Tracking Sensitivity		-164		dBm	
Cold Starts Sensitivity		-147		dBm	
Hot Starts Sensitivity		-156		dBm	
Wi-Fi LILY-W131					
Wi-Fi 2.4 GHz Channels	1		13	Ch.	
Wi-Fi IEEE802.11 version		b/g/n			

General					
Operating Voltage	3	3.3	5.5	V	VCC
Power Input					
RTC Backup supply	1.4	3.3	3.6	V	V_BCKP
USB Interface					V2.0
Operating Temperature Range	-40	25	+85	°C	
Dimension					mini PCIe Standard 50.95mm*30mm
Antenna Connector		4			U.FL-R-SMT-1
Weight		11		g	

APPLICATION CIRCUIT REFERENCE : MINI PCIe CARD



ORDER INFORMATION

Ordering No.	4G Engine	GNSS Engine	Wi-Fi Engine
RYB2000	TOBY-L200		
RYB2010	TOBY-L201		
RYB2100	TOBY-L210		
RYB2200	TOBY-L220		
RYB2800	TOBY-L280		
RYB2008	TOBY-L200	EVA-M8M-0	
RYB2018	TOBY-L201	EVA-M8M-0	
RYB2108	TOBY-L210	EVA-M8M-0	
RYB2208	TOBY-L220	EVA-M8M-0	
RYB2808	TOBY-L280	EVA-M8M-0	
RYB2009	TOBY-L200	EVA-M8M-0	LILY-W131
RYB2019	TOBY-L201	EVA-M8M-0	LILY-W131
RYB2109	TOBY-L210	EVA-M8M-0	LILY-W131
RYB2209	TOBY-L220	EVA-M8M-0	LILY-W131
RYB2809	TOBY-L280	EVA-M8M-0	LILY-W131



Taiwan: sales@reyax.com

China: sales@reyax.com.cn

http://www.reyax.com