

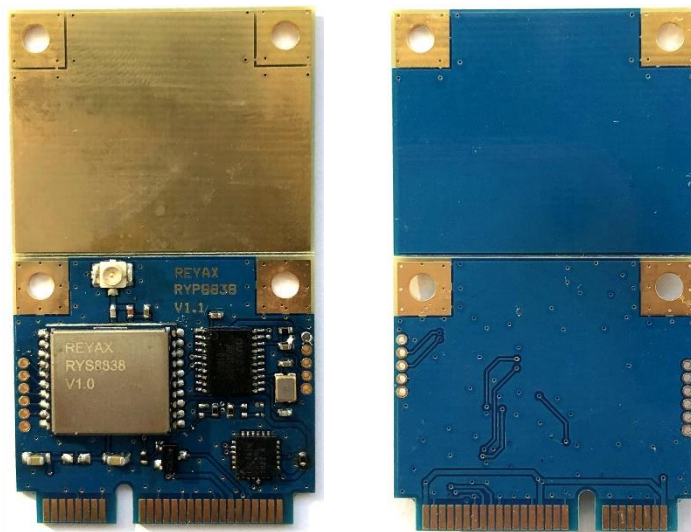
RYP8838

GNSS

Untethered Dead Reckoning (UDR)

Mini PCIe Card

Datasheet



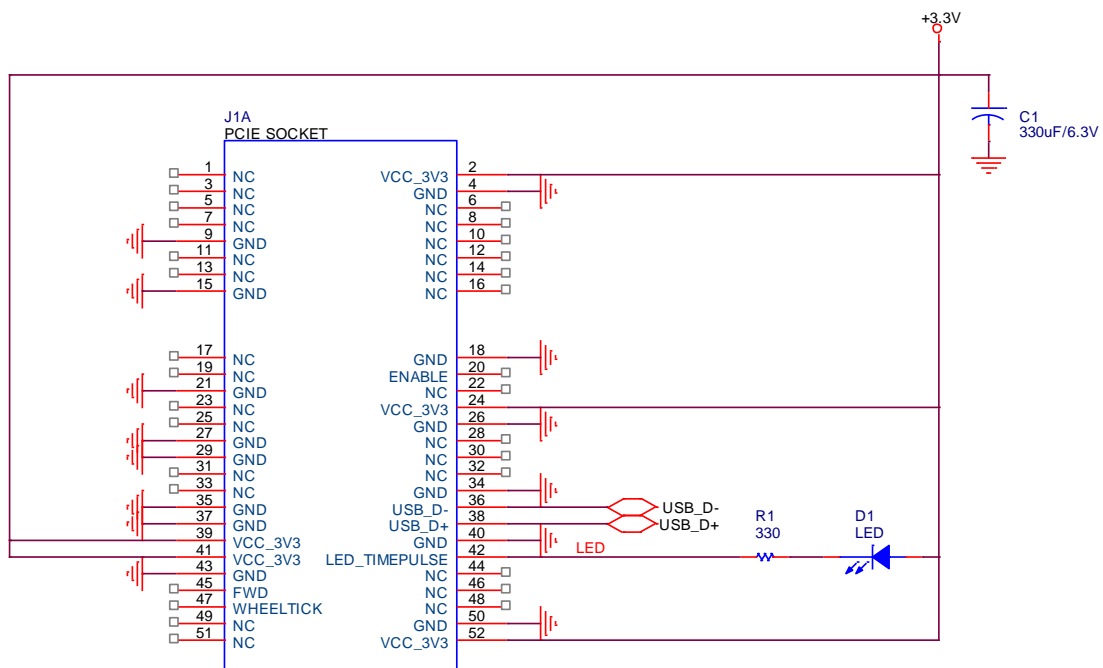
PRODUCT DESCRIPTION

The REYAX RYP8838 GPS/Glonass/SBAS/QZSS/Galileo/BeiDou Untethered Dead Reckoning(UDR) Mini PCIe Card introduces the Untethered Dead Reckoning (UDR) technology, which provides continuous navigation without requiring speed information from the vehicle. This innovative technology brings the benefits of dead reckoning to installations previously restricted to using GNSS alone and significantly reduces the cost of installation for after-market dead reckoning applications.

FEATURES

- SONY CXD5608AGF UDR with 3D inertial sensors engine
- Position accuracy 1m CEP
- Temperature range: -40 to +85°C
- Mini PCIe Signal Type USB2.0
- Standard Full/Half-size Mini PCIe Card connect to computer easily.

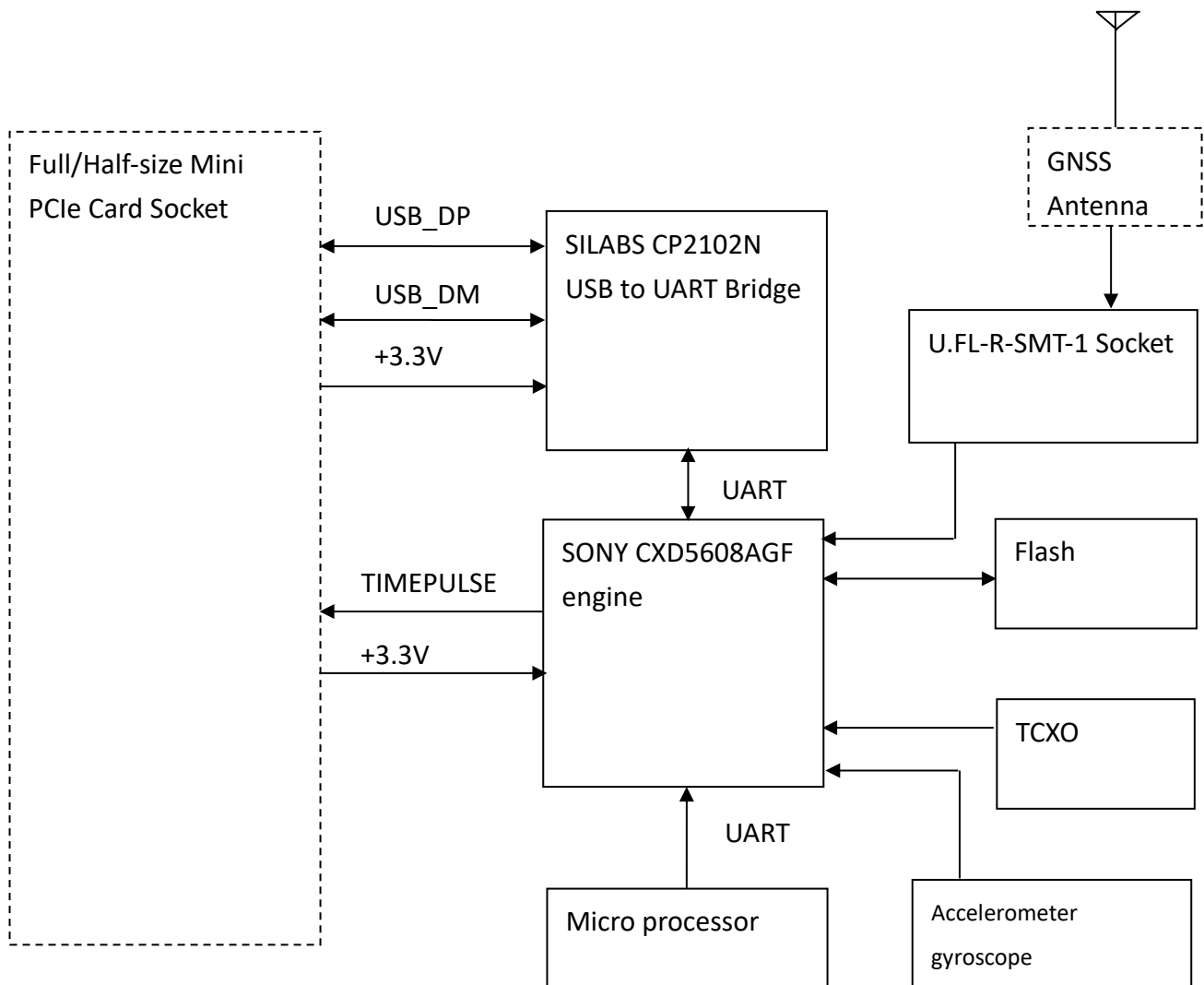
APPLICATION SCHEMATIC



PIN DESCRIPTION

Pin	Name	I/O	Condition
2,24,39,41,52	VCC_3V3	I	Supply voltage
4,9,15,18,21,26,27, 29,34,35,37,40,43, 50	GND	-	Ground
36	USB_DM	I/O	USB Data
38	USB_DP	I/O	USB Data
42	LED_TIMEPULSE	O	Time pulse, Open Drain
U.FL	U.FL Socket	I	+3.3V Active GNSS Antenna

BLOCK DIAGRAM



SPECIFICATION

Item	Min.	Typical	Max.	Unit	Condition
Operation Voltage	3.1	3.3	3.5	V	VCC
Current		27		mA	
USB Interface					V2.0
GNSS Center Frequency		1561.098 1575.42 1602.5625		MHz	BeiDou GPS Glonass
Navigation update rate		1		Hz	
Accuracy		1		M	CEP, Signal strength is -130dBm
Cold starts		35		Sec.	
Aided starts		3		Sec.	
Reacquisition		2		Sec.	
Tracking Sensitivity		-161		dBm	
Cold starts Sensitivity		-147		dBm	
Hot starts Sensitivity		-160		dBm	
Operating Temperature	-40	25	+85	°C	
Antenna supply current			100	mA	+3.3V Active GNSS Antenna
Weight		4		g	

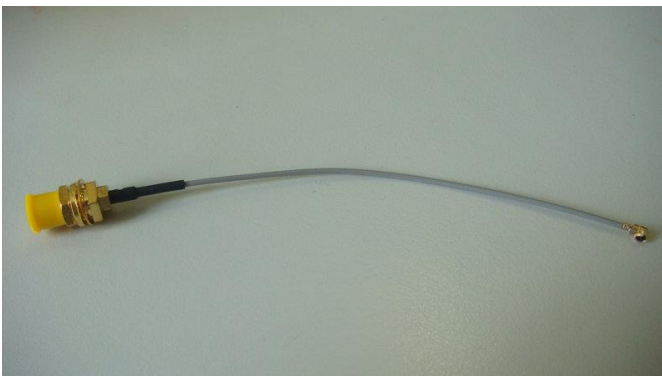
DRIVER AND CONFIGURATION TOOLS

Complete software along with host driver for various operating systems such as Windows, Linux, Windows CE, and Android.

Please download the driver from www.silabs.com

GNSS SIGNALS TEST

We use the REYAX [SMAF2IPEX110](#) cable and REYAX [RYAGN3I](#) active GPS& Glonass antenna.

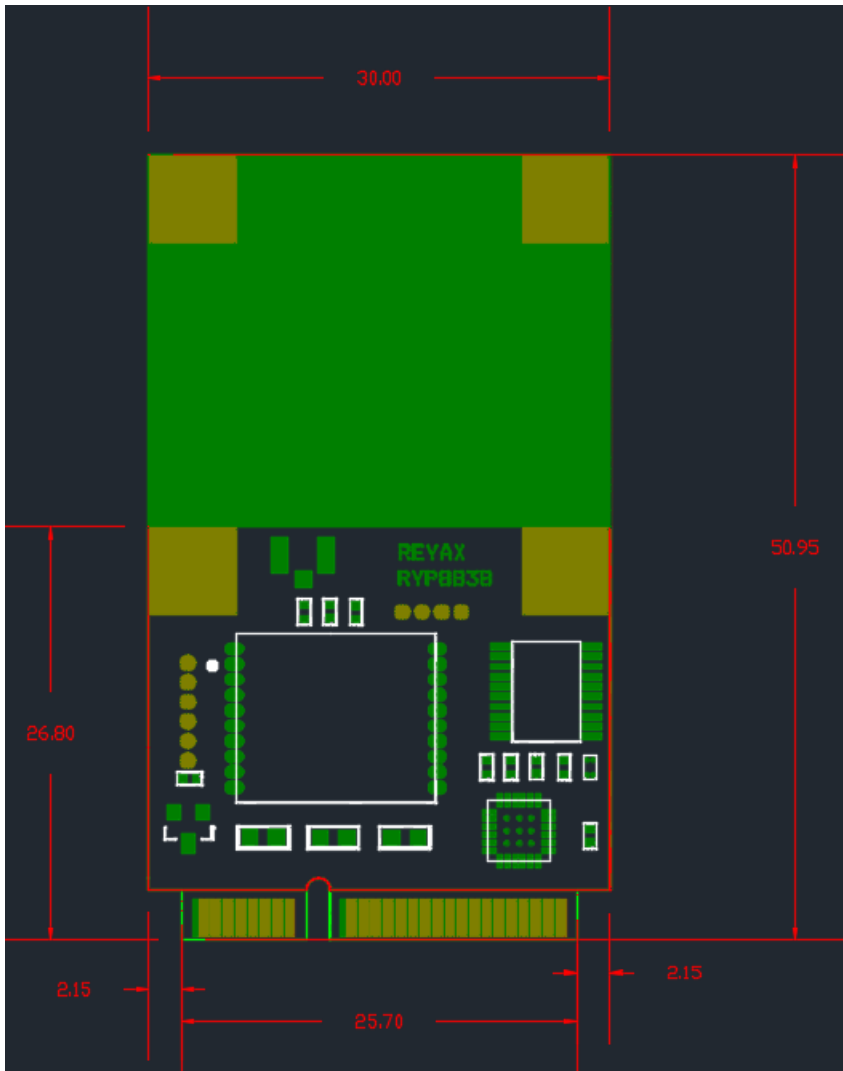


REYAX [SMAF2IPEX110](#)



REYAX [RYAGN3I](#)

DIMENSIONS



Unit: mm

Tolerance ± 0.2 mm

PCB Thickness 1mm

ORDER INFORMATION

Ordering No.	GNSS Default	UDR Function
RYP8838	GPS+Glonass	Yes



E-mail: sales@reyax.com

Website: <http://reyax.com>