L20

Quectel GPS Engine

EVB User Guide

L20_EVB_UGD_V1.0

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Contents

Table Index

Figure Index

0. Revision History

Revision	Date	Author	Description of change
1.0	2010-12-20	Roy Chen	Initial

1. Introduction

This document defines and specifies the usage of L20 EVB (Evaluation Board). Customer can get useful information about L20 EVB and GPS demo tool from this document.

1.1. Reference

Table 1: Reference

SN	Document name	Remark
[1]	L20_HD	Hardware Design

1.2. Abbreviations

Table 2: Abbreviations

Abbreviation	Description
C/NO	Carrier/Noise
GPS	Global Positioning System
HDOP	Horizontal Dilution of Precision
SV	Satellite Vehicle
UART	Universal Asynchronous Receiver & Transmitter
USB	Universal Serial Bus
UTC	Universal Time Coordinated

2. EVB Kit Introduction

2.1. EVB Top and Bottom View

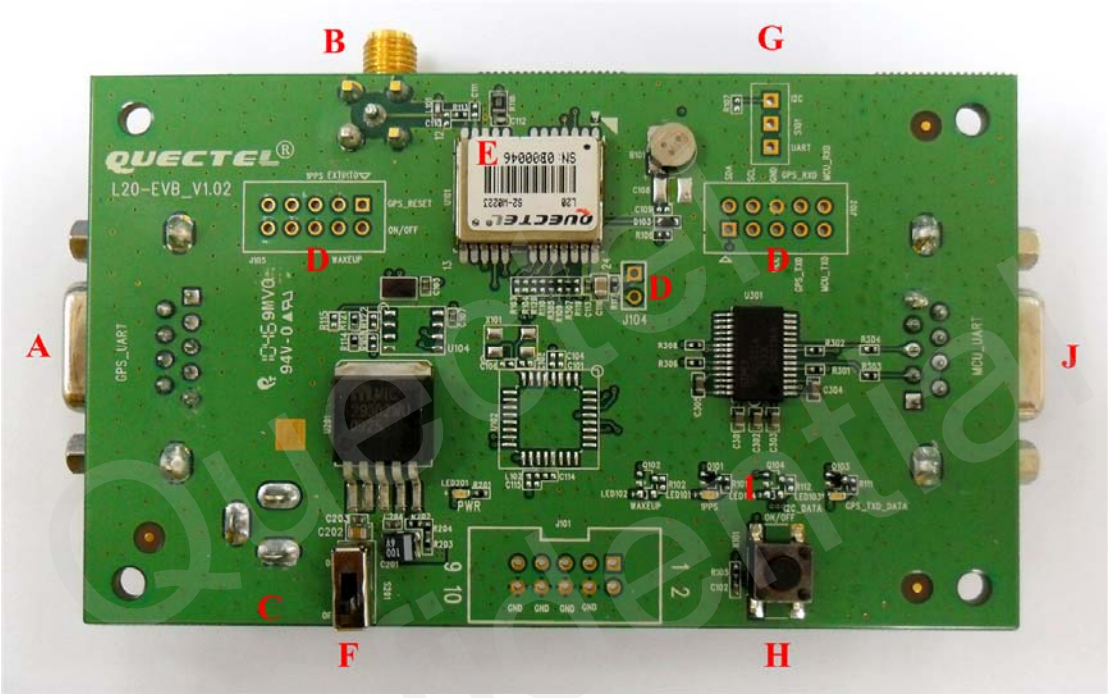


Figure 1: EVB top view

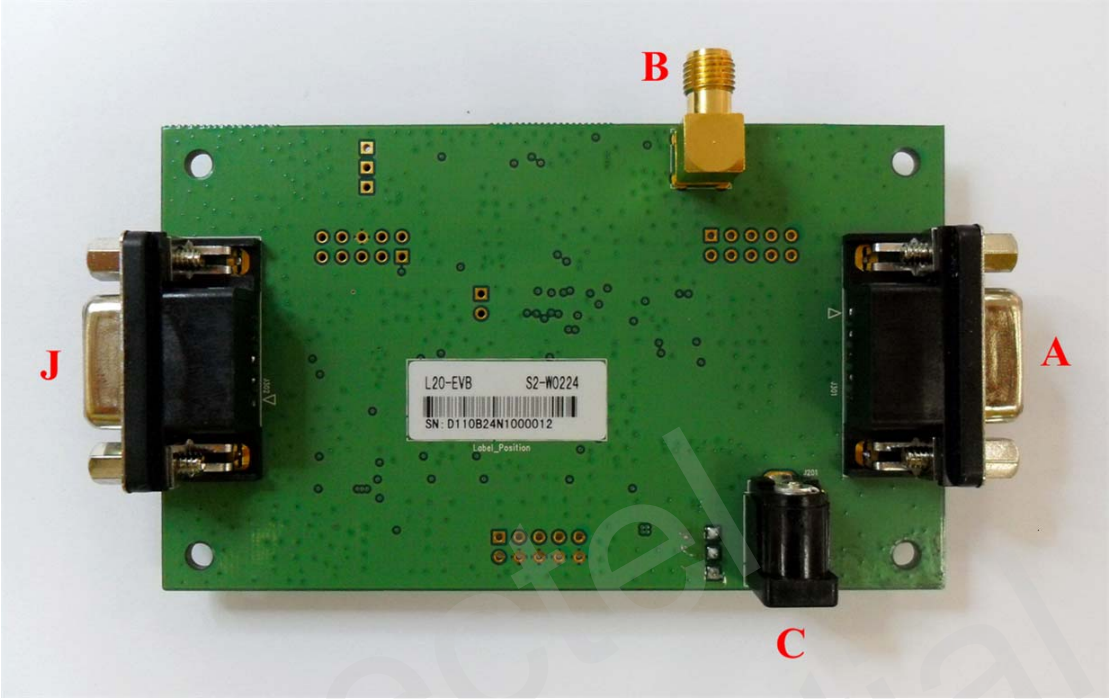


Figure 2: EVB bottom view

A: GPS UART port
B: Antenna interface
C: Adapter interface
D: Test points
E: L20 Module
F: POWER switch
G: NC switch (Reserve for future development)
H: NC botton (Reserve for future development)
I: Indication LEDs
J: MCU UART port (no use)

2.2. EVB Accessories

Figure 3: EVB accessories

A: GPS active antenna (3.3V)
B: Serial port cable (USB 2.0)
C: DC5V/2A power adapter

3. Interface Application

3.1. Power Interface

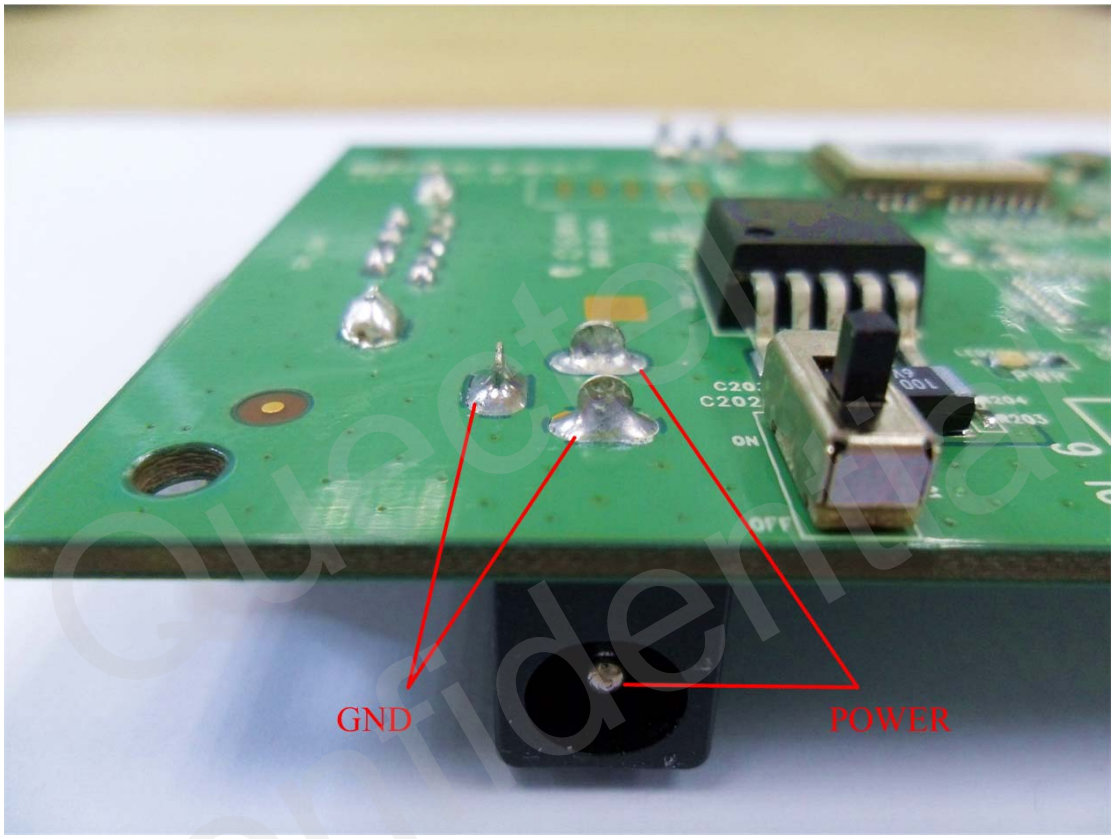


Figure 4: Power interface

3.2. UART Interface

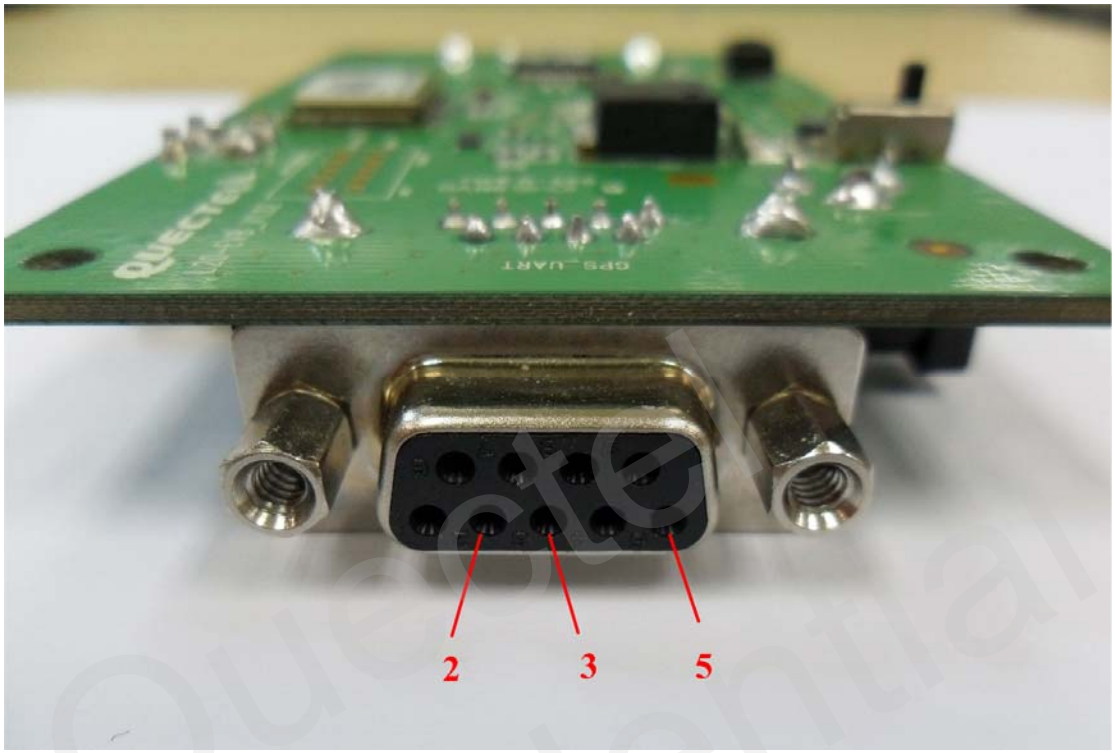


Figure 5: UART interface

Table 3: Pins of UART port

Pin	Signal	I/O	Description
2	TXD(RS232)	O	Transmit data
3	RXD(RS232)	I	Receive data
5	GND		GND

3.3. Antenna Interface

Figure 6: Antenna interface

3.4. Switches

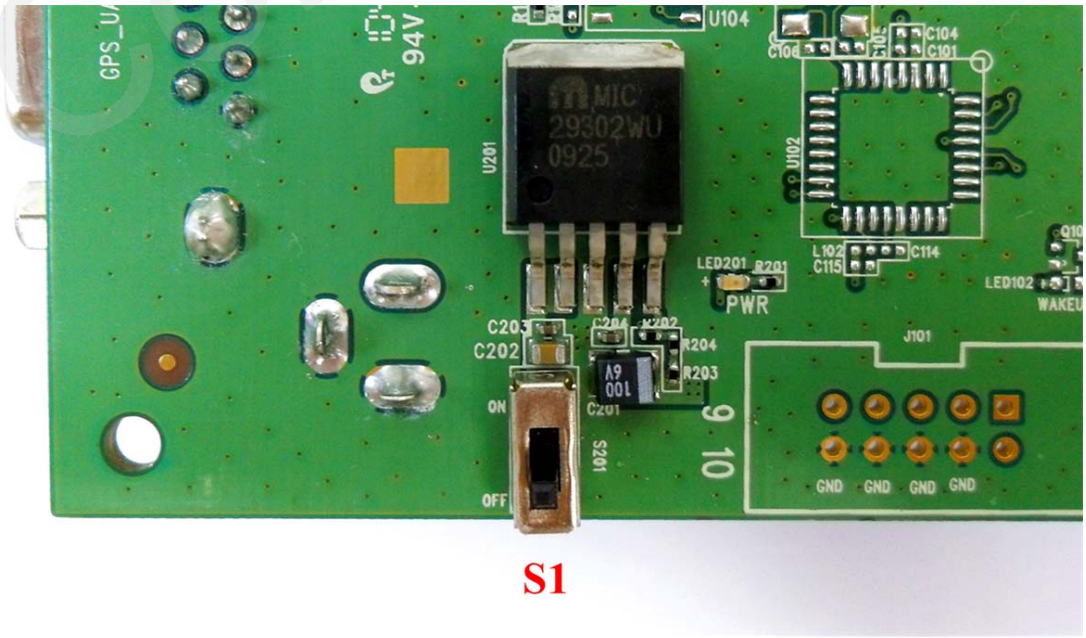


Figure 7: Switches

Table 4: Switches and buttons

Part	Name	I/O	Description
S1	POWER	I	Control power supply from adapter

3.5. Operating Status LEDs

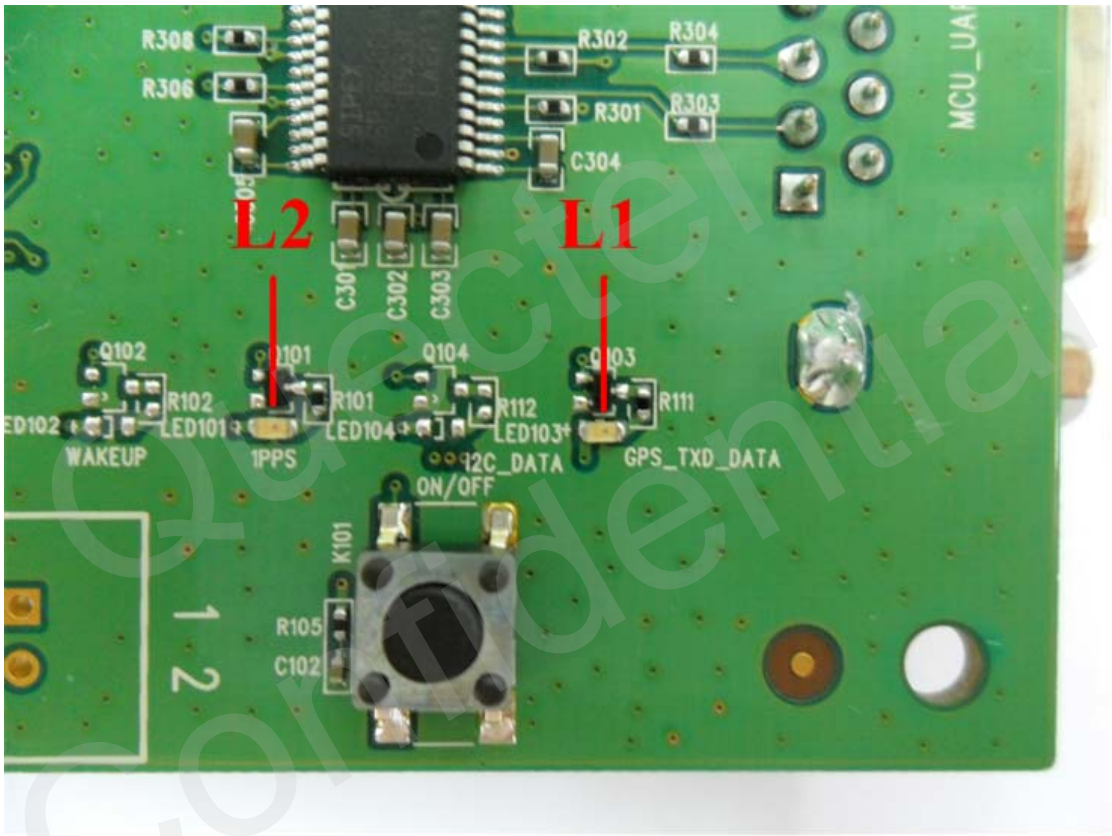


Figure 8: Operating status LEDs

Table 5: Operating status LEDs

Part	Name	I/O	Description
L1	GPS_TXD_DATA	O	Flash: GPS Data export from TXD Extinct: no data
L2	1PPS	O	TBD

3.6. Test Points

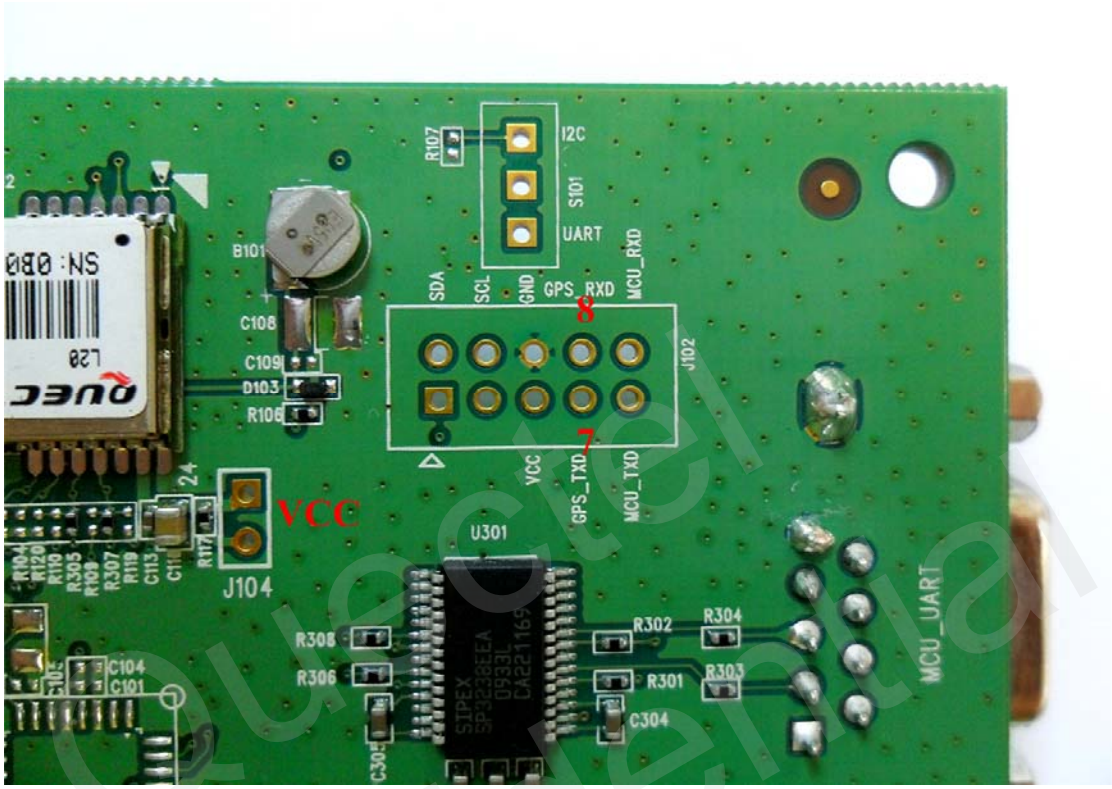


Figure 9: Test points J102 & J104

Table 6: Pins of J102 & J104

Pin	Signal	I/O	Description
7	TXD1	O	Transmit GPS data
8	RXD1	I	Receive GPS data
	VCC	I	Supply voltage to module

4. EVB and Accessories

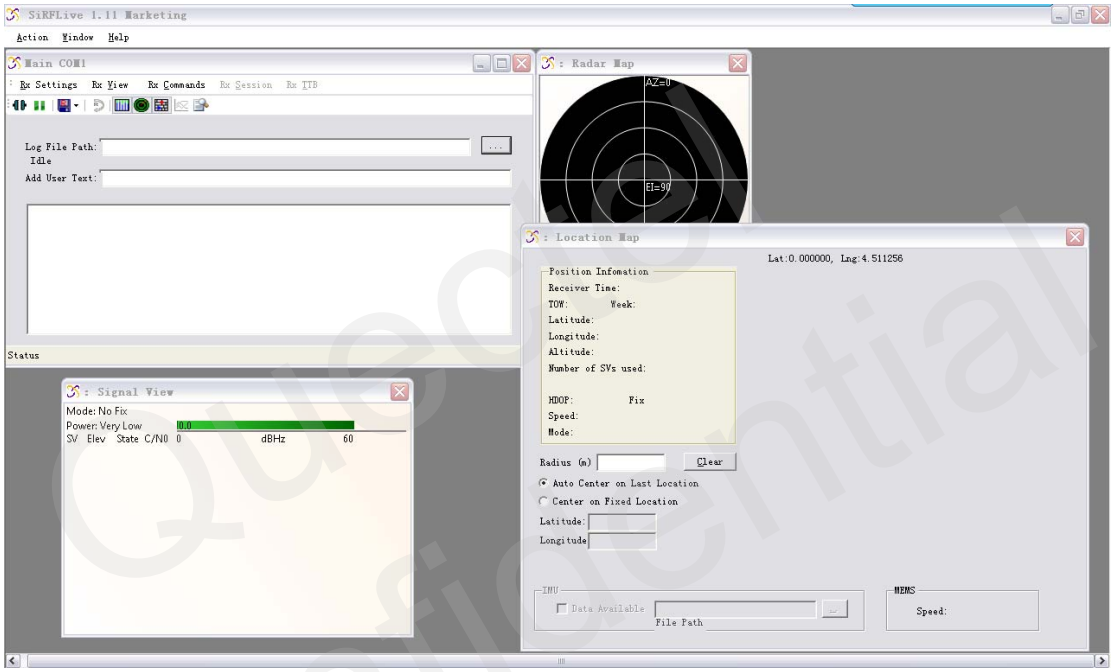
The EVB and its accessories are equipped as shown in Figure 10.

Figure 10: EVB and accessory equipments

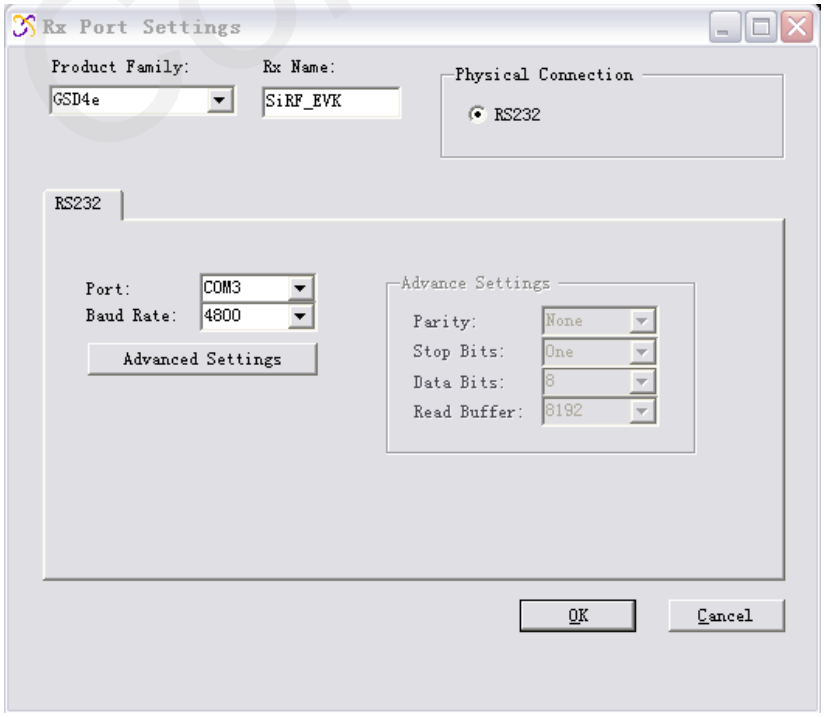
5. Starting SiRFLive

The SiRFLive tool can help user to view the status of GPS receiver and record NMEA data. The steps of using SiRFLive for L20 are described as below:

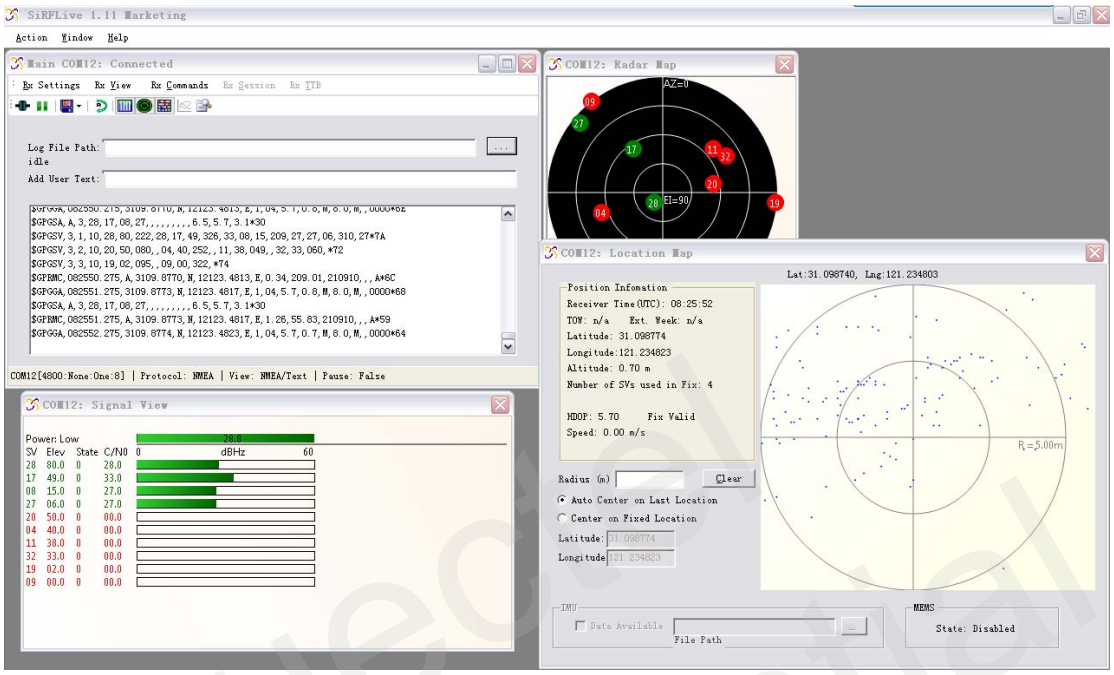
1. After finishing assembling the EVB as figure 10, connect the RS232 to USB cable to PC, and power on the module, the LED GPS_TXD_DATA will be flash. The operation window of SiRFLive is shown below:



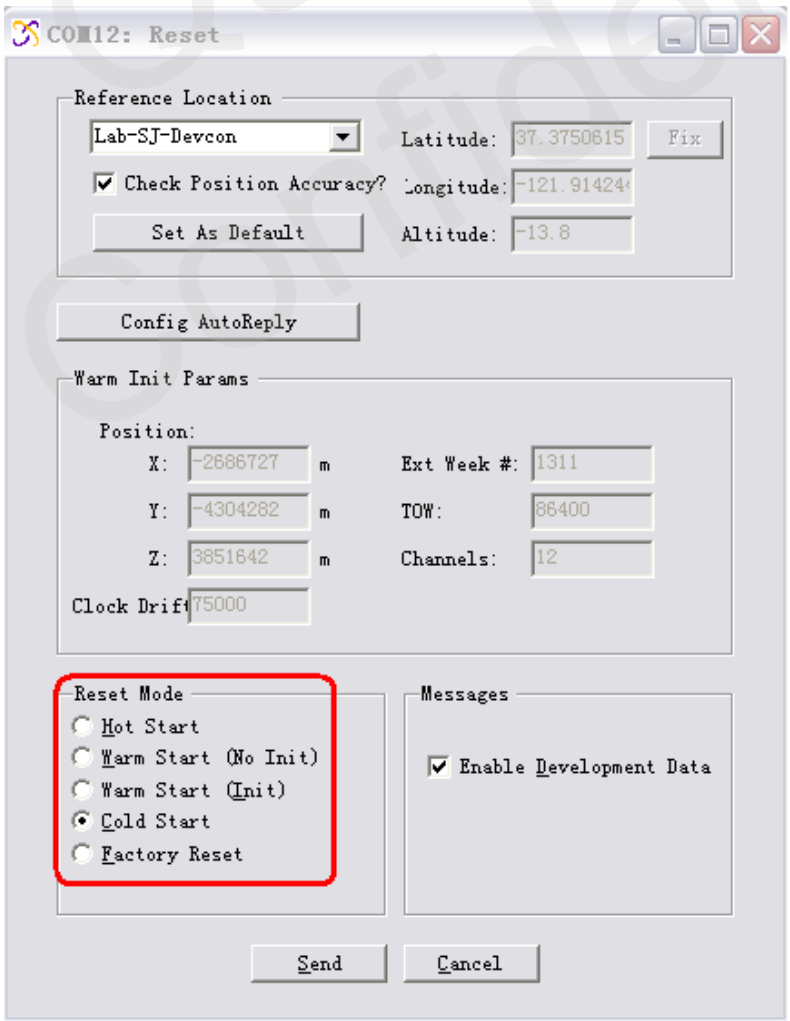
2. Click the button Rx Settings to select COM port and baud rate 4800 in pop-up window:



3. The operation window will show NMEA data, Signal view, Radar view, Location map and Position information including UTC, latitude, longitude, altitude, HDOP, speed and so on.



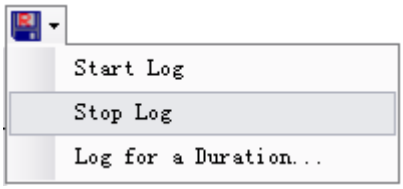
4. Click button , the reset window will pop up as below:



5. Select reset mode and click “Send” to implement Cold Start, Warm Start or Hot Start.

Save NMEA data with below toolbar:

6. Record log and Stop log with below menu:



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