

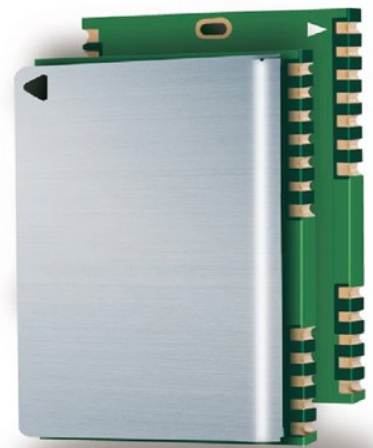


# L20

## Quectel GPS Engine

### **EVB User Guide**

L20\_EVB\_User\_Guide\_V1.0



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## 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

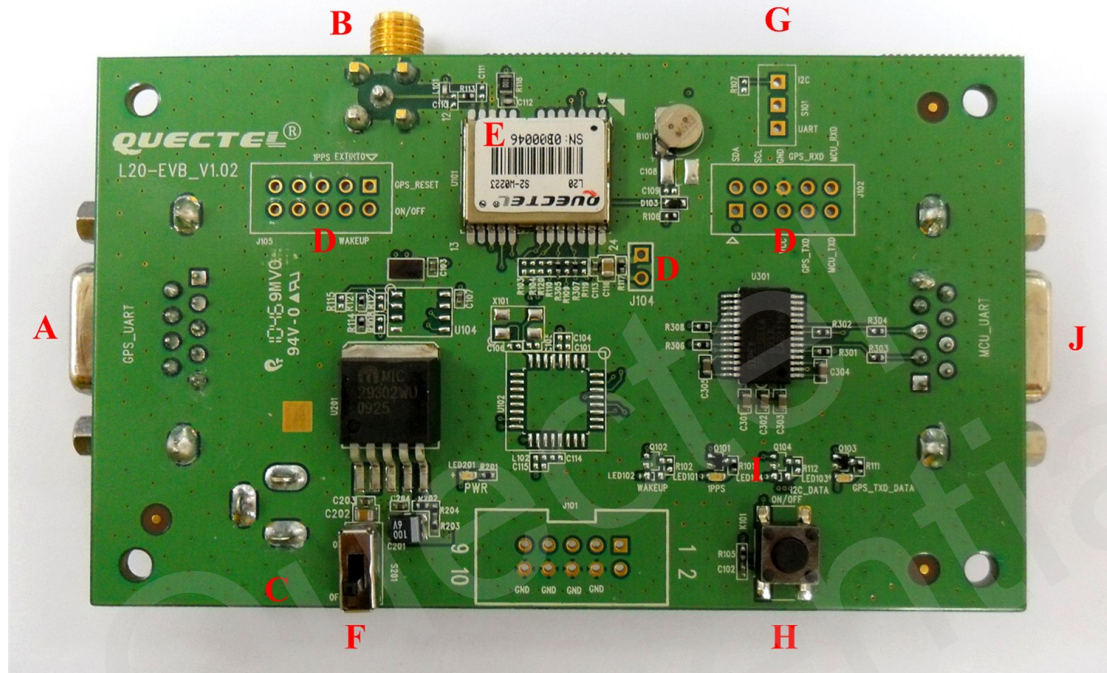
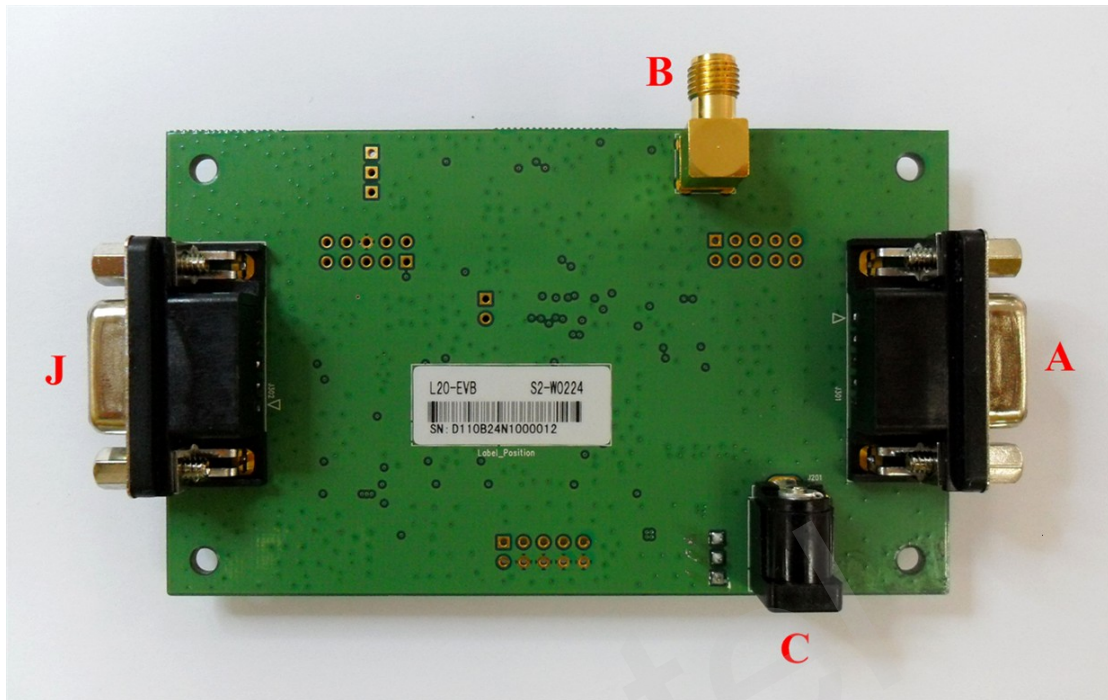


Figure 1: EVB top view





**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 button (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

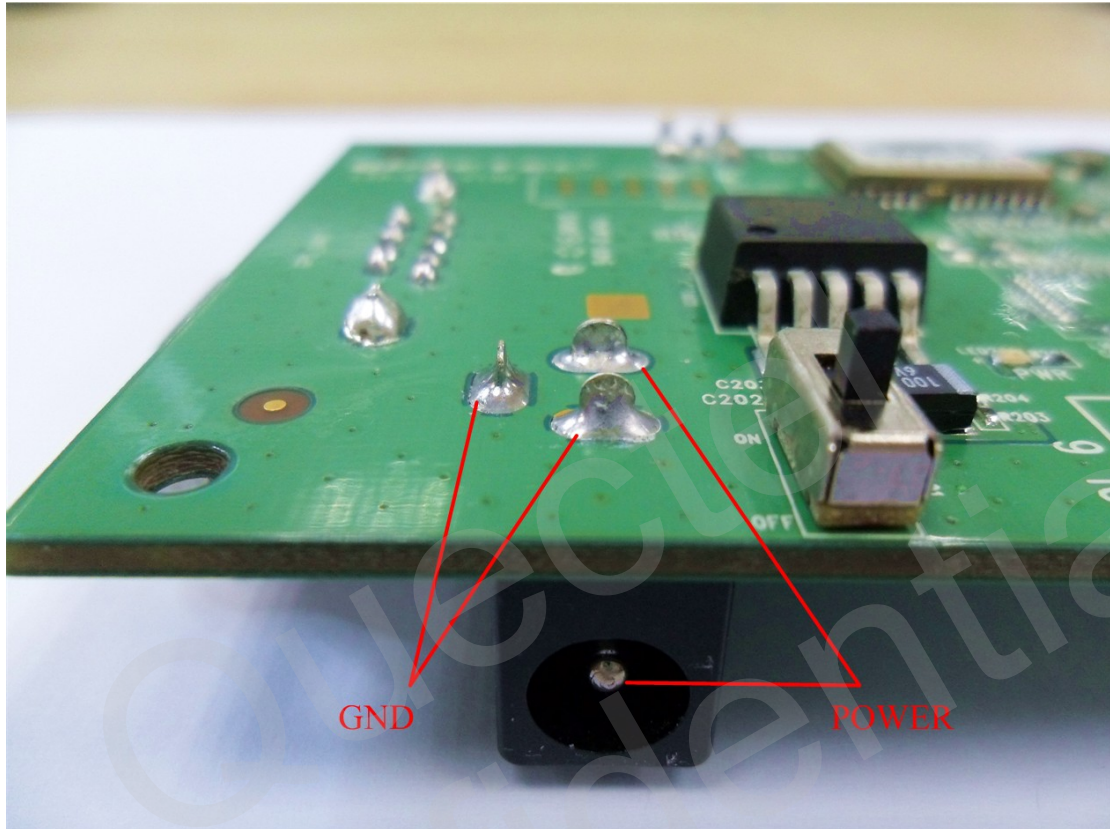


Figure 4: Power interface

### 3.2. UART Interface

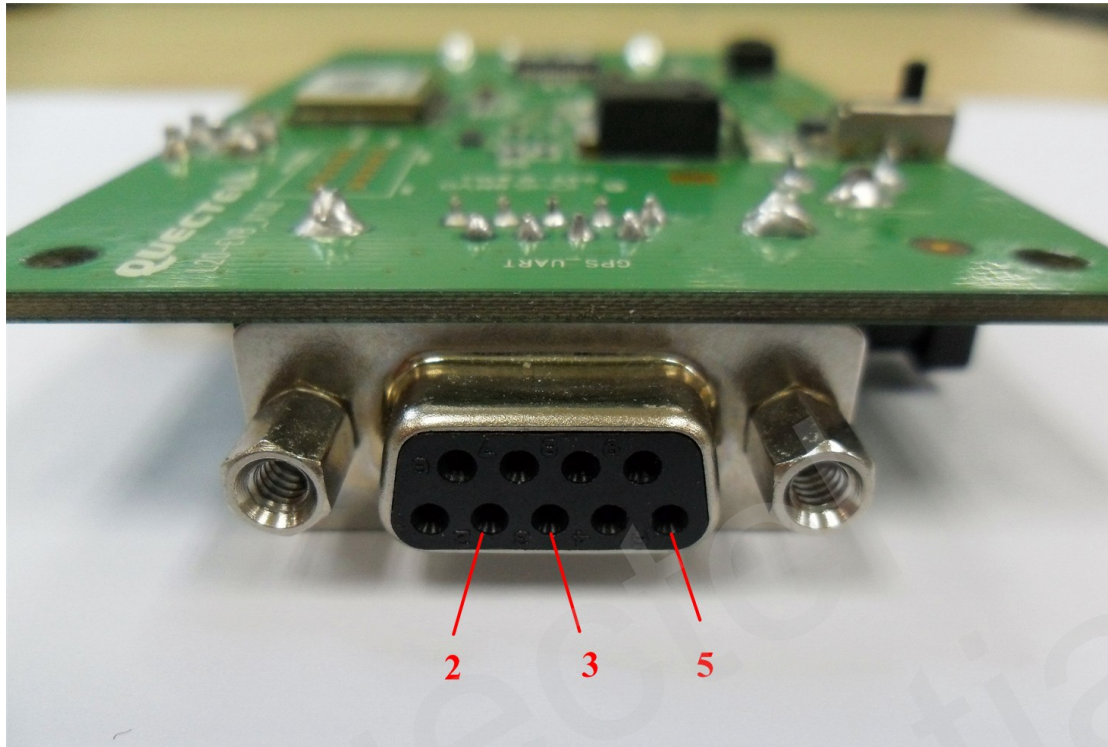


Figure 5: UART interface

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

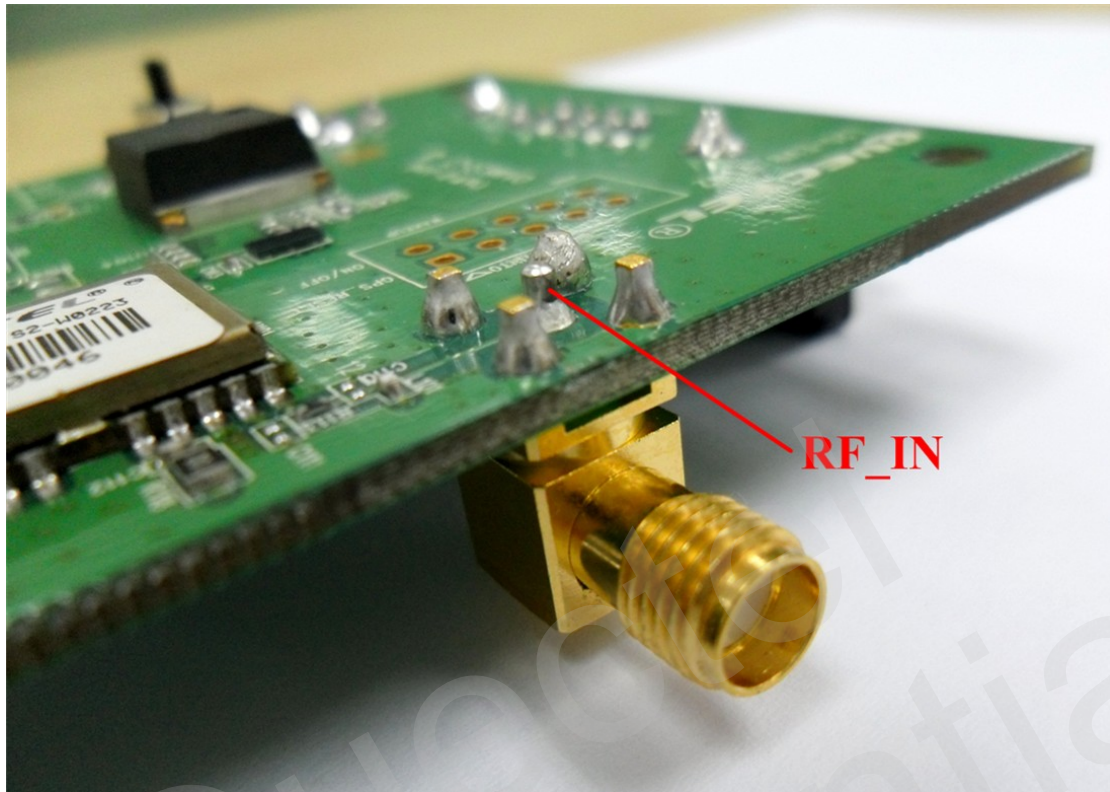
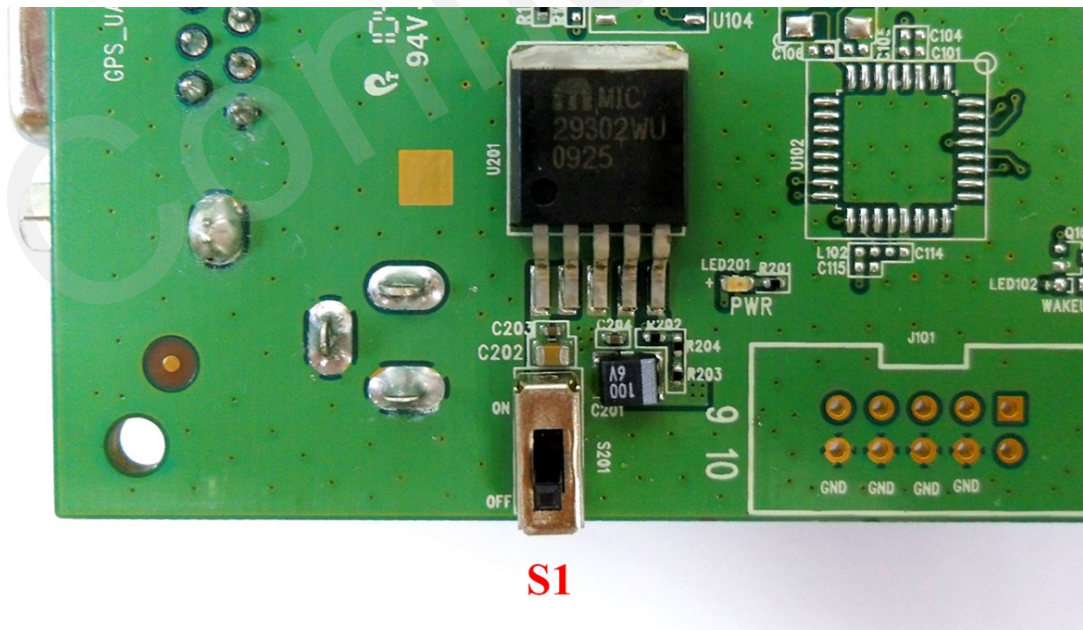


Figure 6: Antenna interface

### 3.4. Switches



S1

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

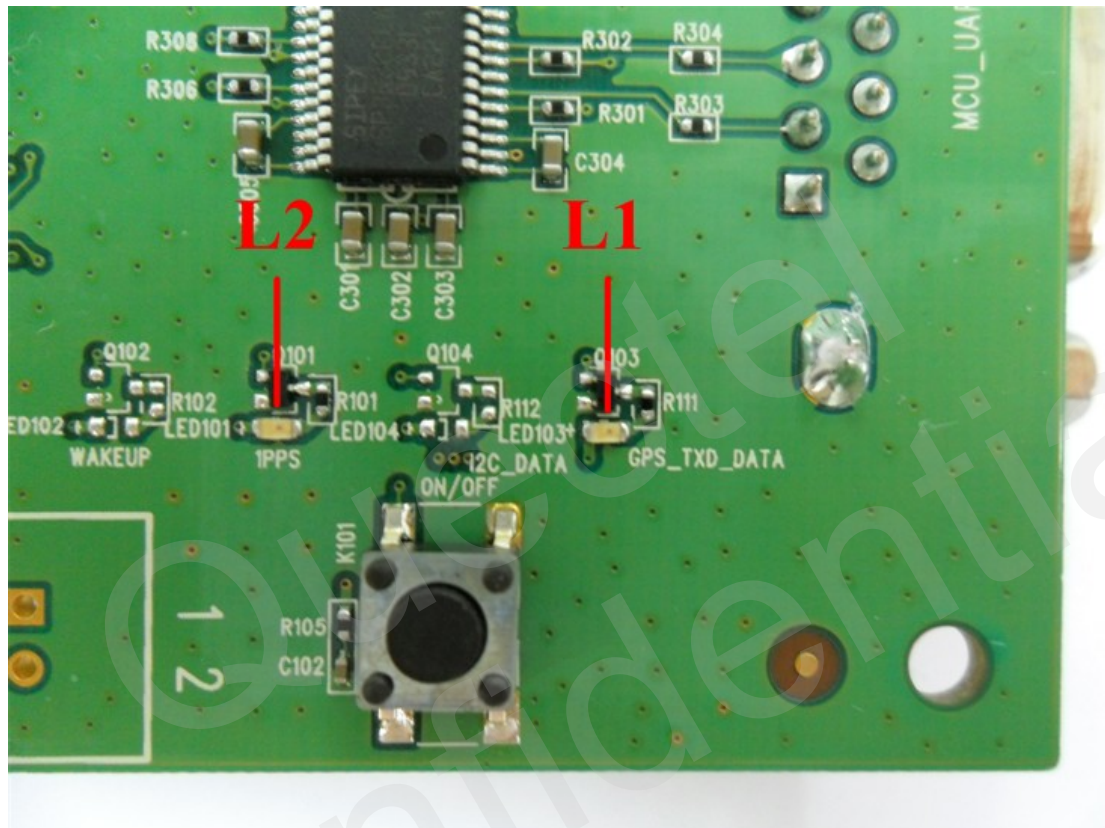


Figure 8: Operating status LEDs

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

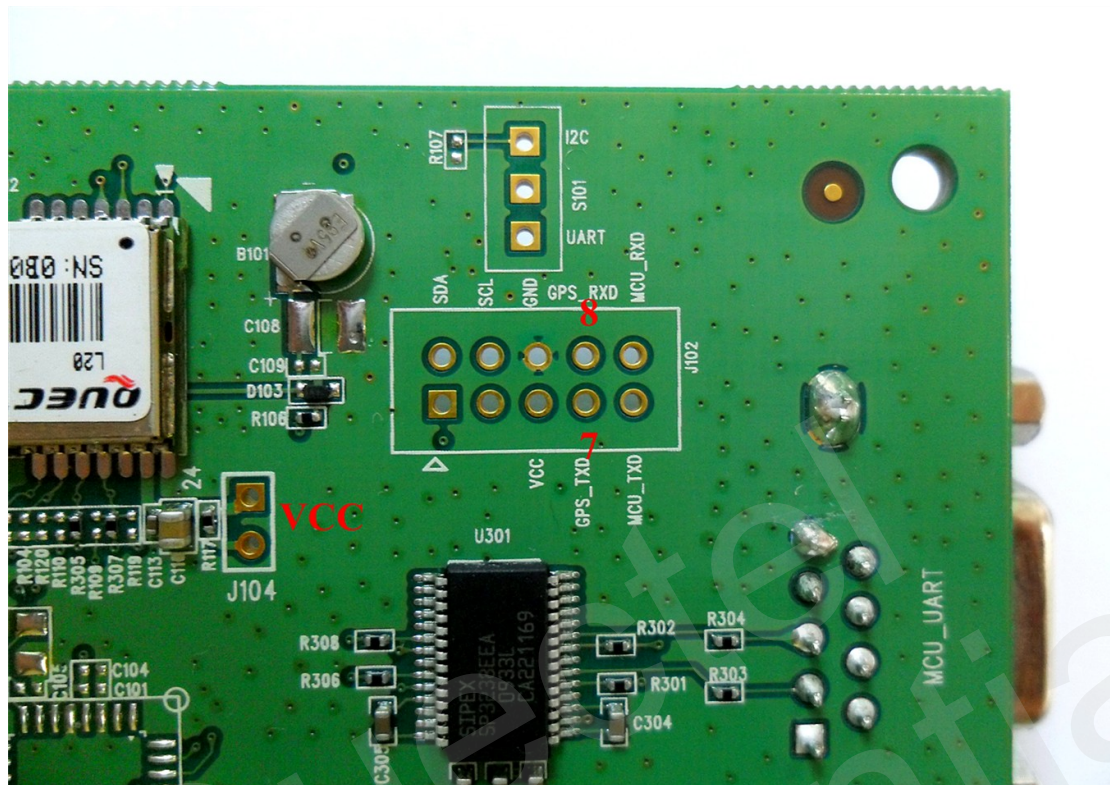


Figure 9: Test points J102 & J104

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.



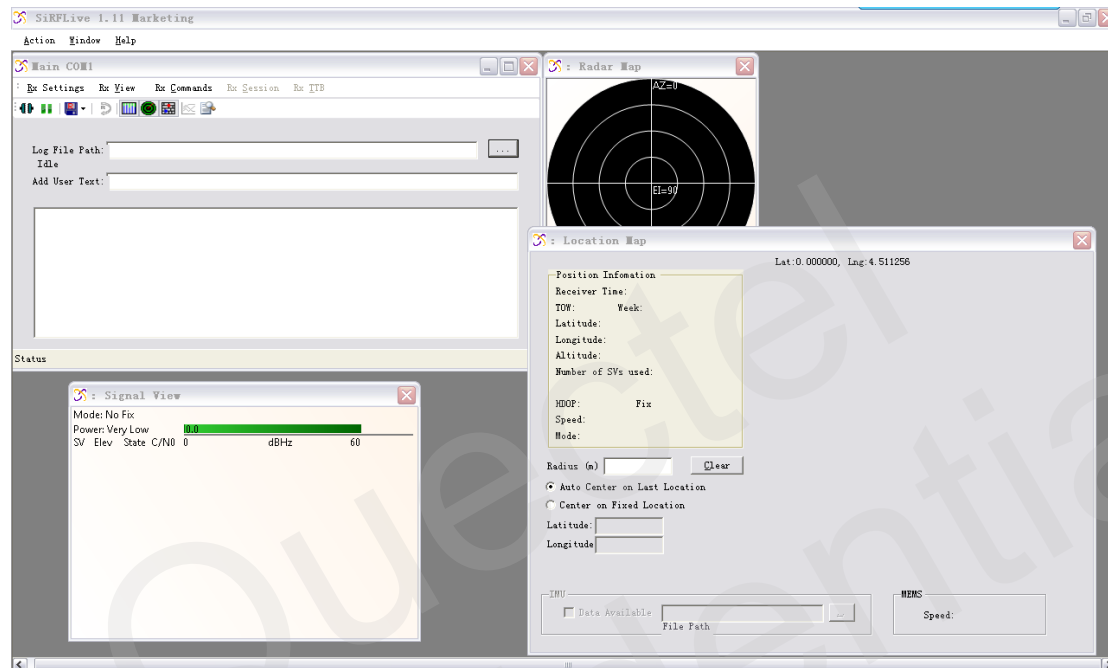
**Figure 10: EVB and accessory equipments**



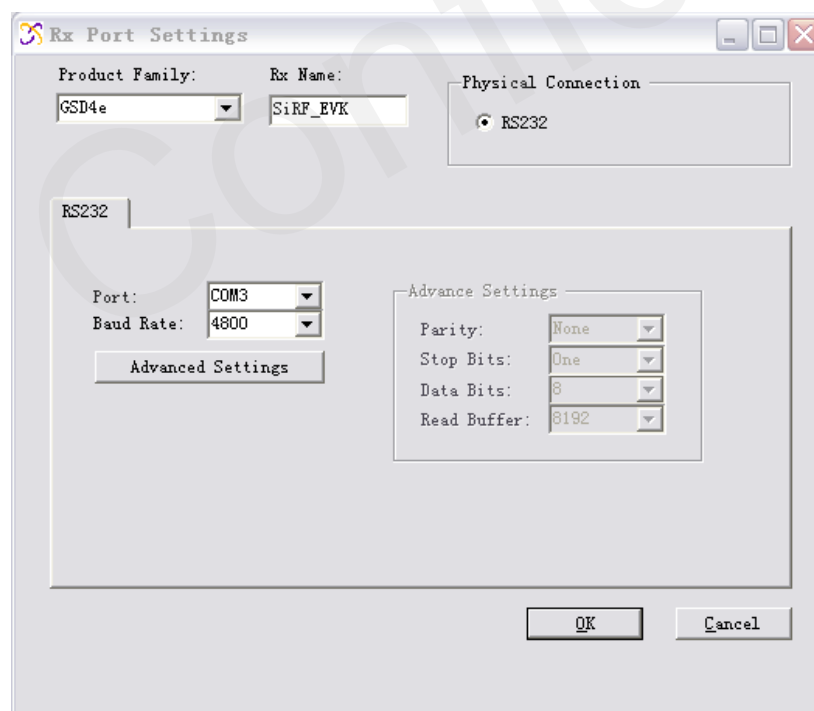
## 5. Starting SiRFLive

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:

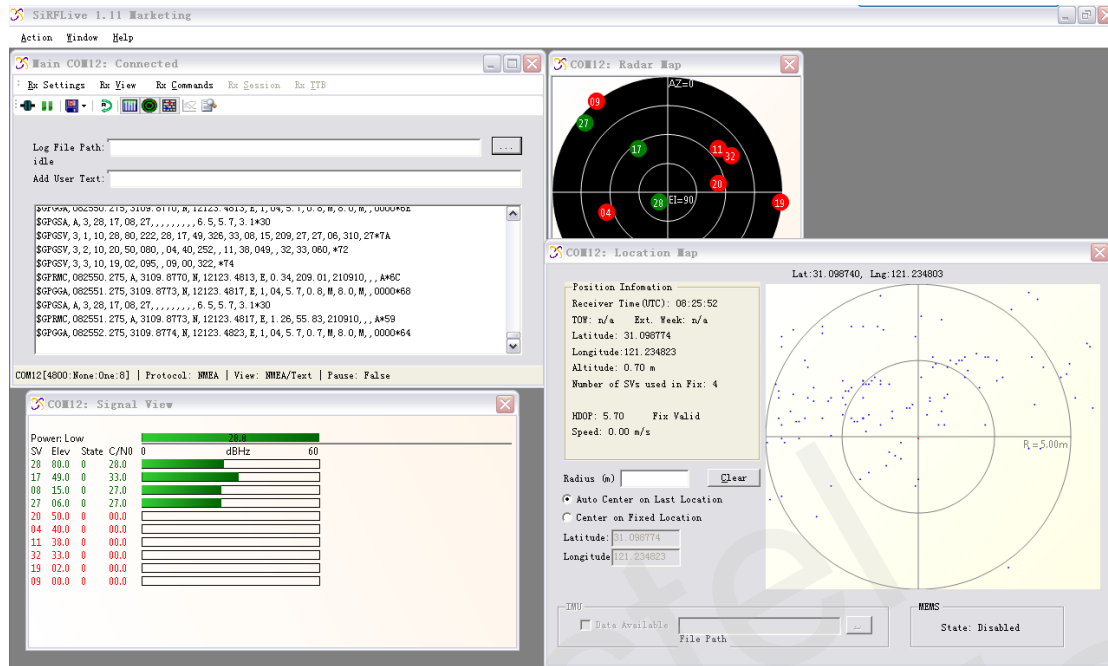
1. After finishing assembling the EVB as figure 10, connect the RS232 to USB cable to PC, and power on the module, the LED GPS\_TXD\_DATA will be flash. The operation window of SiRFLive is shown below:




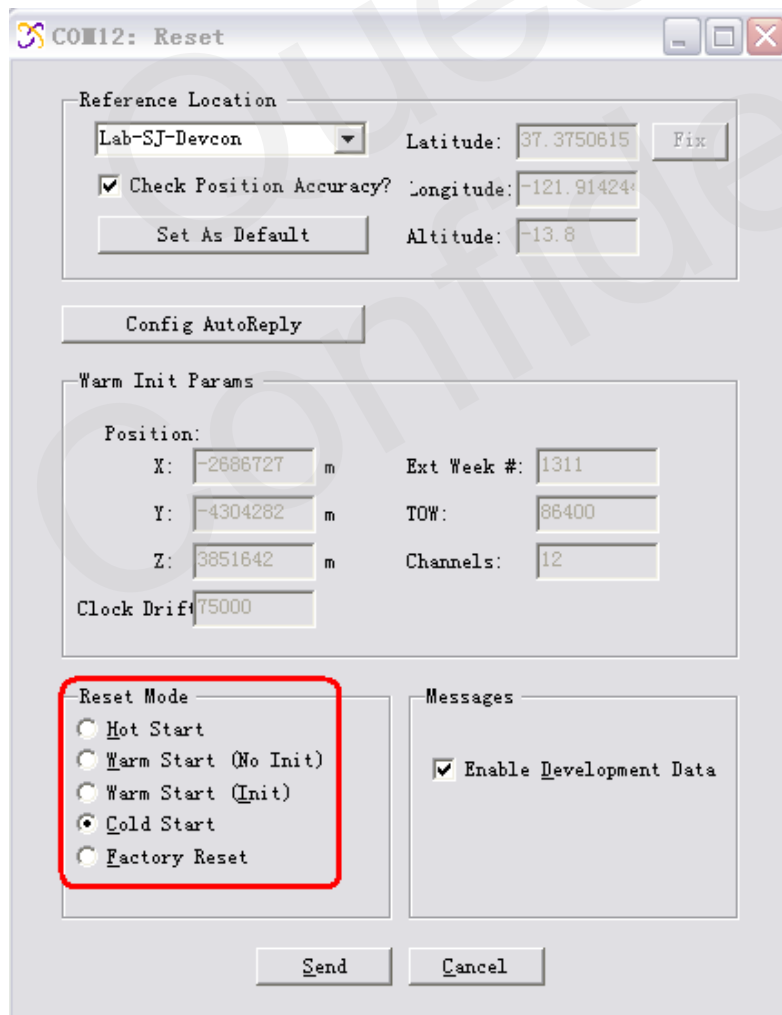
2. Click the button **Rx Settings** to select COM port and baud rate 4800 in pop-up window:



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:

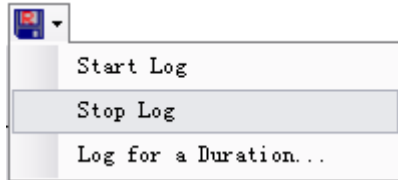


5. Select reset mode and click “Send” to implement Cold Start, Warm Start or Hot Start.

Save NMEA data with below toolbar:



6. Record log and Stop log with below menu:



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