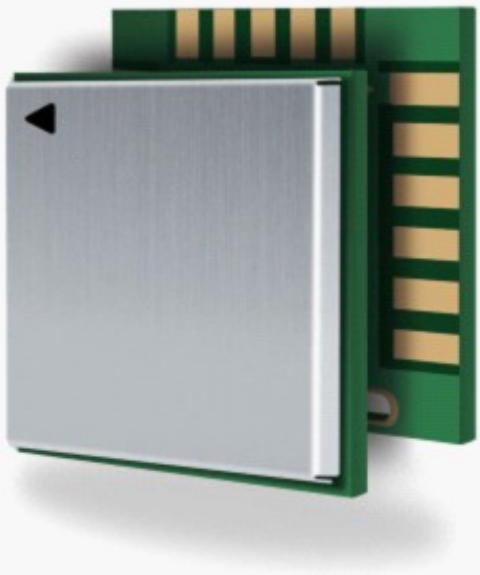
L30

Quectel GPS Engine

EVB User Guide

L30_EVB_User_Guide_V1.0



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0. Revision History

Revision	Date	Author	Description of change
1.0	2011-4-25	Jerry YOU	Initial

1. Introduction

This document defines and specifies the usage of L30 EVB (Evaluation Board). Customer can get useful information about L30 EVB and GPS demo tool from this document.

1.1. Reference

Table 1: Reference

SN	Document name	Remark
[1]	L30_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
UTC	Universal Time Coordinated

2. EVB Kit Introduction

2.1. EVB Top and Bottom View

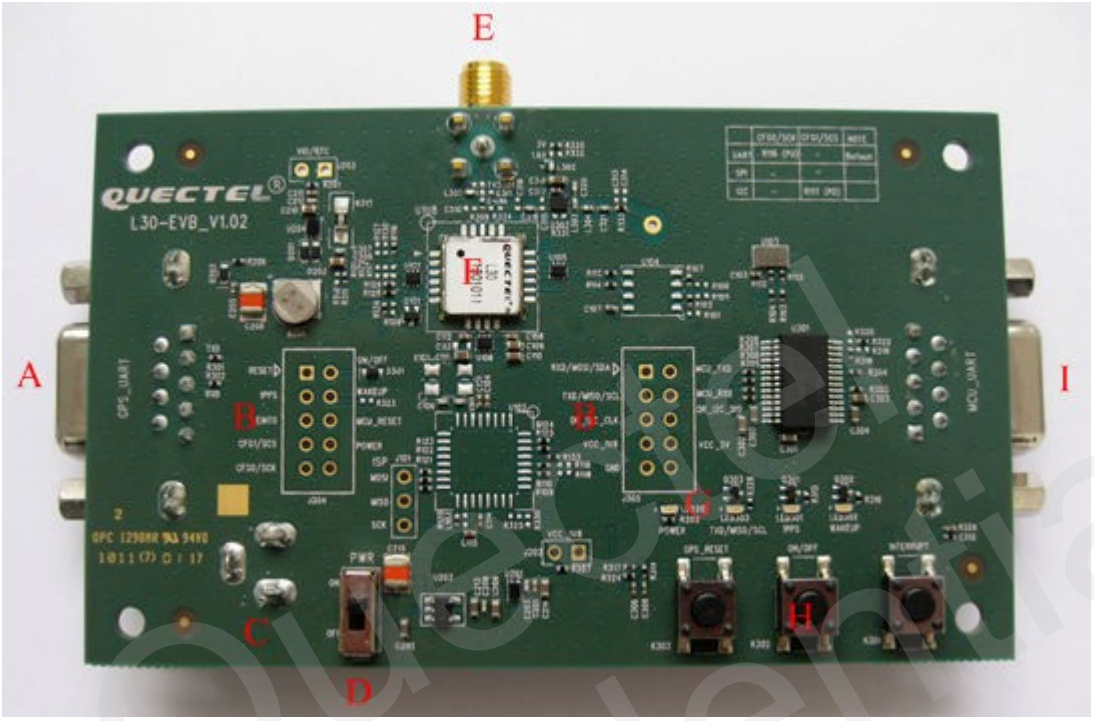


Figure 1: EVB top view

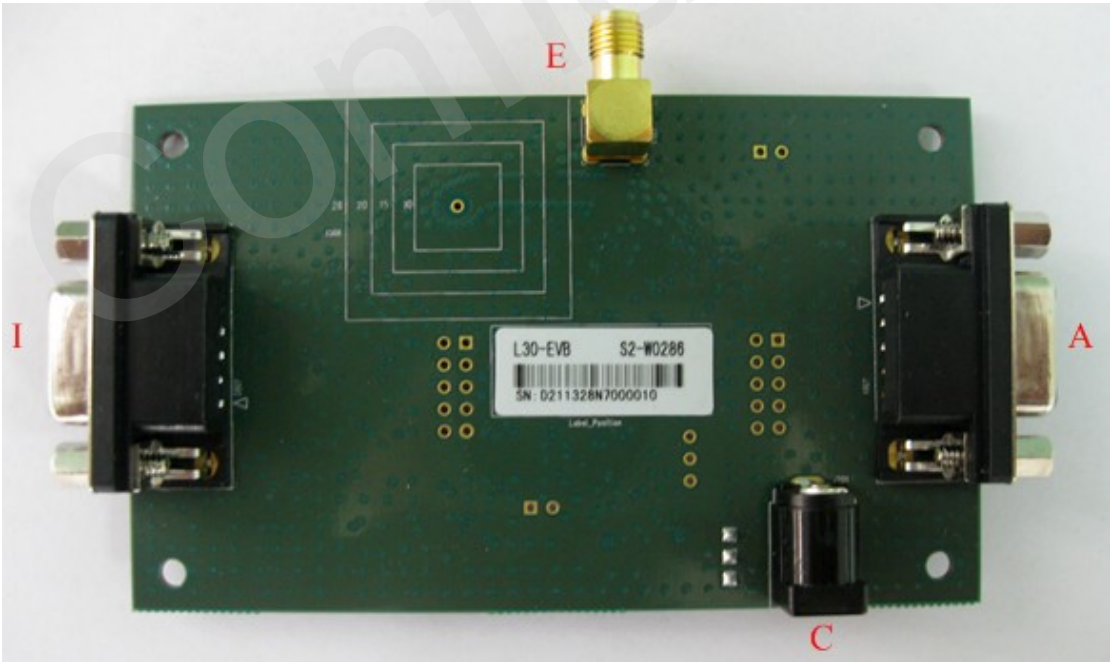


Figure 2: EVB bottom view

A: GPS UART port
B: Test points
C: Adapter interface
D: POWER switch
E: Antenna interface
F: L30 Module
G: Indication LEDs
H: Buttons of GPS_RESET,ON/OFF and INTERRUPT
I: 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

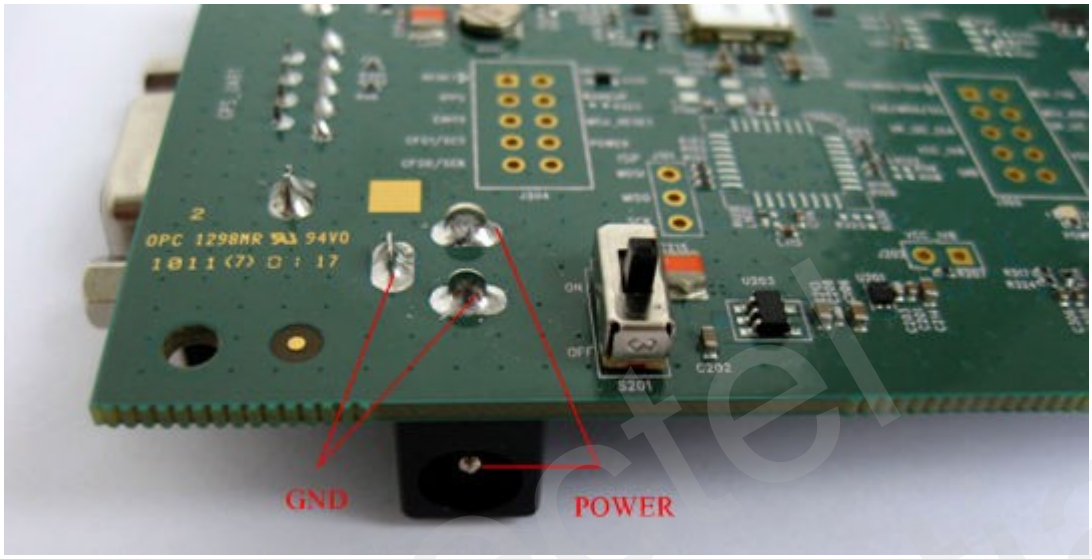


Figure 4: Power interface

3.2. UART Interface

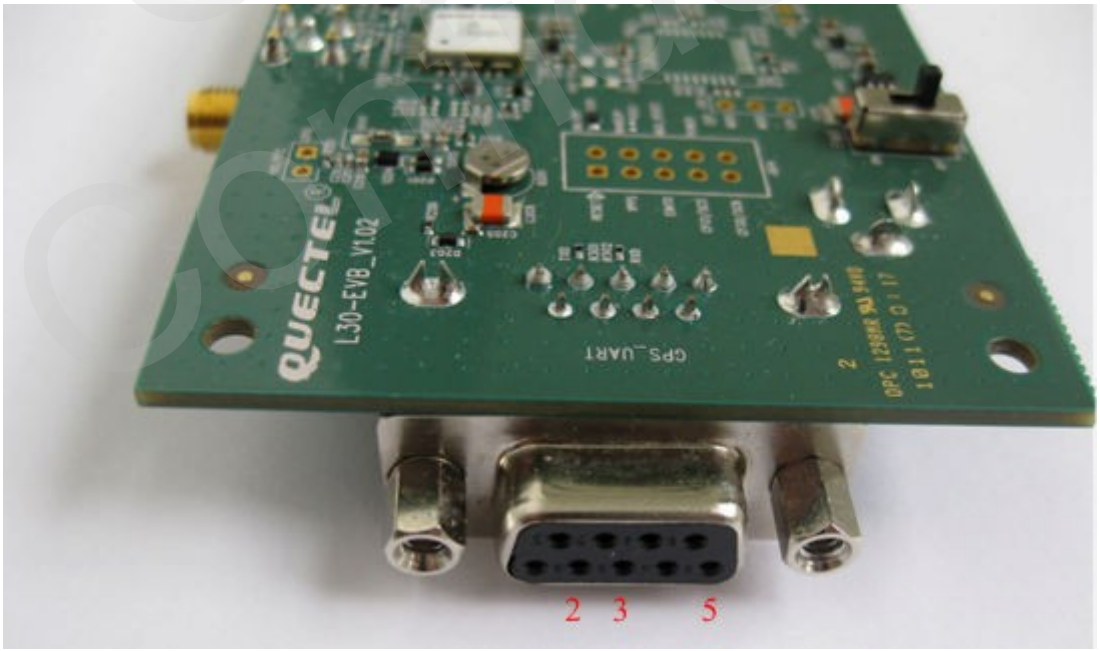


Figure 5: UART interface

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

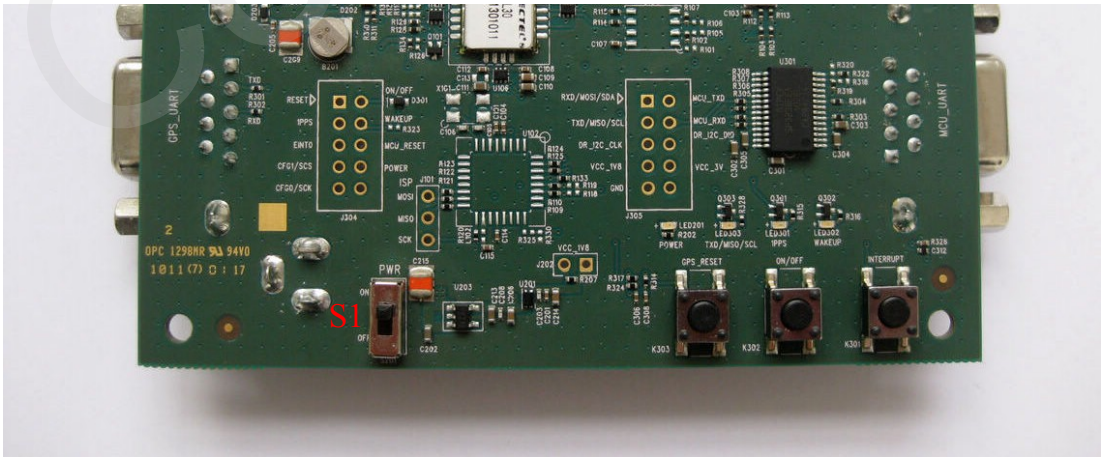


Figure 7: Switches

Table 4: Switches and buttons

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

3.5. Operating Status LEDs

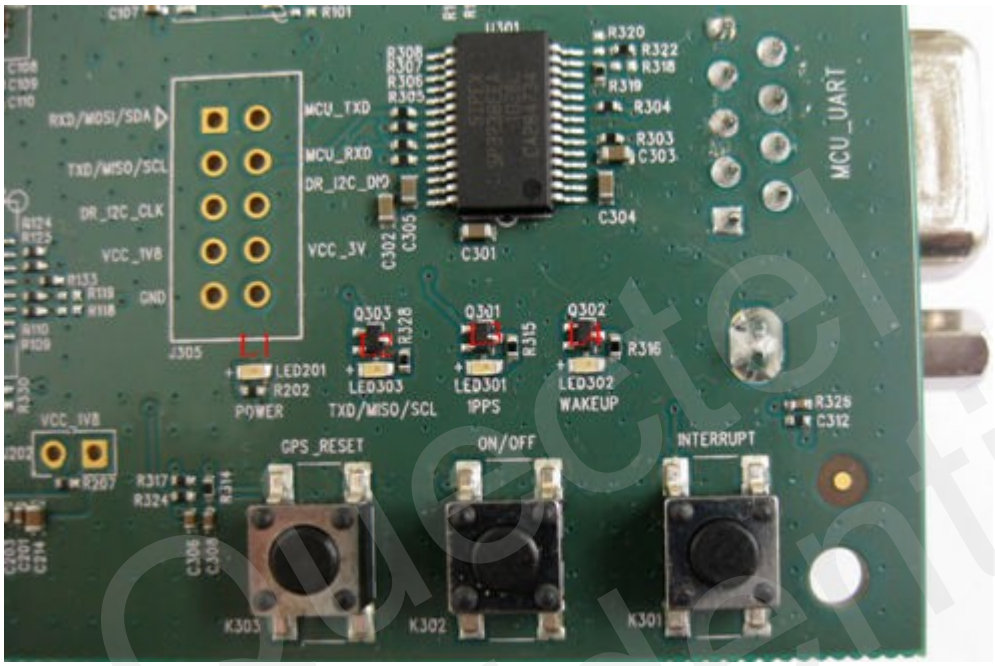


Figure 8: Operating status LEDs

Table 5: Operating status LEDs

Part	Name	I/O	Description
L1	POWER	O	Flash: VCC ON Extinct: VCC OFF
L2	TXD_MISO_SCL	O	1,UART_TX UART data transmit(TXD) 2, SSPI_DO slave SPI data output(MISO) 3, I2C_CLK I2C clock(SCL)
L3	1PPS	O	One pulse per second
L4	WAKWUP	O	Flash: module works in full on mode Extinct: module works in hibernate mode

3.6. Buttons

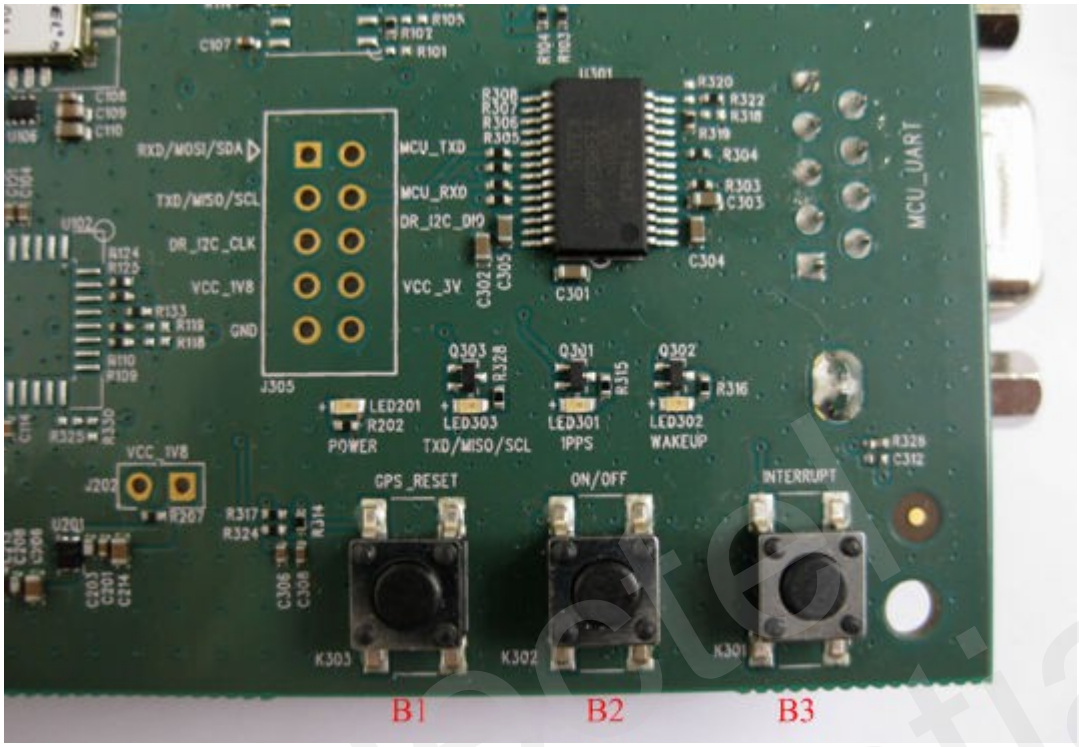


Figure 9: Buttons

Table 6: Buttons

Part	Name	I/O	Description
B1	GPS_RESET	I	Reset the module
B2	ON/OFF	I	Power on or off module
B3	INTERRUPT	I	External interrupt

4. EVB and Accessories

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

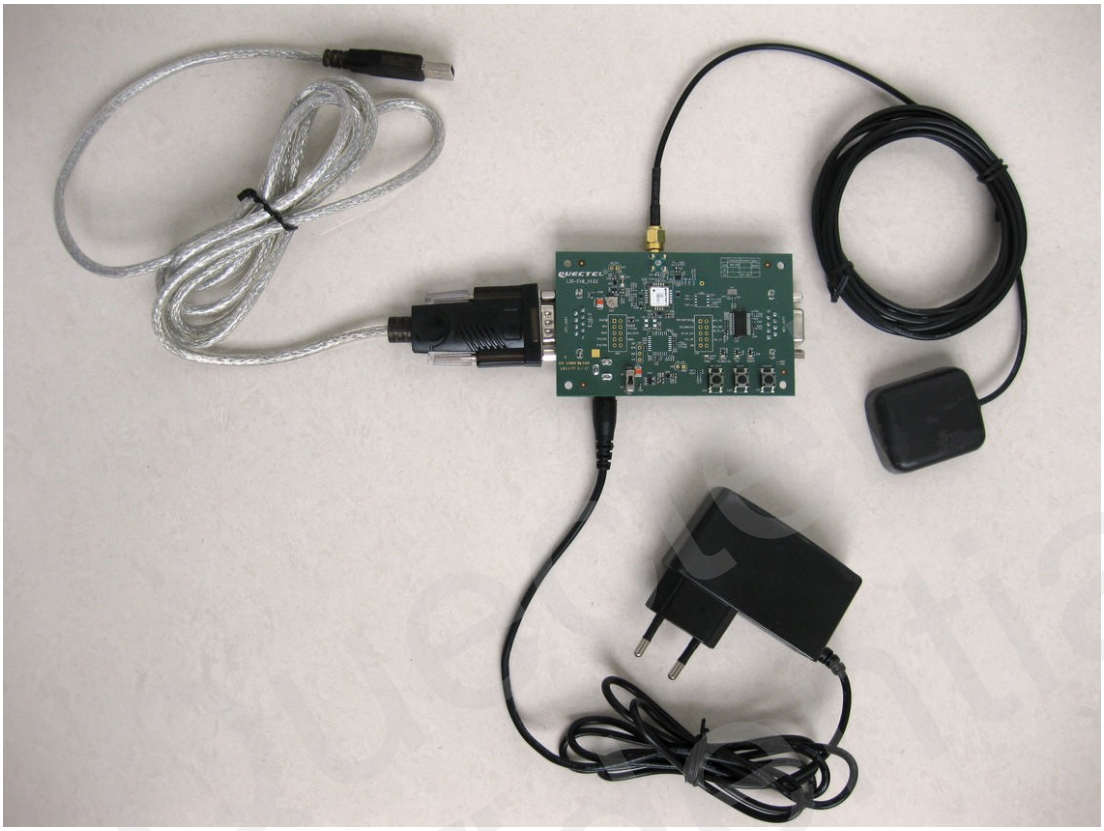
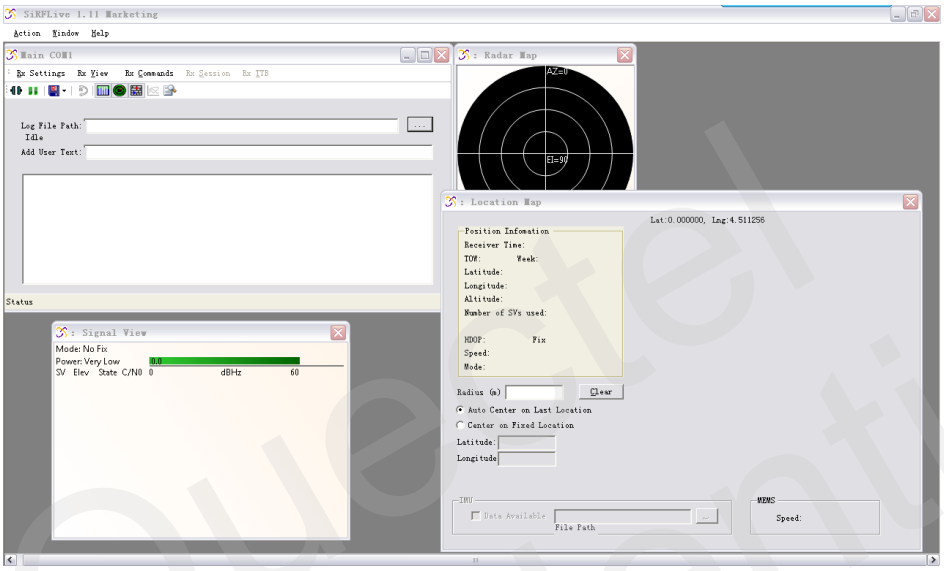


Figure 10: EVB and accessory equipments

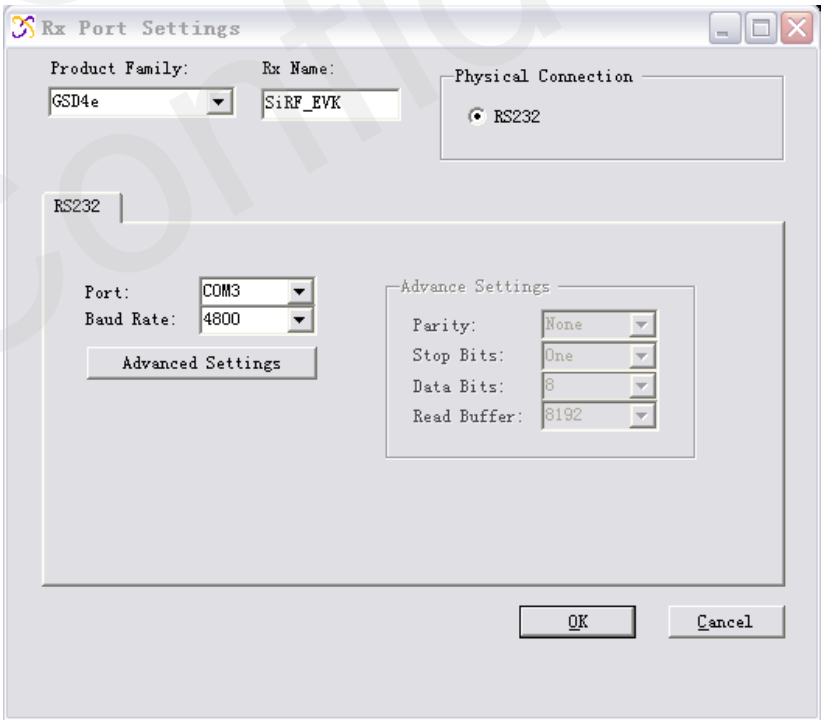
5. Starting SiRFLive

The SiRFLive tool can help user to detect the status of GPS receiver and record NMEA data. The steps in using SiRFLive for L30 are described as below:

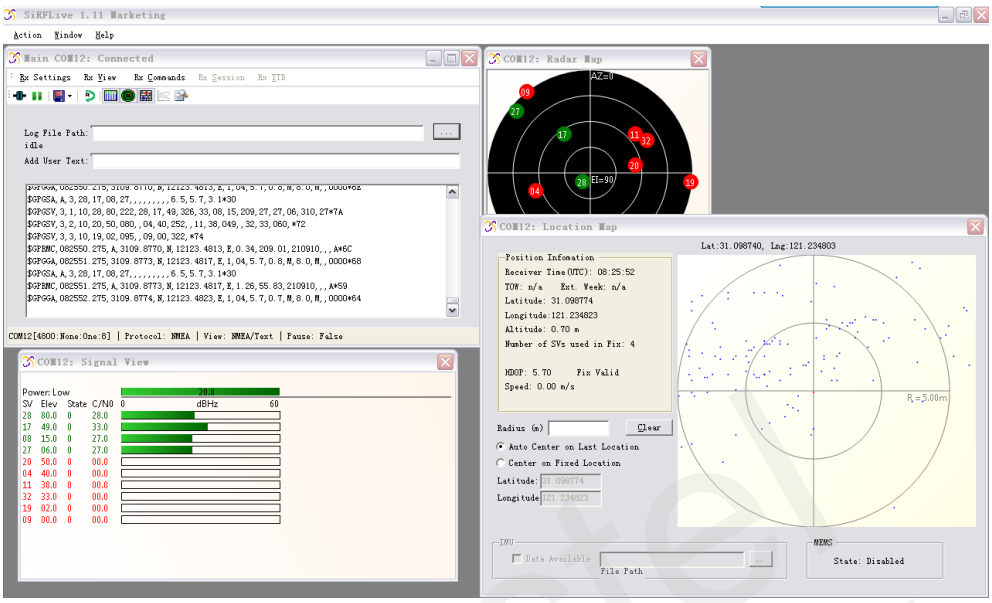
1. After the EVB has been assembled, connect the RS232 to USB cable to PC, and power on the module, then the LED TXD_MISO_SCL will flash. The operation window of SiRFLive is shown as below:



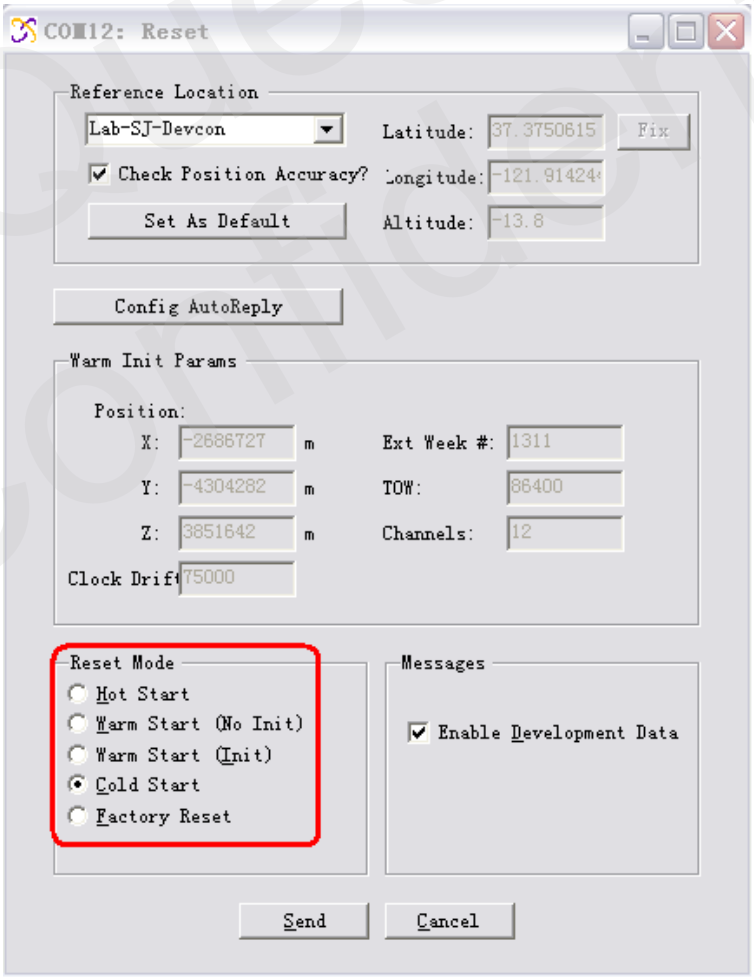
2. Click the button Rx Settings to select COM port and baud rate 4800 in pop-up window:



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.

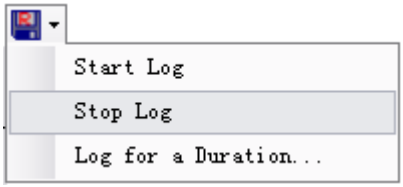


4. Click button  , the reset window will pop up as below:



5. Select reset mode and click “Send” to implement Cold Start, Warm Start or Hot Start.
Use the toolbar below to save NAME data.

6. Use the menu below to Record log and Stop log.



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