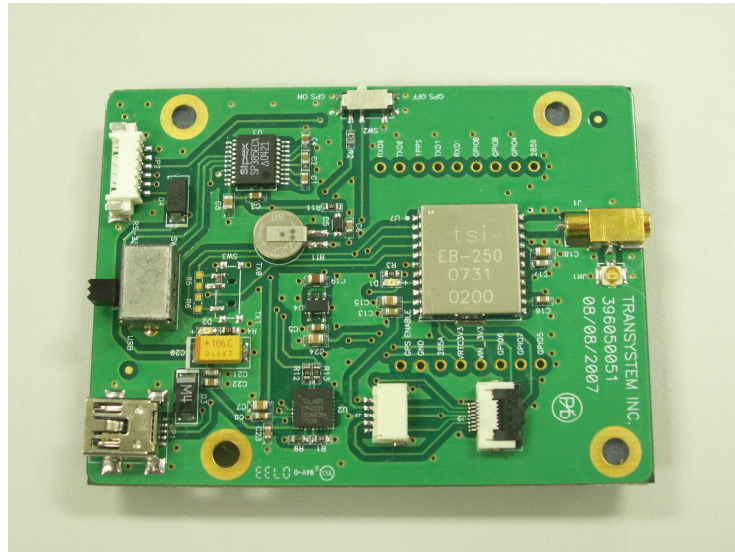


# *EB-250 GPS Engine Board* Evaluation Kit User's Manual

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AN-01



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Ver 1.0

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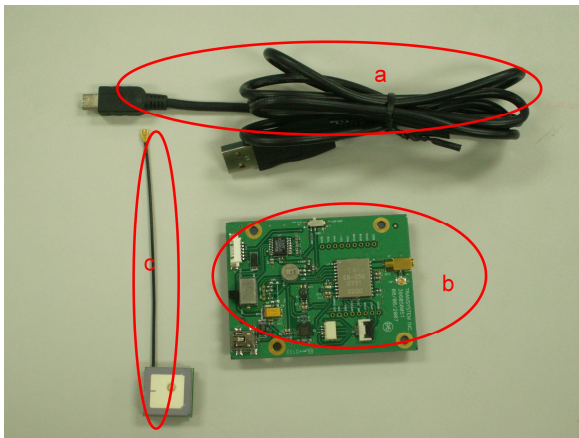
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## 1 Introduction

EB-250 evaluation kit is an user friendly tool for your evaluation of TSI's EB-250 GPS engine board. With its miniature size, low power consumption and superior performance, EB-250 is your ultimate choice for all embedded applications such as :

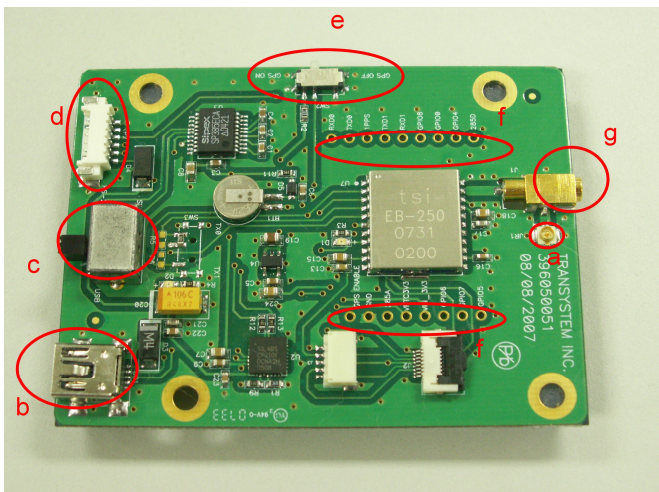
- Handheld devices (PDA, Smart phone...)
- Automotive and Marine Navigation
- Automotive Navigator Tracking
- Emergency Locator
- Geographic Surveying
- Personal Positioning
- Sporting and Recreation

## 2 When you open it



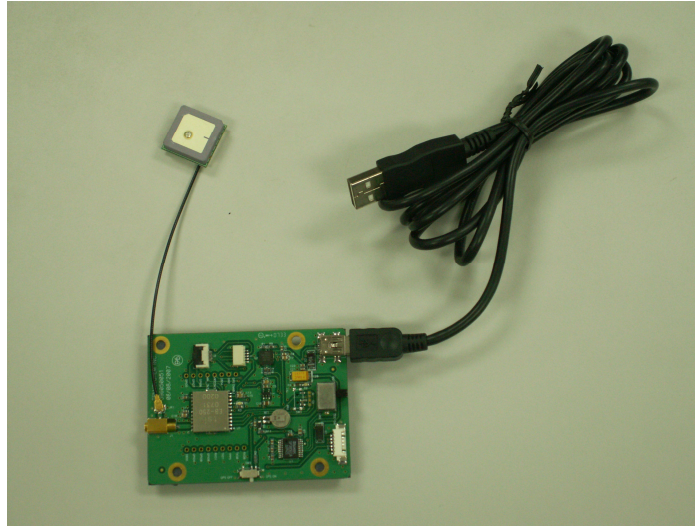
- a. USB Cable x1
- b. EB-250 Evaluation Board x1
- c. GA-232 Active Antenna x1 (IPX Connector)
- d. CD-ROM with technical data and GPS testing software

### 2.1 Evaluation Board Picture



- a. RF Port 1 JR1 (Ipex)
- b. Mini USB Port
- c. USB/RS232 Select Switch
- d. RS232 Port
- e. GPS On/Off Switch
- f. Test point for EB-250 signals
- g. Aux RF Port 2 J1 (MMCX)

## 2.2 USB Setup



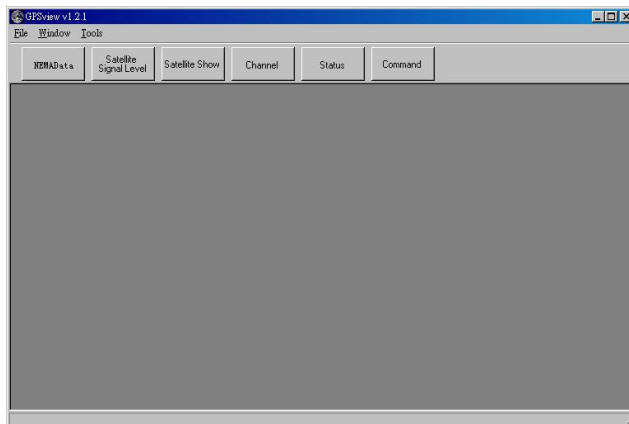
- a. Plug active antenna into the external antenna connector JR1
- b. Connect USB cable between EB-250 Evaluation board and PC
- c. Turn SW1 to " USB " position
- d. Turn SW2 to " GPS On " position

## 3 GPS Testing Software

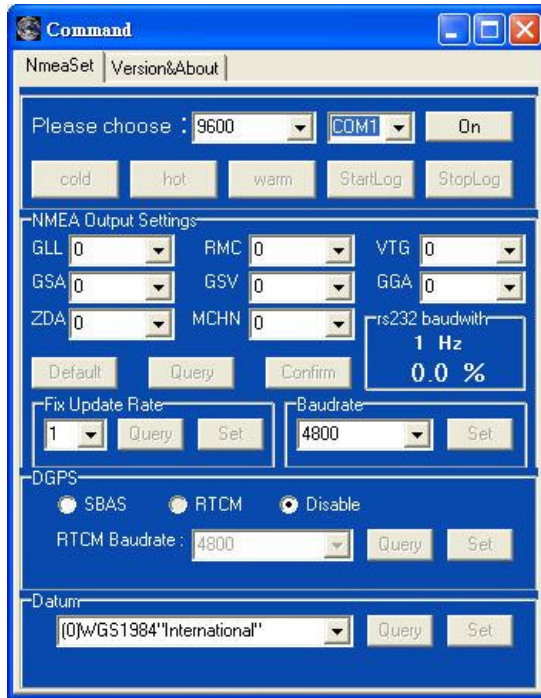
- a. Check the COM port number from Device Manager in your PC first.
- b. Place CD-ROM into your CD drive.
- c. Install CP2101 driver for USB port from CD-ROM.
- d. Double click GPSView.exe



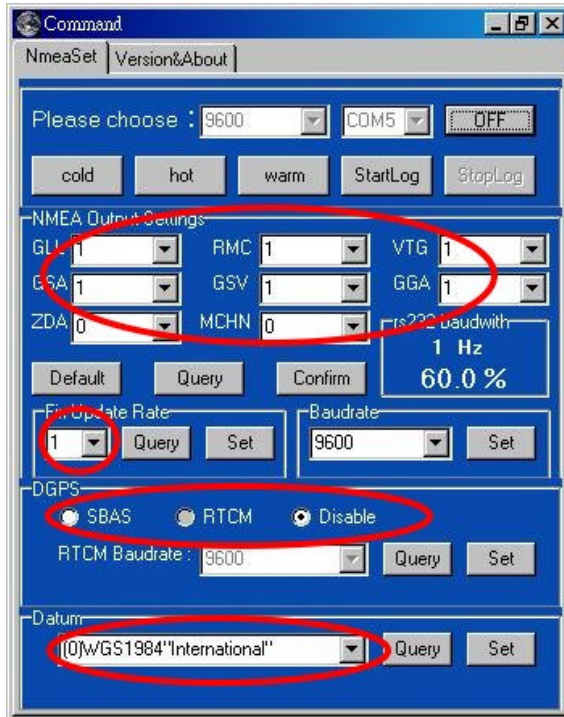
- e. Following main page will show on your screen.



- f. Select baud rate and serial port.  
Default setting for EB-250 is 9600bps and COM1.

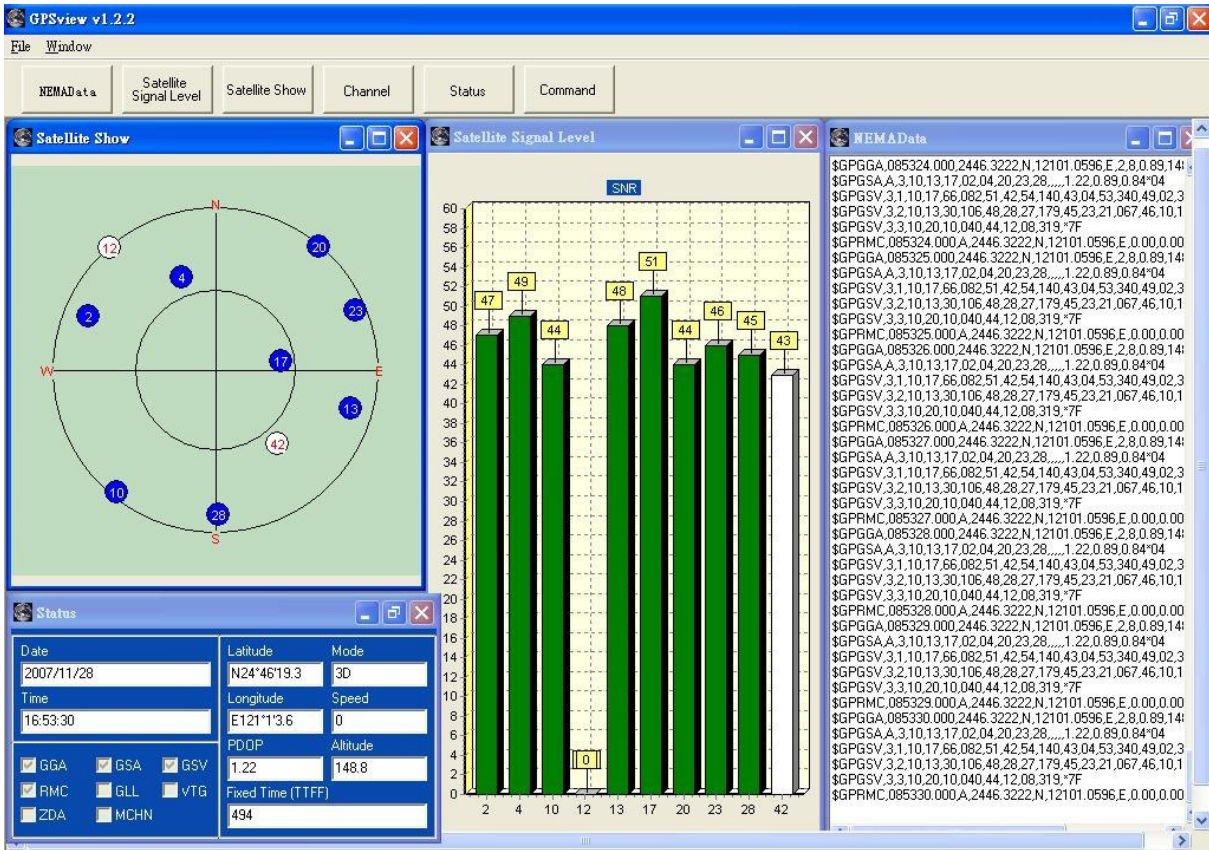


- g. Click “Setup” tap, more options for your choice of NMEA output, update rate, Datum, DGPS...etc. are available through pull-down menus.





- h. Go back to main page for viewing of life performance information including Date, Time, Latitude, Longitude, Altitude, Speed, Satellite number, SNR...etc.



There are still more options for you to click on including : Hot (Hot Start), Warm (Warm Start), Cold (Cold Start), NMEA Log (Log the data as a \*.nma file).

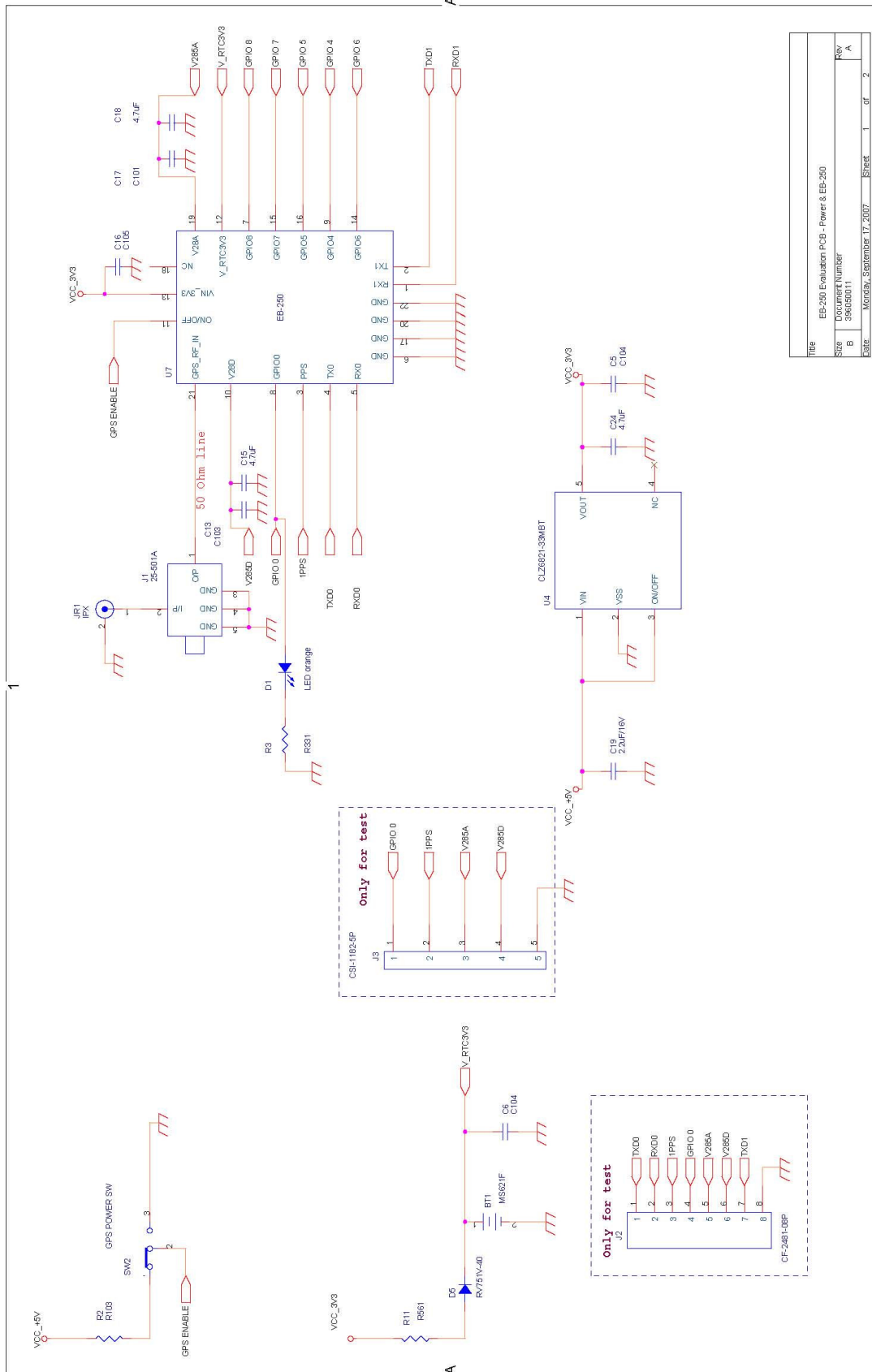
**4. Connector Definition**

Pin#	Signal Name	Type	Description
1	RX1	I	Serial Data Input
2	TX1	O	Serial Data Output
3	PPS	O	1Hz pulse 10% duty cycle when GPS has position fix
4	TXD	O	Serial data Output (NMEA)
5	RXD	I	Serial Data Input (NMEA)
6	GND	P	Ground
7	GPIO[8]	I/O*	General input/ output
8	GPIO[0]	O	GPS status, blink when GPS has position fix
9	GPIO[4]	I/O*	General input/ output
10	V285D	P	Digital power indicator, 2.85V±2%
11	On / Off	I	GPS Power On / Off control , Open if not used
12	V_RTC_3V3	P	RTC power 1.5~6V DC, 500uA max
13	VIN_3V3	P	Power Supply 3.0~6V DC
14	GPIO[6]	I/O*	General input / output
15	GPIO[7]	I/O*	General input / output
16	GPIO[5]	I/O*	General input / output
17	GND	P	Ground
18	NC	NC	NC
19	V285A	P	Analog power indicator, 2.85V±2%
20	GND	P	Ground
21	RF Input	I	Antenna port, L1, 1575.42MHz, 50 ohm
22	GND	P	Ground

P: Power      I: Input      O: Output      I/O\*: Input or Output, Open if not used

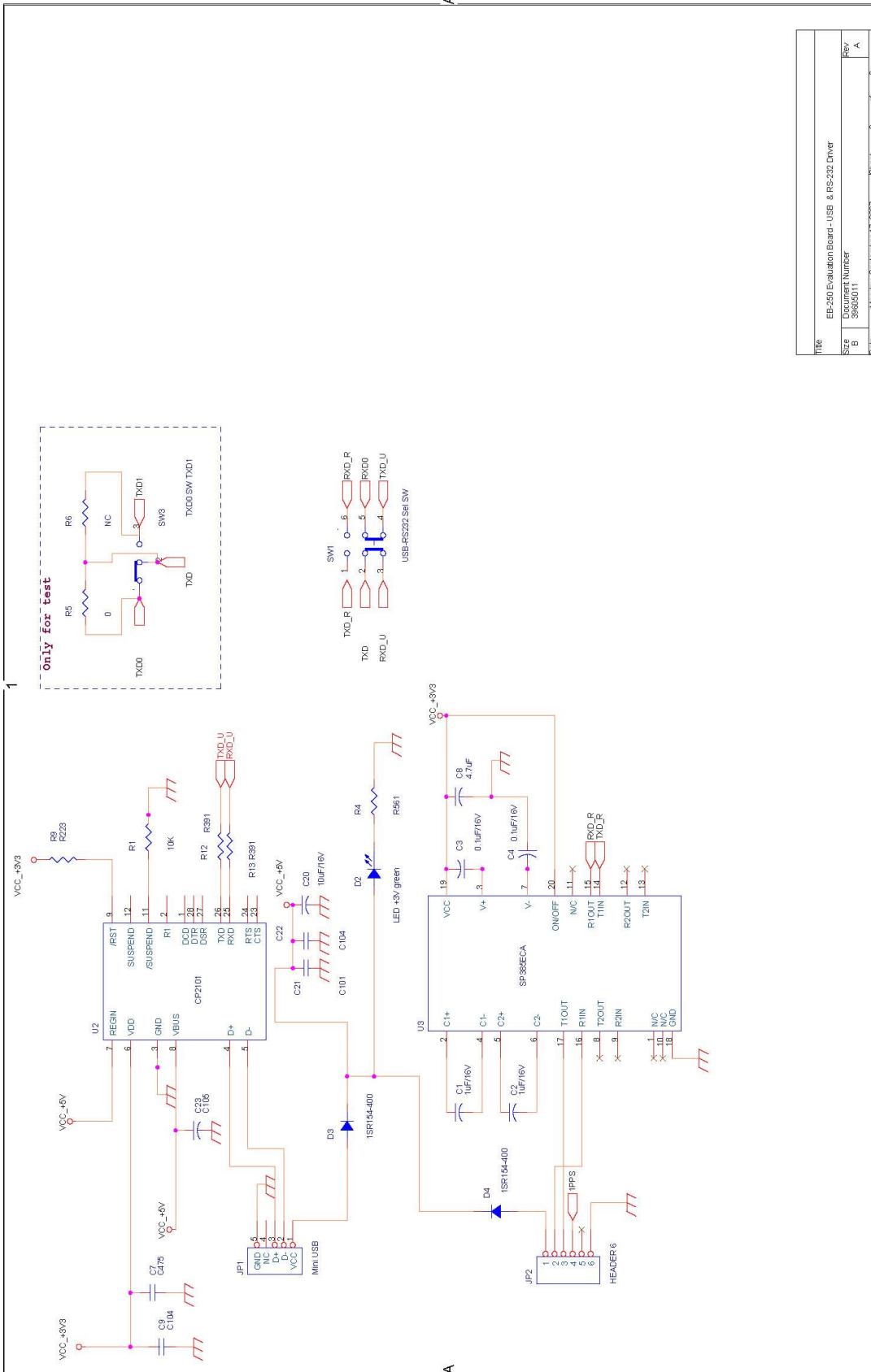
PRELIMINARY

**5. Evaluation Board Schematics**



Title	EB-250 Evaluation PCB - Power & EP-250
Size	Document Number 35030011
Date	Monday, September 17, 2007
Sheet	1 of 2
Rev	A





FILE	EB-250 Evaluation Board - USB & RS-232 Driver
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DATE	MONDAY, SEPTEMBER 17, 2007
REV	A
SHEET	2 of 2

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