SIM300EVB User Guide

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Version History

Data	Version	Description of change	Author
2005-12-08	1.01	Origin	Simon

SCOPE

This document give the usage of SIM308 EVB, user can get useful info about the SIM308 EVB quickly through this document.

This document is subject to change without notice at any time.
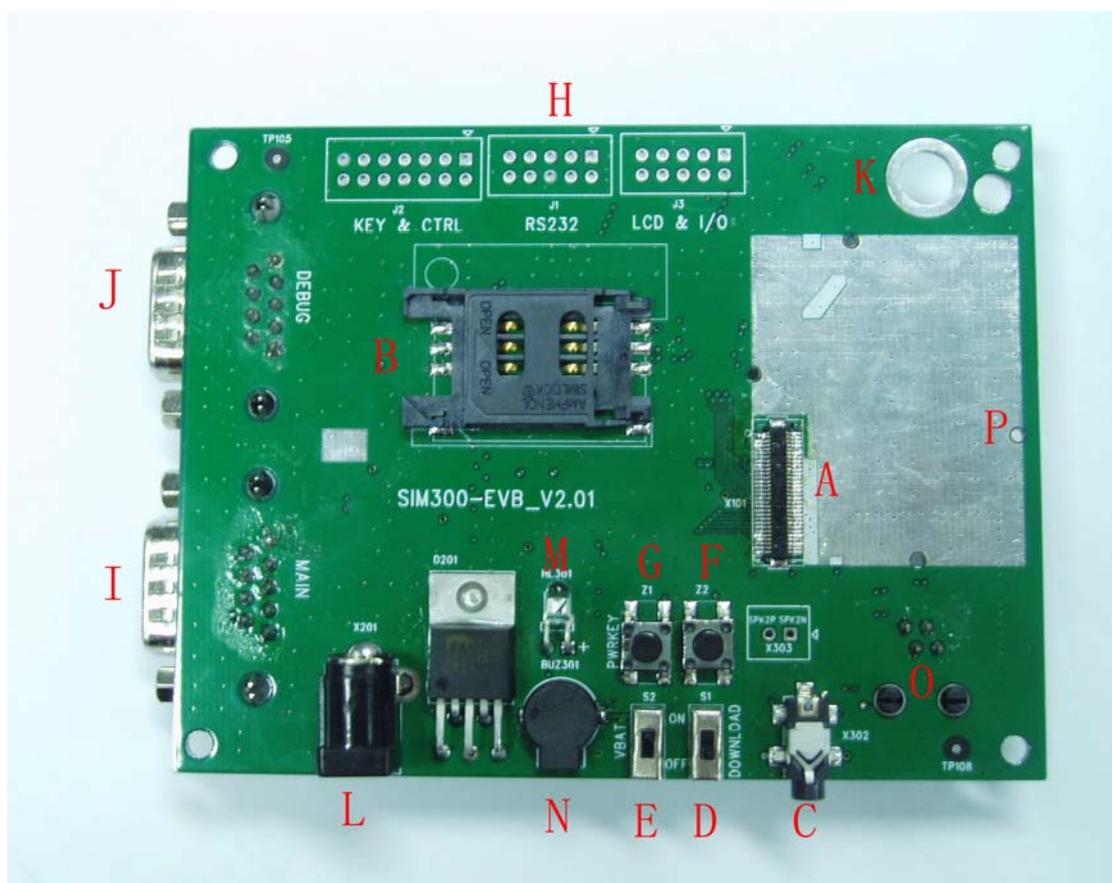
1. SIM300 EVB
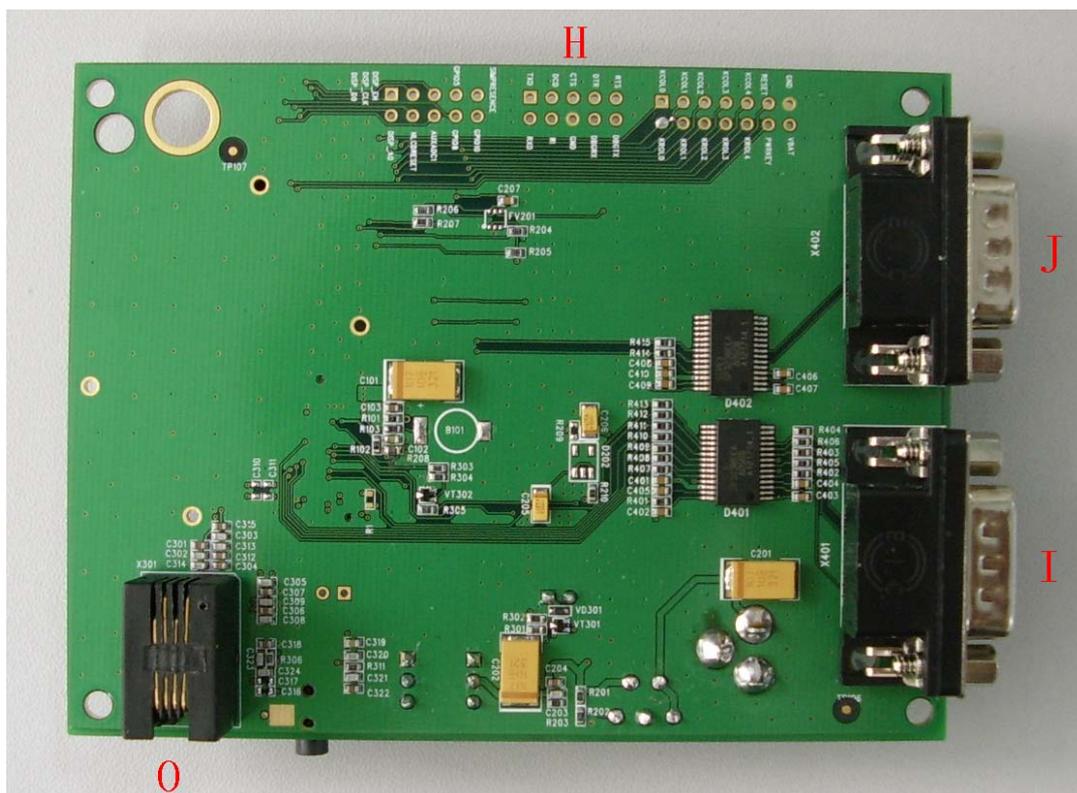

Figure 1： EVB TOP view

Figure 2： EVB BOTTOM view

A: SIM300 module interface

B: SIM card interface

C: headset interface

D: Download switch, turn on or off download function

E: VBAT switch, switch the voltage source from the adaptor or external battery

F: PWRKEY key, turn on or turn off SIM300

G: RESET key

H: expand port, such as keypad port, main and debug serial port, display port

I: MAIN serial port for downloading, AT command transmiting, data exchanging

J: DEBUG serial port

K: hole for fixing the antenna

L: source adapter interface

M: light

N: buzzer

O: headphones interface

P: hole for fixing the SIM300

2. EVB accessory
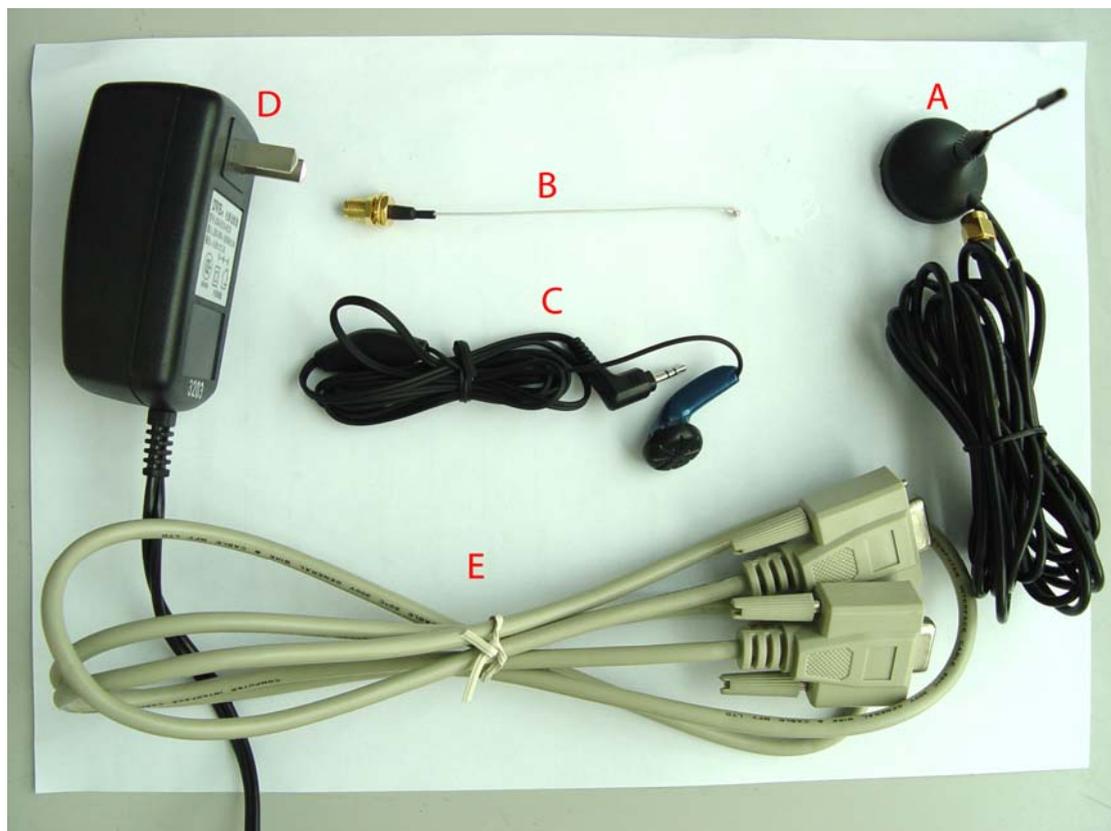
Figure 3： EVB accessory

A: antenna

B: antenna transmit line

C: headset

D: 5V DC source adapter

E: serial port line
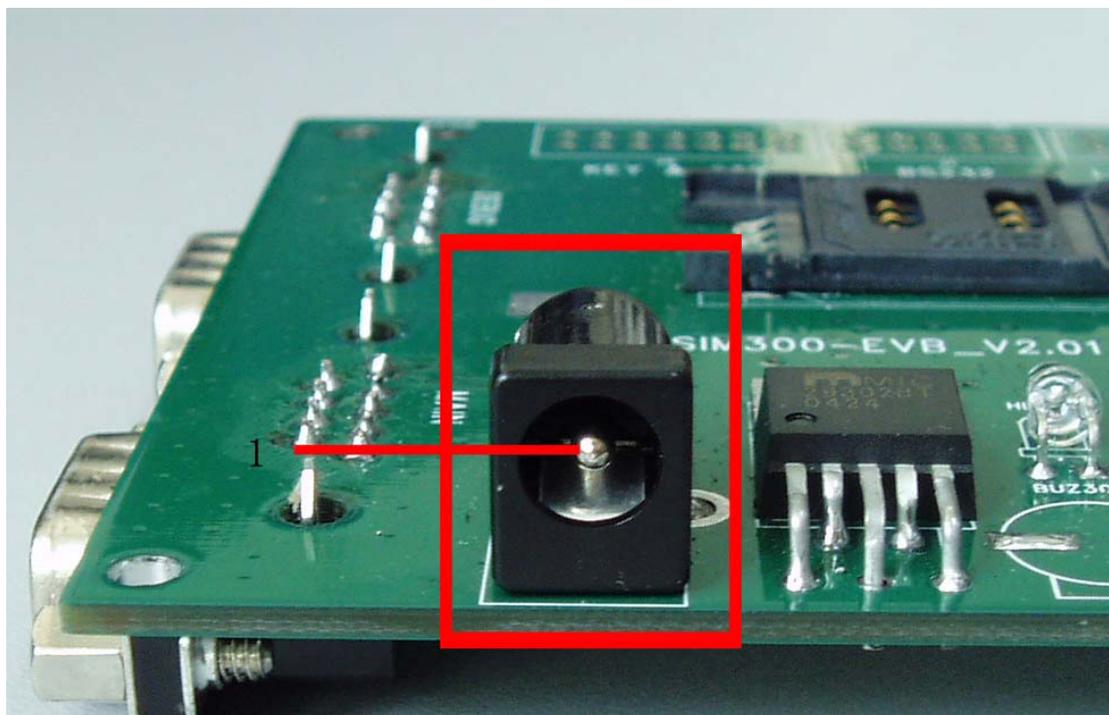
3. Accessory Interface

3.1 Power Interface

Figure 4： Power Interface

Pin	Signal	I/O	Description
1	Adapter input	I	5V/2.5A DC source input

3.2 Audio Interface
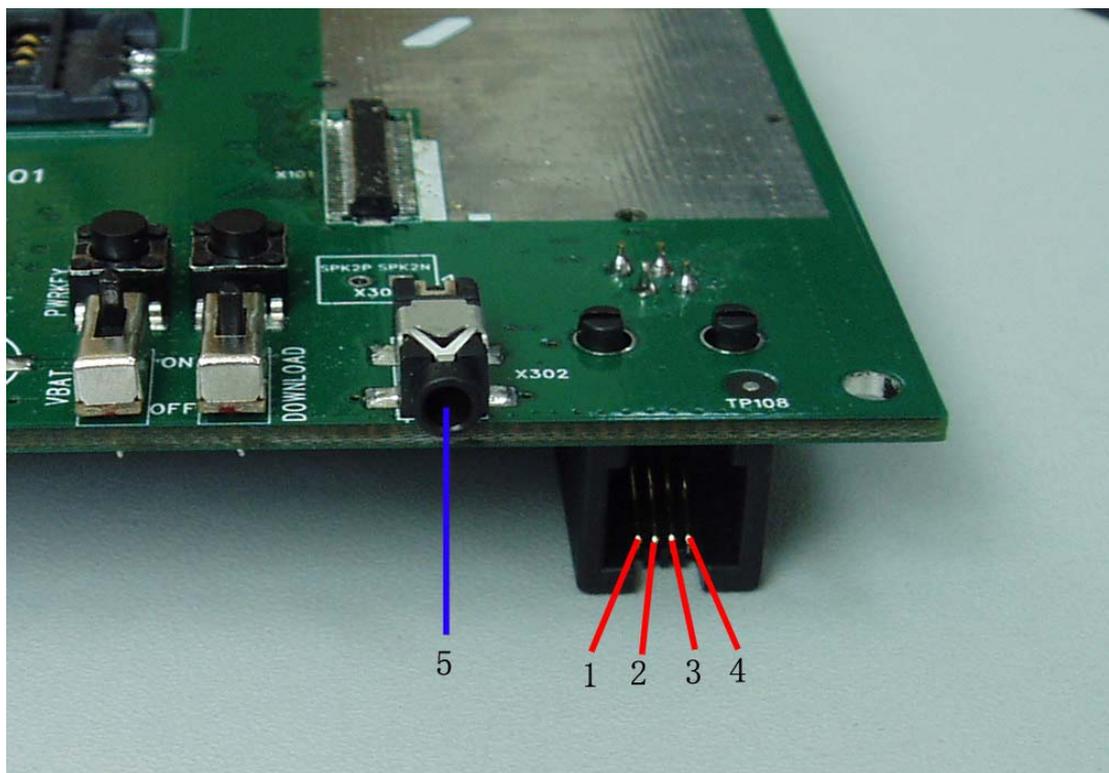
Figure 5： Audio Interface

Headset interface:

Pin	Signal	I/O	Description
1	MIC1P	I	Positive microphone input
2	SPK1P	O	Positive microphone input
3	SPK1N	O	Negative microphone input
4	MIC1N	I	Negative microphone input

Earphone interface:

Pin	Signal	Input/Output	Description
5	MIC2P&SPK2P	I/O	Auxiliary positive input and output

3.3 SIM card interface

<div align="center">

Figure 6： SIM card interface

</div>

3.4 Antenna Interface

Figure 7： Antenna Interface

3.5 RS232 Interface
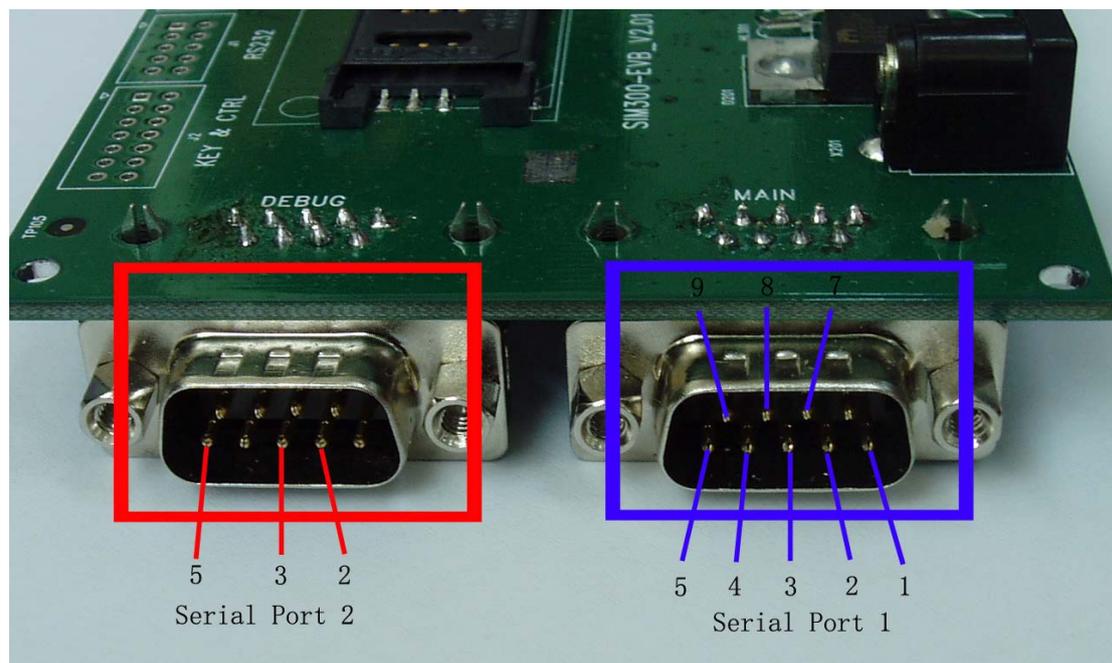
Figure 8： Serial Ports
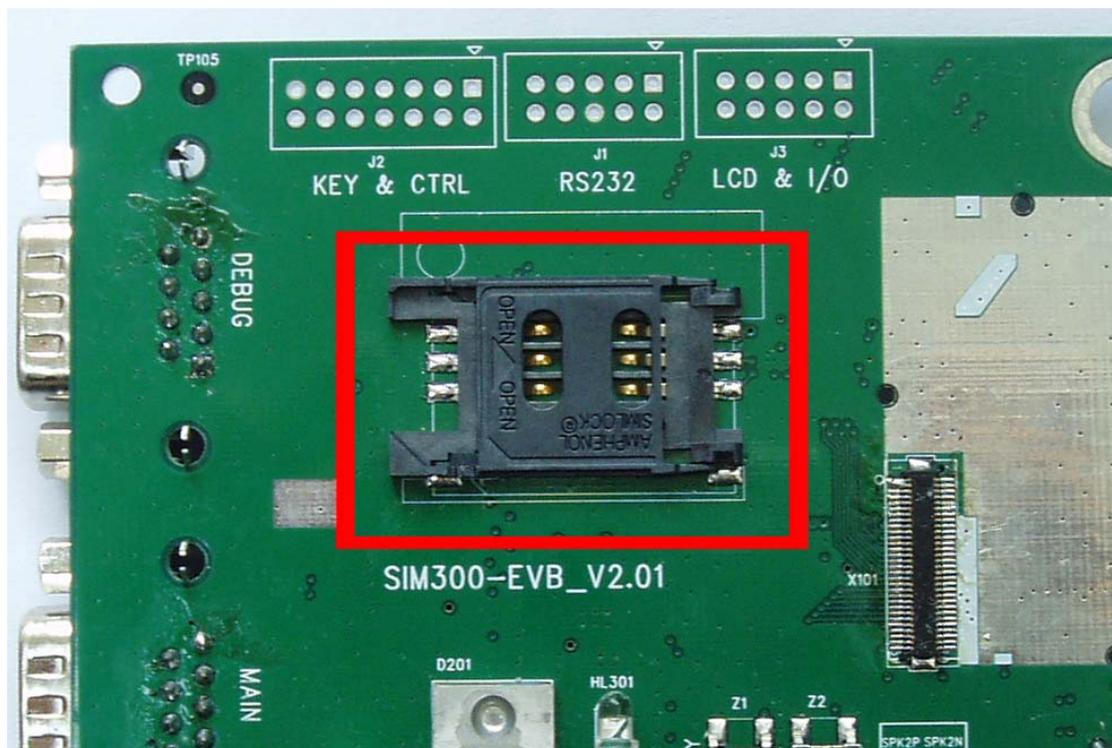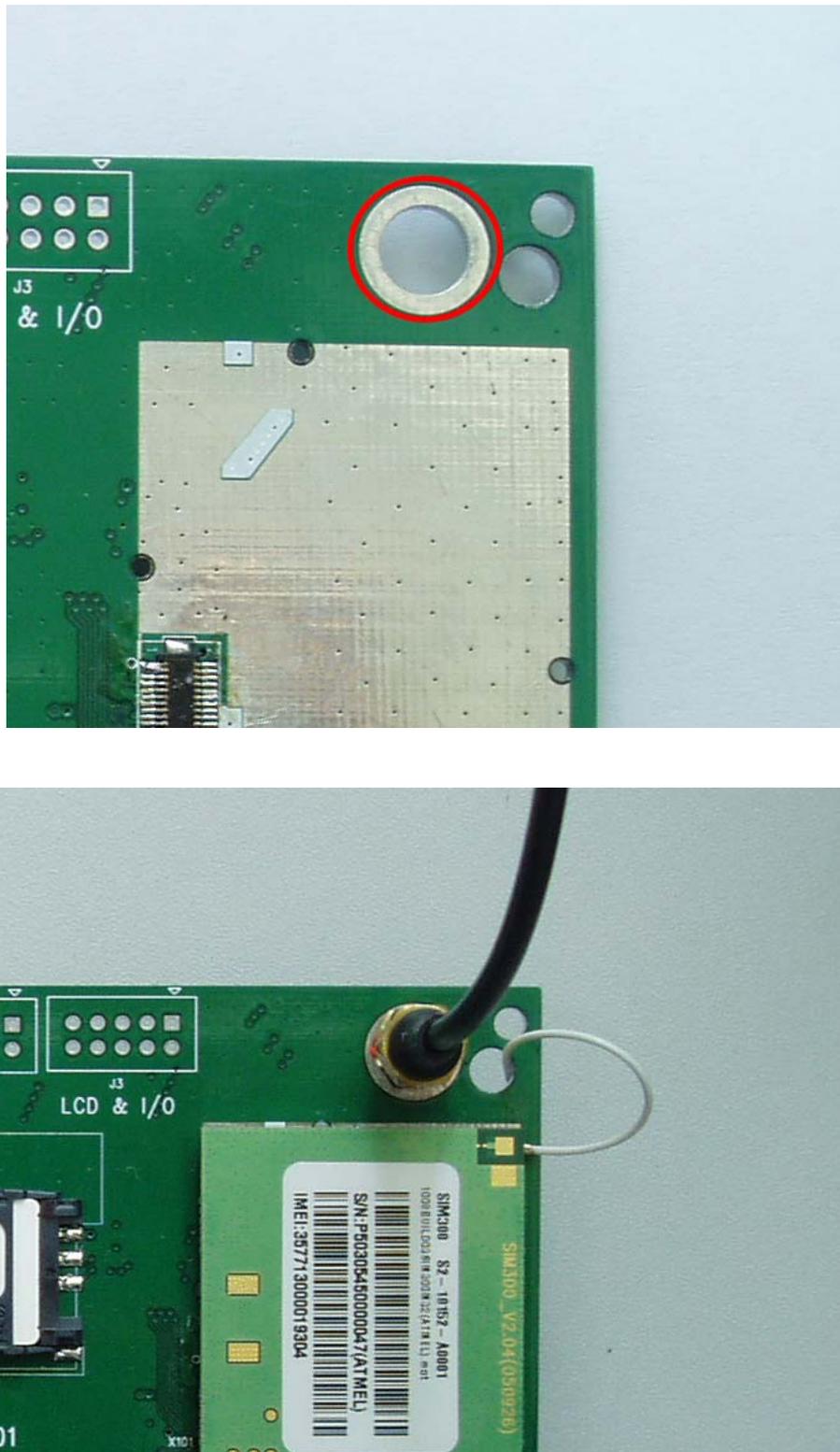
Serial Port 1——MAIN Interface
Serial Port 2——DEGUG Interface

Main Interface:

Pin	Signal	I/O	Description
1	DCD	O	Data carrier detection
2	TXD	O	Transmit data
3	RXD	I	Receive data
4	DTR	I	Data Terminal Ready
5	GND		GND
7	RTS	I	Request to Send
8	CTS	O	Clear to Send
9	RI	O	Ring Indicator

Debug Interface:

Pin	Signal	I/O	Description
2	DEBUG_TX	O	Transmit data
3	DEBUG_RX	I	Receive data
5	GND		GND

3.6 Operating Status LED
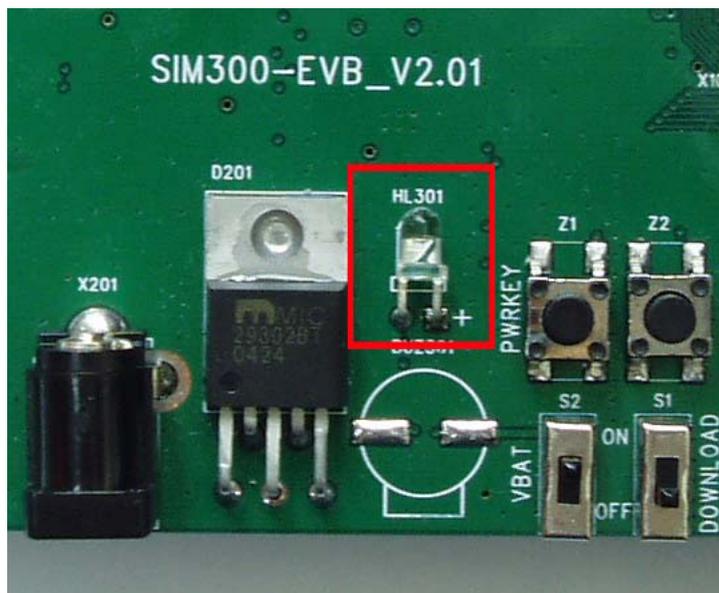
Figure 9： StatusLED

Working state of status LED as list:

State	Module function
Off	Module is not running
64ms On/ 800ms Off	Module does not find the network
64ms On/ 3000ms Off	Module find the network
64ms On/ 300ms Off	GPRS communication

4. Test Interface
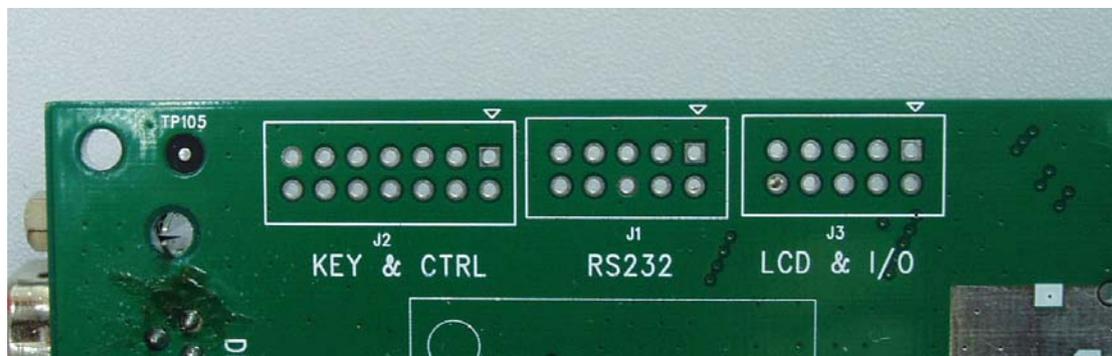
Figure 10： Test interface overview

4.1 Serial Interface

J1---RS232 Interface
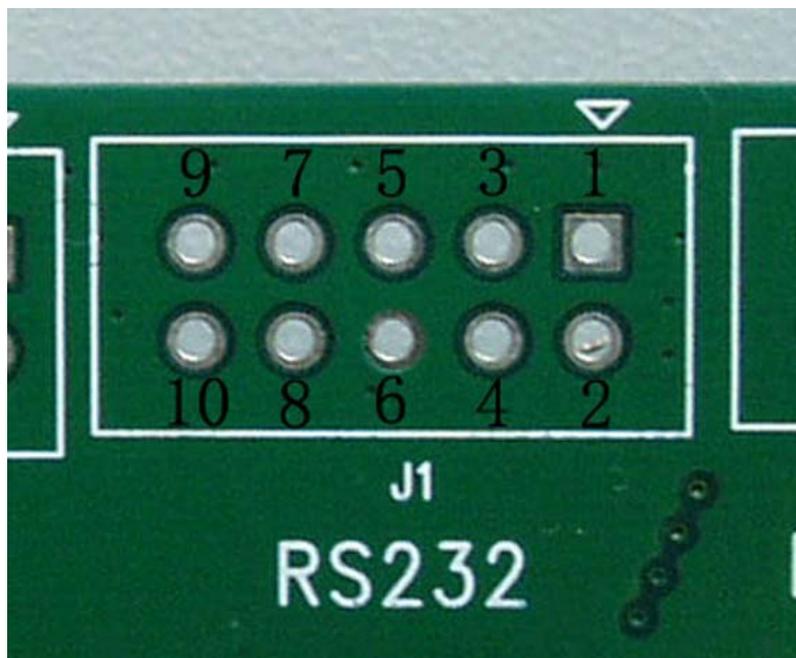
Figure 11： J1 Interface

RS232 Interface Pin List:

Pin	Signal	I/O	Description
1	TXD	O	Transmit data
2	RXD	I	Receive data
3	DCD	O	Data carrier detection
4	RI	O	Ring Indicator
5	CTS	O	Clear to Send
6	GND		GND
7	DTR	I	Data Terminal Ready
8	DEBUG_RX	I	Receive data
9	RTS	I	Request to Send
10	DEBUG_TX	O	Transmit data

4.2 J2---KEY & CTRL
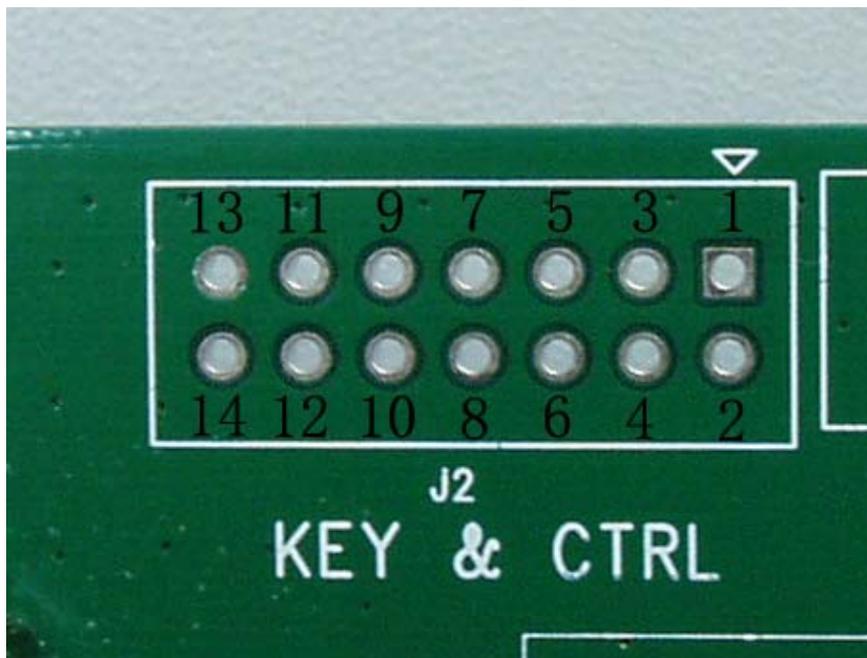
Figure 12：　J2 Interface

KEY & CTRL Pin List

Pin	Signal	I/O	Description
1	KCOL0	O	
2	KROW0	I	
3	KCOL1	O	
4	KROW1	I	
5	KCOL2	O	
6	KROW2	I	Keypad array interface
7	KCOL3	O	
8	KROW3	I	
9	KCOL4	O	
10	KROW4	I	
11	NC		
12	PWRKEY	I	power on key
13	GND		GND
14	VBAT	I	VBAT

4.3 J3---LCD & I/O
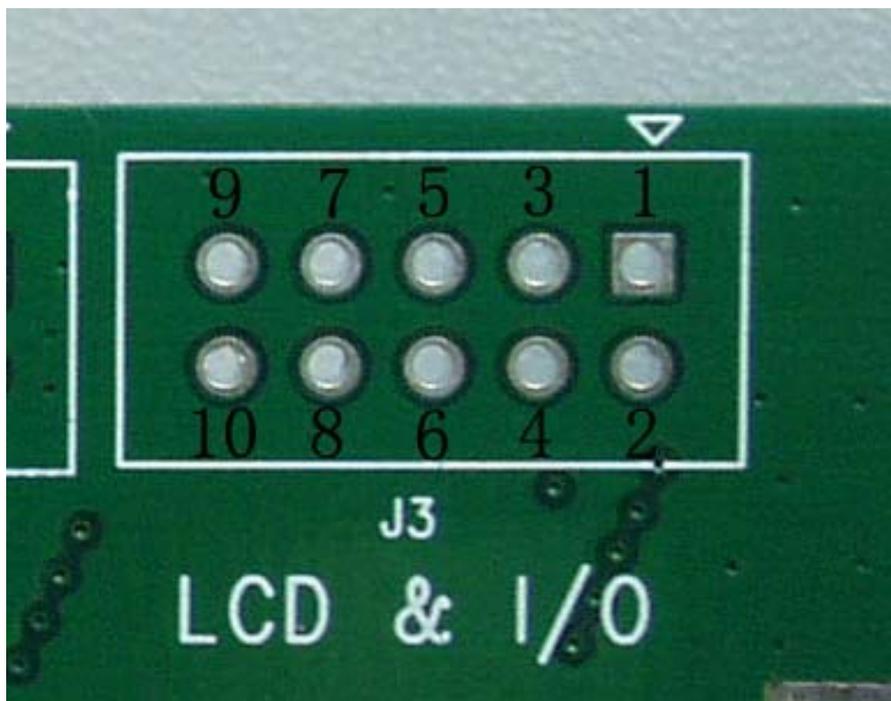
Figure 13： J3 Interface

LCD & I/O Interface Pin List:

Pin	Signal	I/O	Description
1	DISP_D0	I/O	Display data line
2	DISP_A0	O	Display data or address select
3	DISP_CLK	O	Display clock output
4	NCLDRESET	O	Display reset outplay
5	DISP_EN	O	Display enable output
6	AUXADC1	I	Adc input
7	GPIO5	I/O	GPIO5 reserved for user
8	GPIO8	I/O	GPIO8 reserved for user
9	SIM_PRESENCE	I	SIM Card Detection
10	NC		

5. EVB and accessory equipment

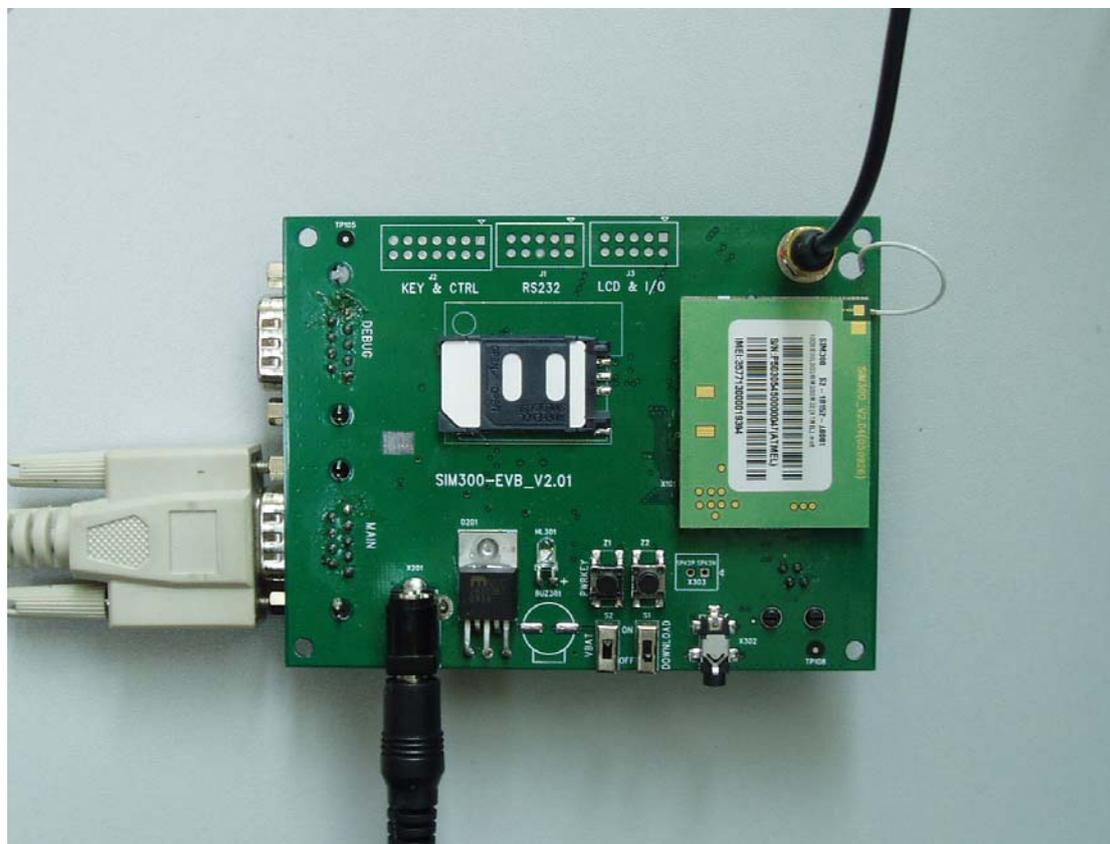At normal circumstance, the EVB and its accessory are equipped as the Figure 14

Figure 14： EVB and accessory equipment

6. Illustration:

6.1 Running:

(1) Connect the SIM300 module to the 60pins connector on SIM300 EVB, inserting 5V direct current source adapter, switching the S1 switch on **off** state, S2 switch on **ON** state;

(2) Press the PWRKEY for about 1 second, and then SIM300 module begins running.

You can see the light on the EVB flashing at a certain frequency. By the state, you can judge whether the EVB and SIM300 can run or not.   No function and test can be executed when we have not connected necessary accessories.

6.2 Connecting Net and calling

    (1) connect the serial port line to the MAIN serial port, open the HyperTerminal(AT command windows) on your Personal computer, the location of the HyperTerminal in windows2000 is START→accessory→communication→HyperTerminal. Set correct Baud Rate and COM number. The Baud Rate of SIM300 is 115200, and the COM number based on which USB port your serial port line insert in, you should select such as COM3 or COM4 etc.

    (2) Connect the antenna to the SIM300 module using an antenna transmit line, insert SIM card into the SIM card interface, insert headphones or headset into its interface.

    (3) Act on the step of running which mentioned above, power on the system, typing the AT command in the HyperTerminal, and then the SIM300 module will execute its corresponding function.

6.3 Downloading

    Connect the serial port line to the **MAIN** serial port, connect the direct current source adapter, run the download program and press the **START** key, then switch the S1 switch on **ON** state, S2 switch on **ON** state, then EVB provide the function of downloading.

6.4 Turns off and Reset

    (1) Turn off SIM300 module: press the PWRKEY for about 1 second, SIM300 module will be turned off.

    (2) RESET:　when emergency happens, the module can not be turned off and turned on by the PWRKEY, then press the RESET key and release it, SIM300 will be reset.