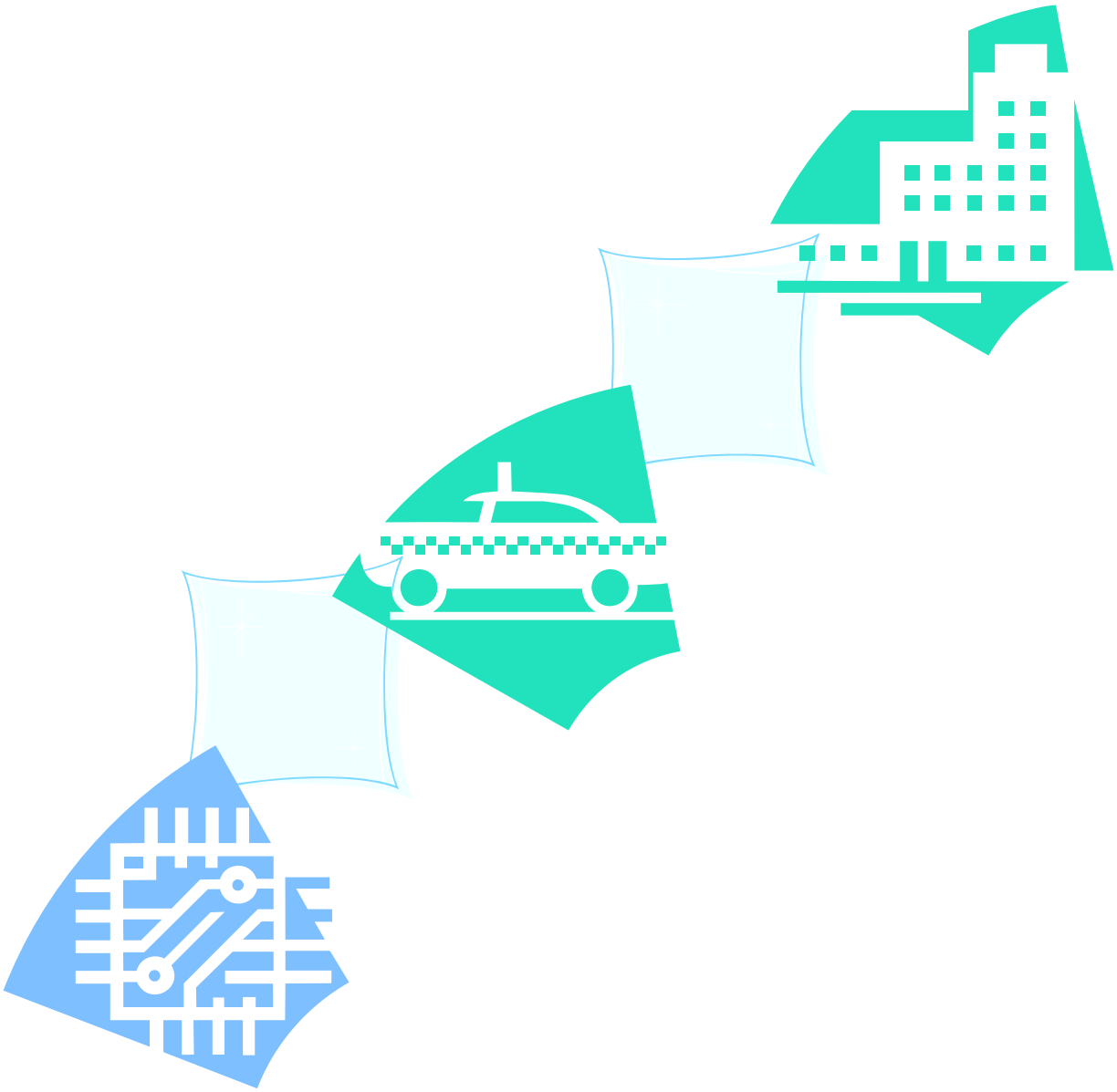
SIM300C EVB User Guide



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Version History

Data	Version	Description of change	Author
2005-12-25	1.00	Origin	yiyong

SCOPE

This document give the usage of SIM300C EVB, user can get useful info about the SIM300C EVB quickly through this document.

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

1. SIM300C EVB

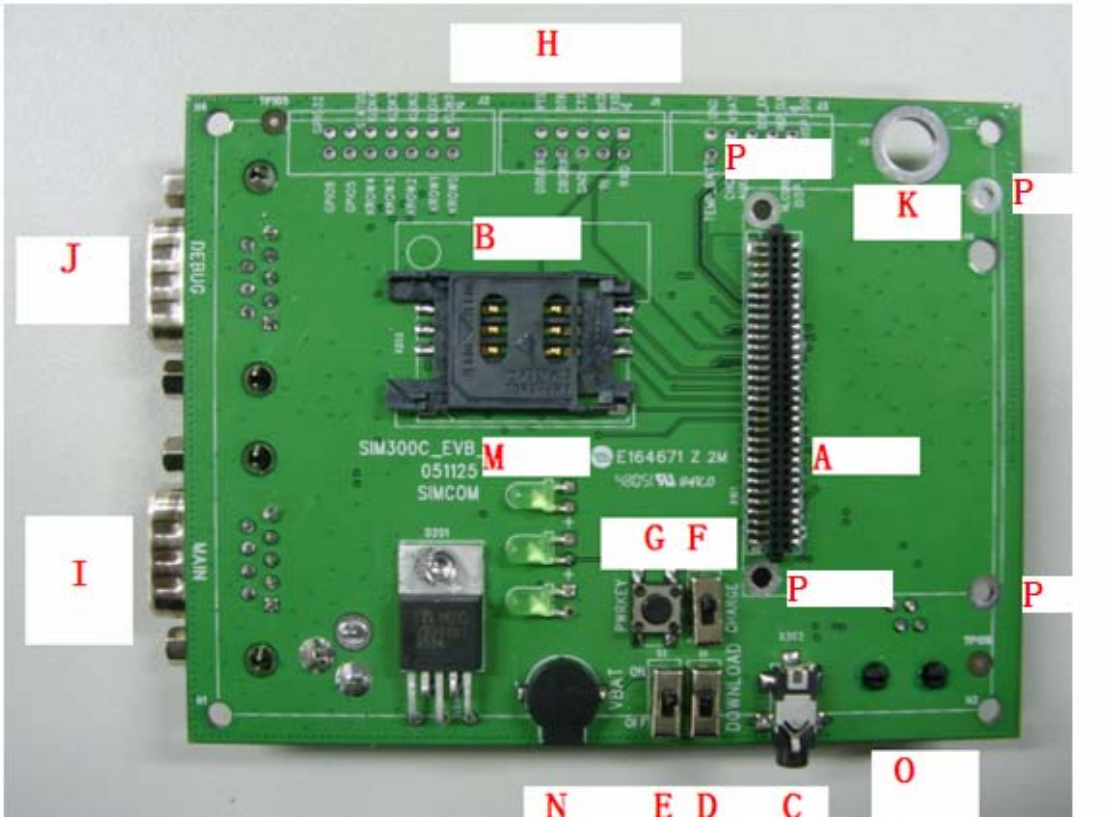

Figure 1: EVB TOP view

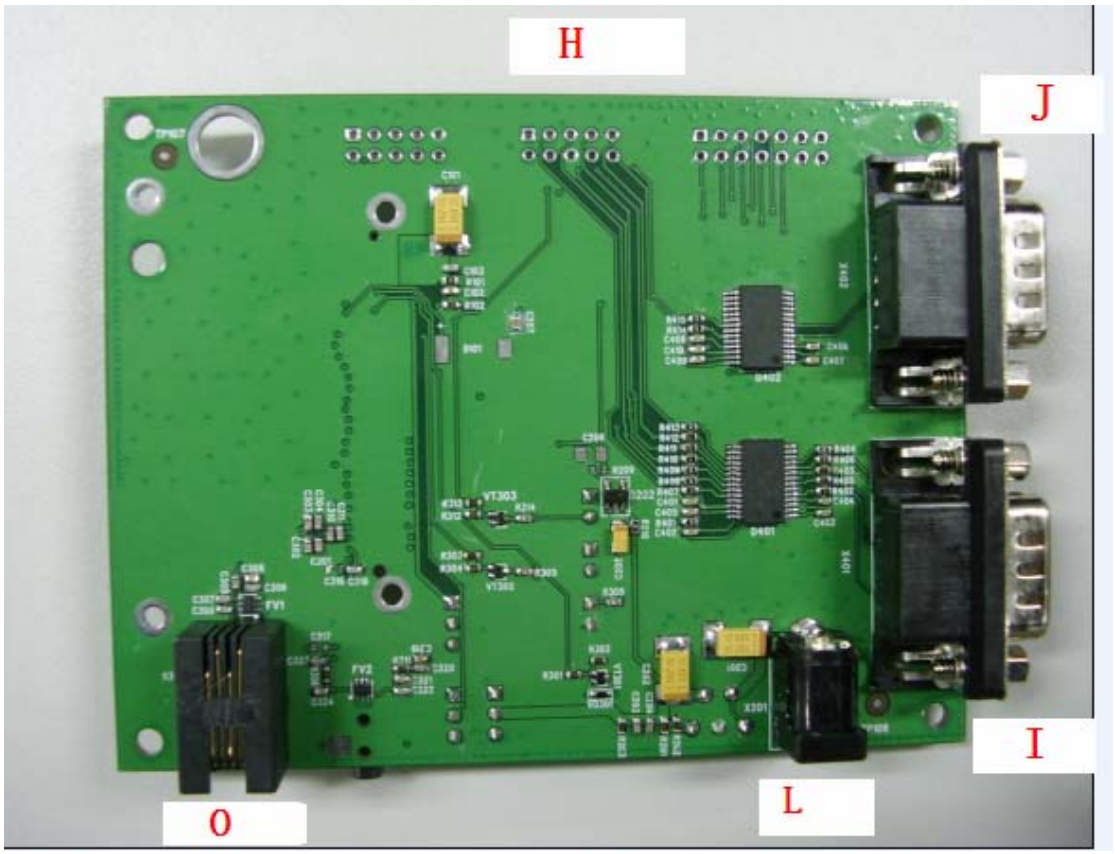

Figure 2: EVB BOTTOM view

A: SIM300C 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: VCHG ON/OFF control (shifter S3)
G: PWRKEY key, turn on or turn off SIM300C
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 SIM300C

2. EVB accessory

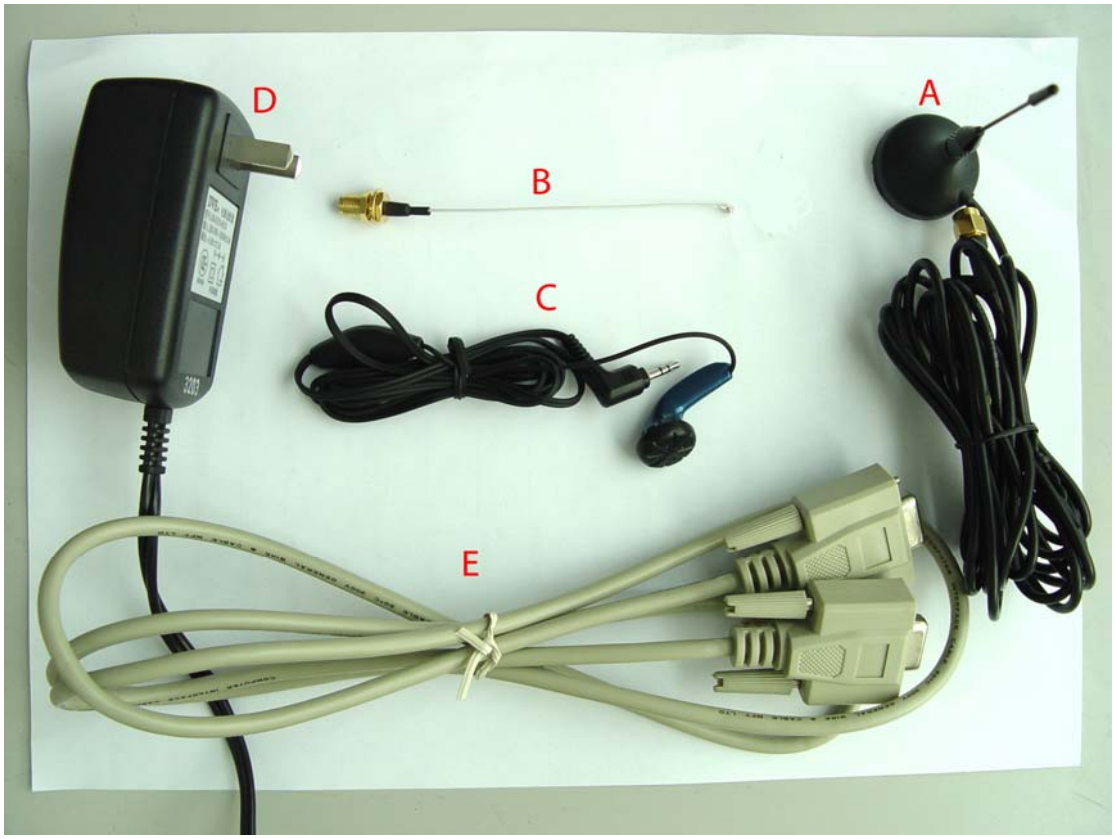

Figure 3： EVB accessory

A: antenna
B: antenna transmit line
C: headset
D: 5V DC source adapter
E: serial port line

3. Accessory Interface

3.1 Power Interface

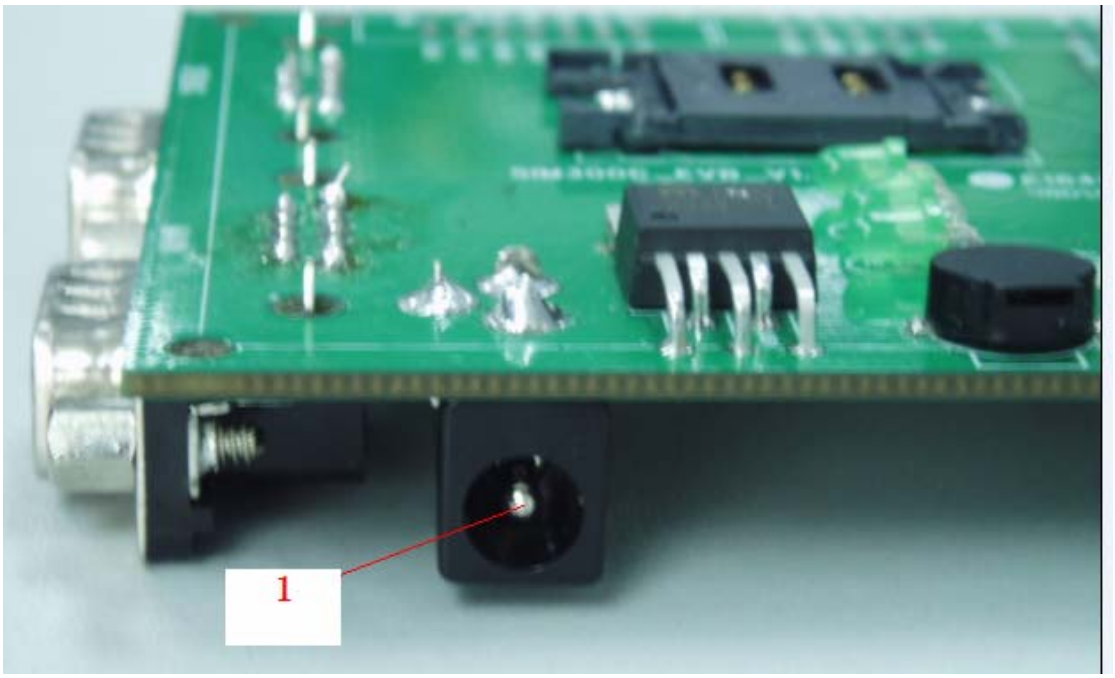

Figure 4: Power Interface

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

3.2 Audio Interface

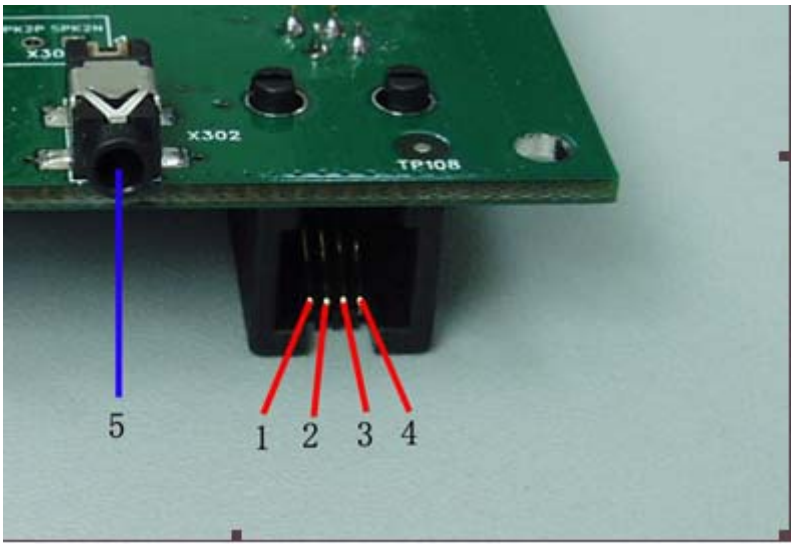

Figure 5: Audio Interface

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

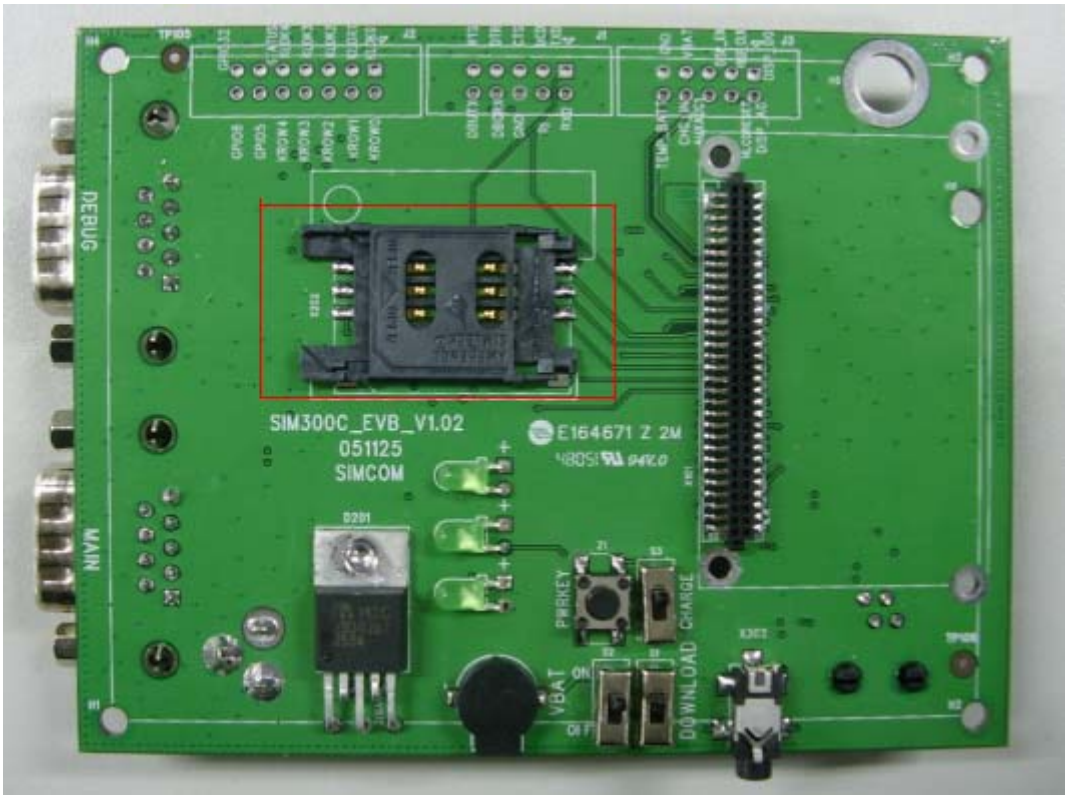

Figure 6: SIM card interface

3.4 Antenna Interface

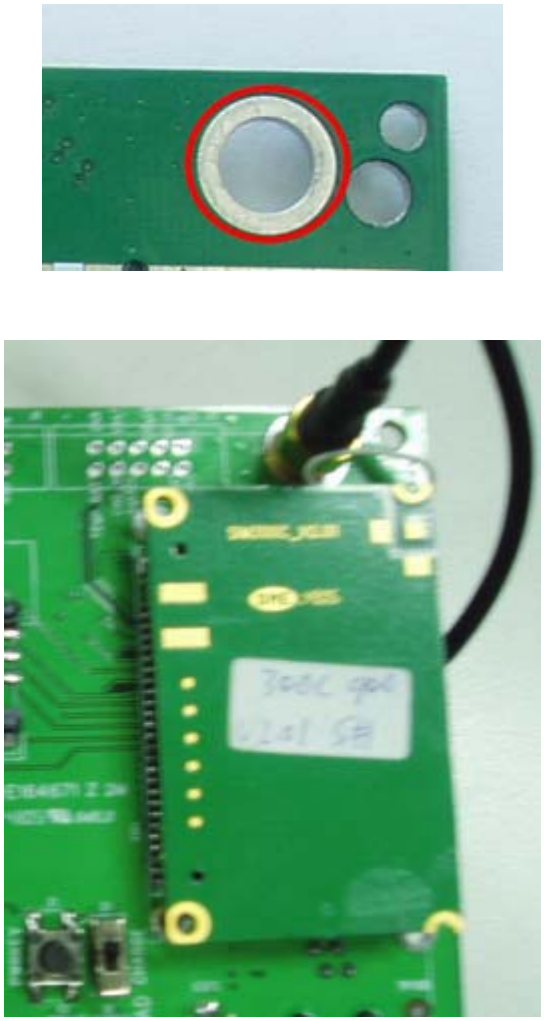

Figure 7: Antenna Interface

3.5 RS232 Interface

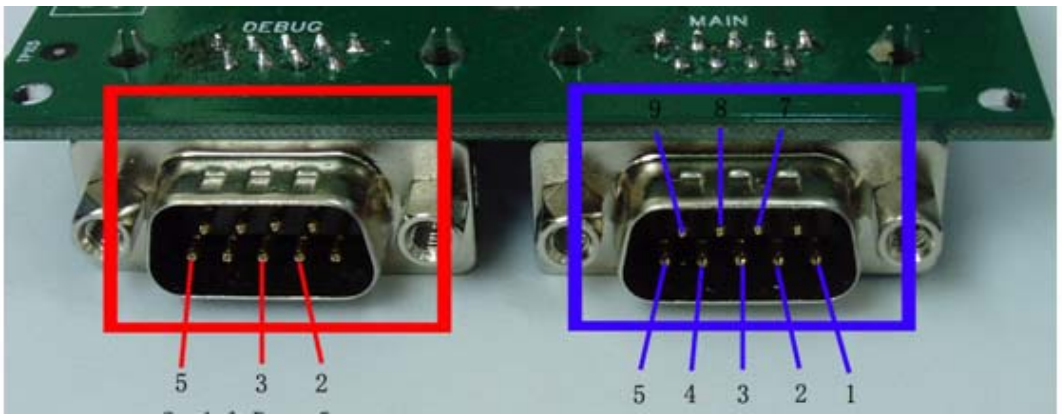

Figure 8: Serial Ports

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

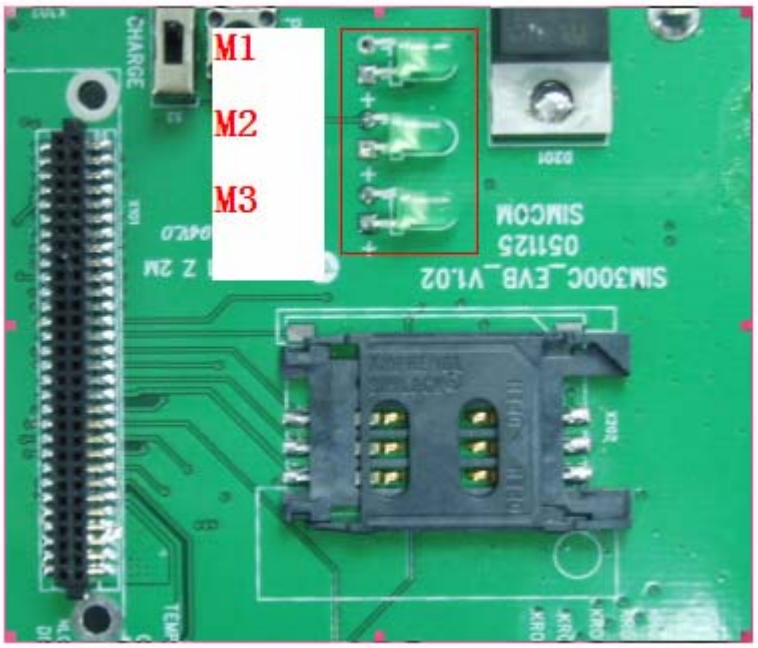

Figure 9： StatusLED

Working state of status LED as list:

Name	Description	STATUS
M1	VBAT ON/OFF indicator	Bright： VBAT ON; Extinct: VBAT OFF
M2	GSM_NET status indicator	Blinking at a certain frequency according various GSM net status
M3	GSM part status indicator	Not used, will be configured in our latter software.

4. Test Interface

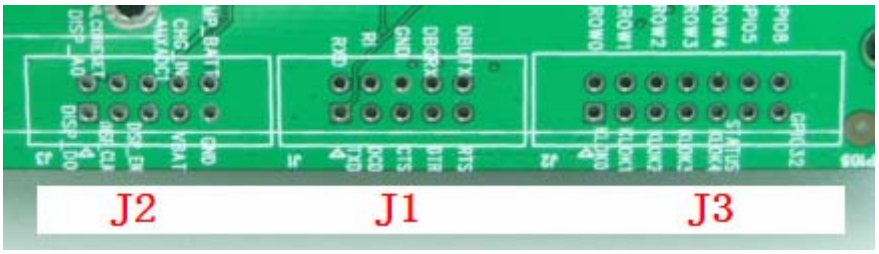

Figure 10： Test interface overview

4.1 Serial Interface

J1---RS232 Interface

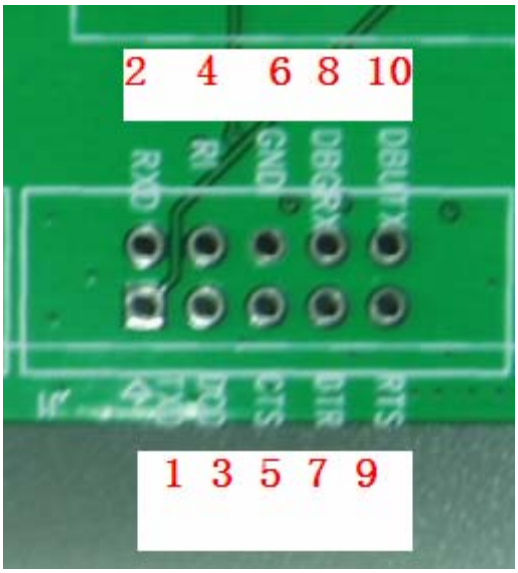

Figure 11： J1 Interface

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

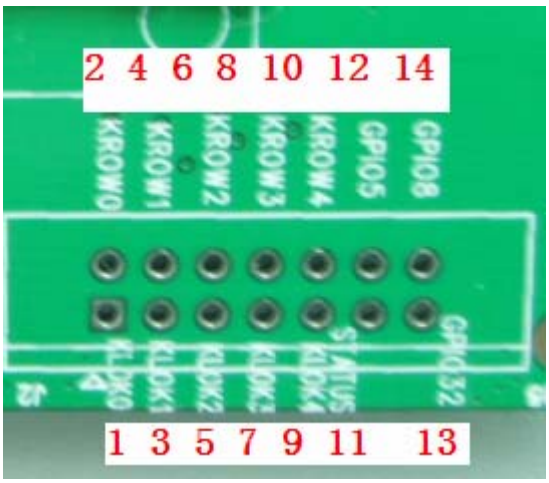

Figure 12: J2 Interface

KEY & CTRL Pin List

Pin	Signal	I/O	Description
1	KCOL0	O	Keypad array interface
2	KROW0	I	
3	KCOL1	O	
4	KROW1	I	
5	KCOL2	O	
6	KROW2	I	
7	KCOL3	O	
8	KROW3	I	
9	KCOL4	O	
10	KROW4	I	
11	STATUS	O	GSM_NET status
12	GPIO5	I	GPIO5 reserved for user.
13	GPIO32	**I/O**	GPIO32 reserved for user.
14	GPIO8	I	Control signal of BUZZER

4.3 J3---LCD & I/O

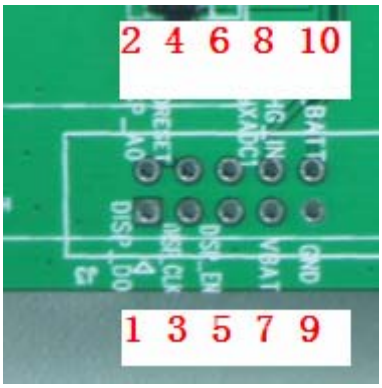

Figure 13: J3 Interface

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 output
5	DISP_EN	O	Display enable output
6	AUXADC1	I	Adc input
7	VBAT	I	VBAT
8	CHG_IN	I	Charger Input
9	GND		Ground
10	TEMP	I	For measure of the batter temperature

5. EVB and accessory equipment

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

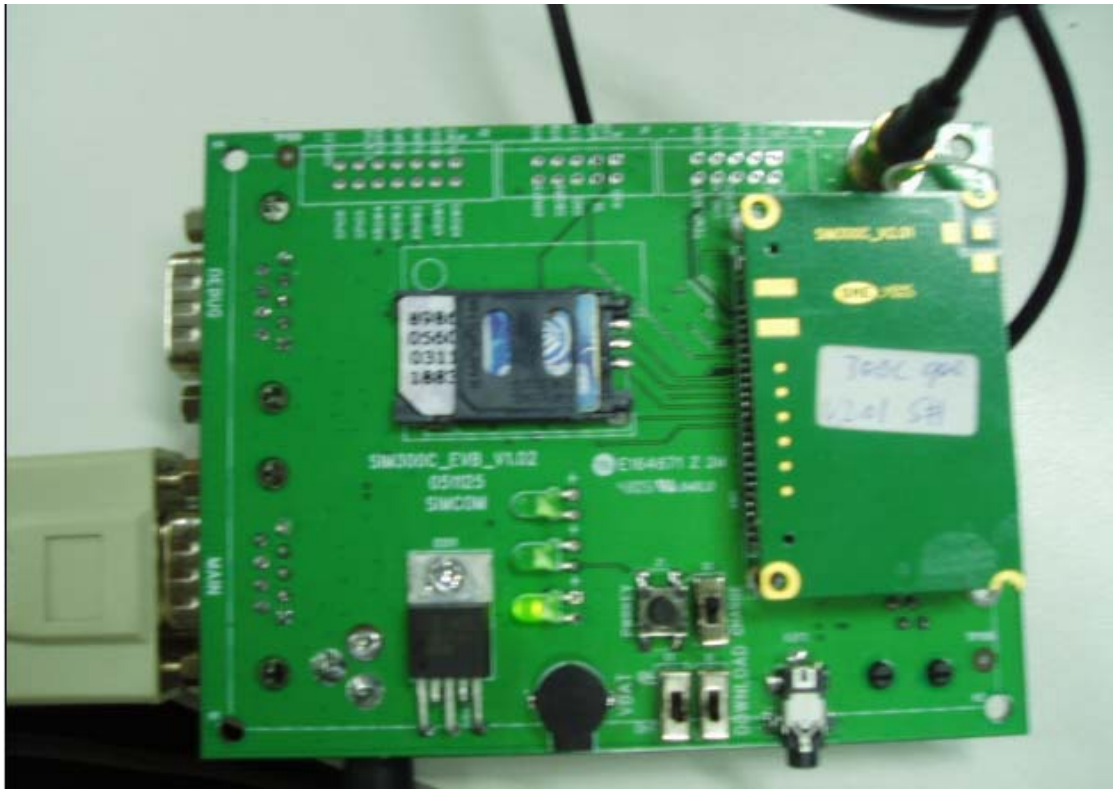

Figure 14： EVB and accessory equipment

6. Illustration:

6.1 Running:

(1) Connect the SIM300C module to the 60pins connector on SIM300C 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 SIM300C 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 SIM300C 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 SIM300C 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 SIM300C 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 SIM300C 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 SIM300C module: press the PWRKEY for about 1 second, SIM300C 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, SIM300C will be reset.

6.5 Charging

Connect the SIM300C module to the 60pin connector interface and the external battery to charging interface, which have been provided on the EVB. Insert the direct current source adapter; switch shifter S2 on the OFF state, shifter S3 on the ON state, then the SIM300C will go to the charging state.