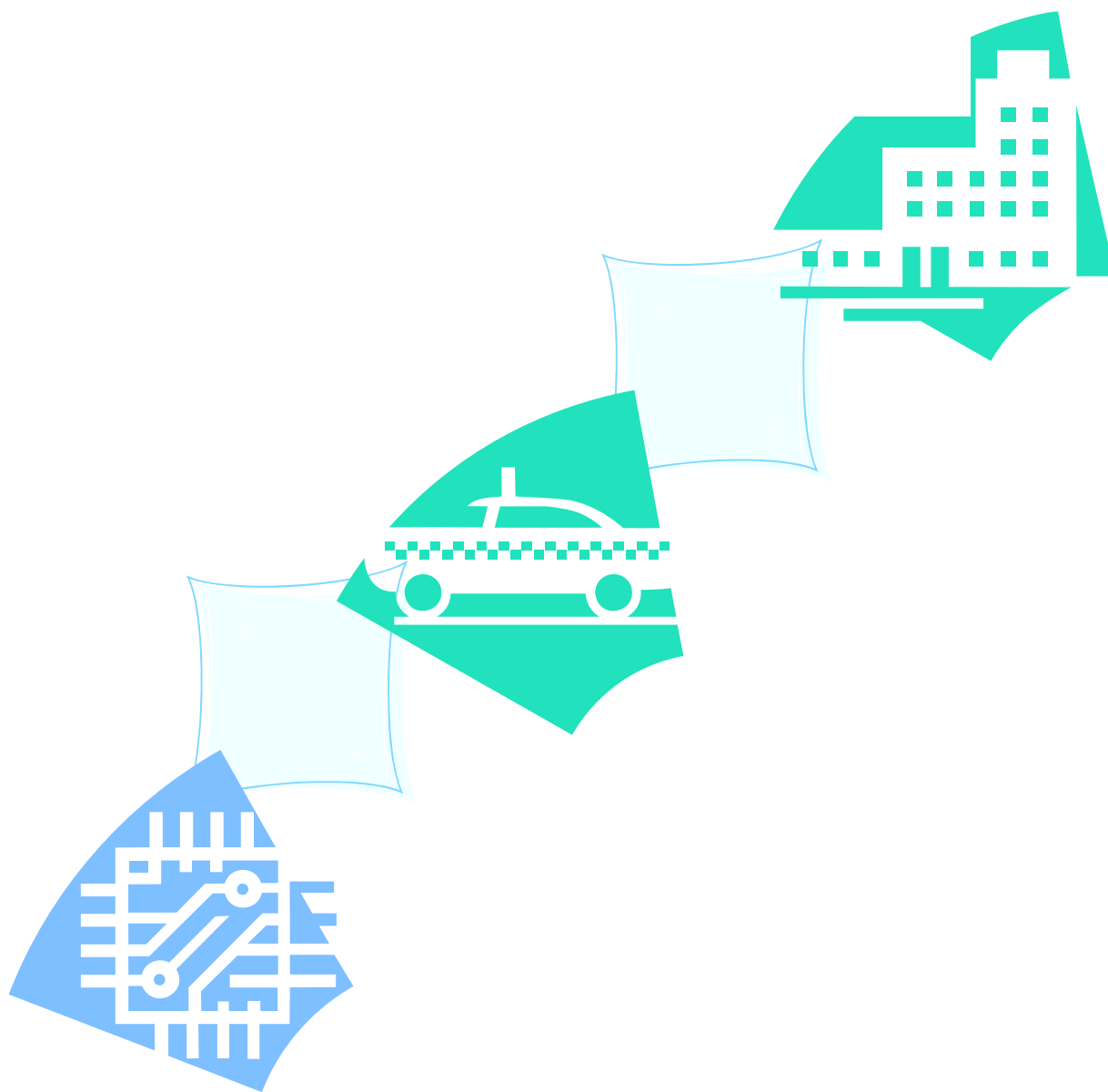


SIM340DZ EVB User Guide



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Version History

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2006-6-12	1.01	Update the figure in the document	Qianhuai
2006-7-21	2.01		

SCOPE

This document give the usage of SIM340DZ EVB, user can get useful info about the SIM340DZ EVB quickly through this document.

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1. SIM340DZ EVB

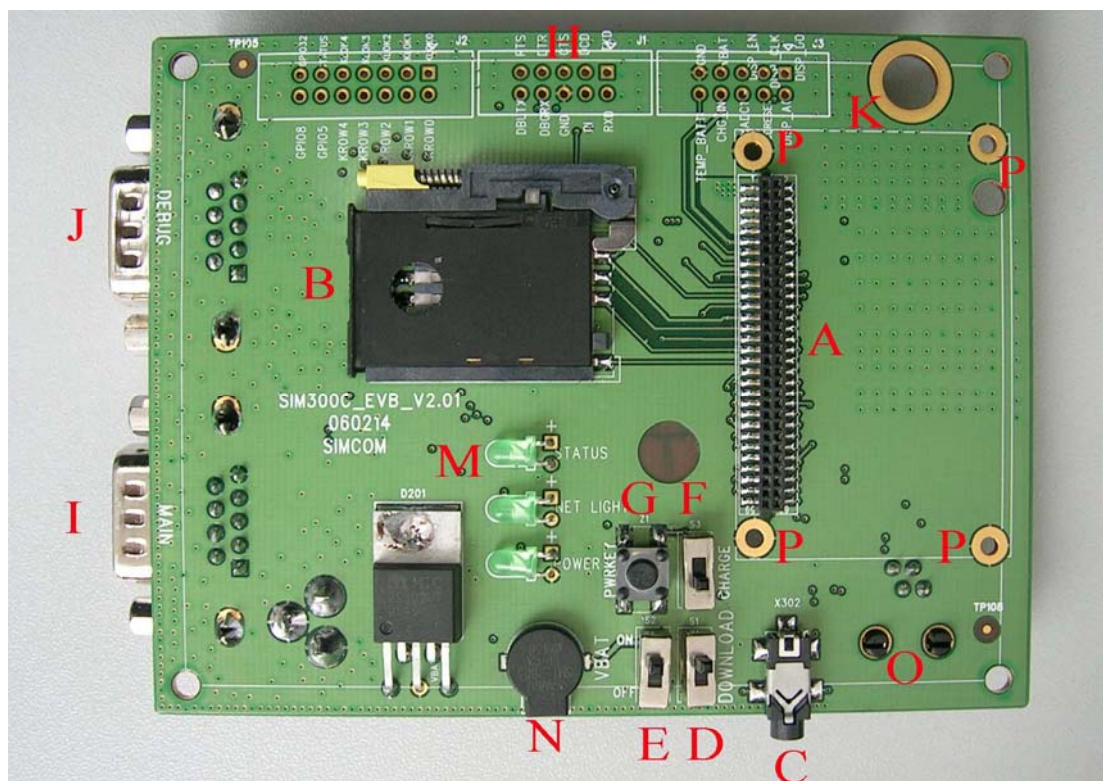


Figure 1: EVB TOP view

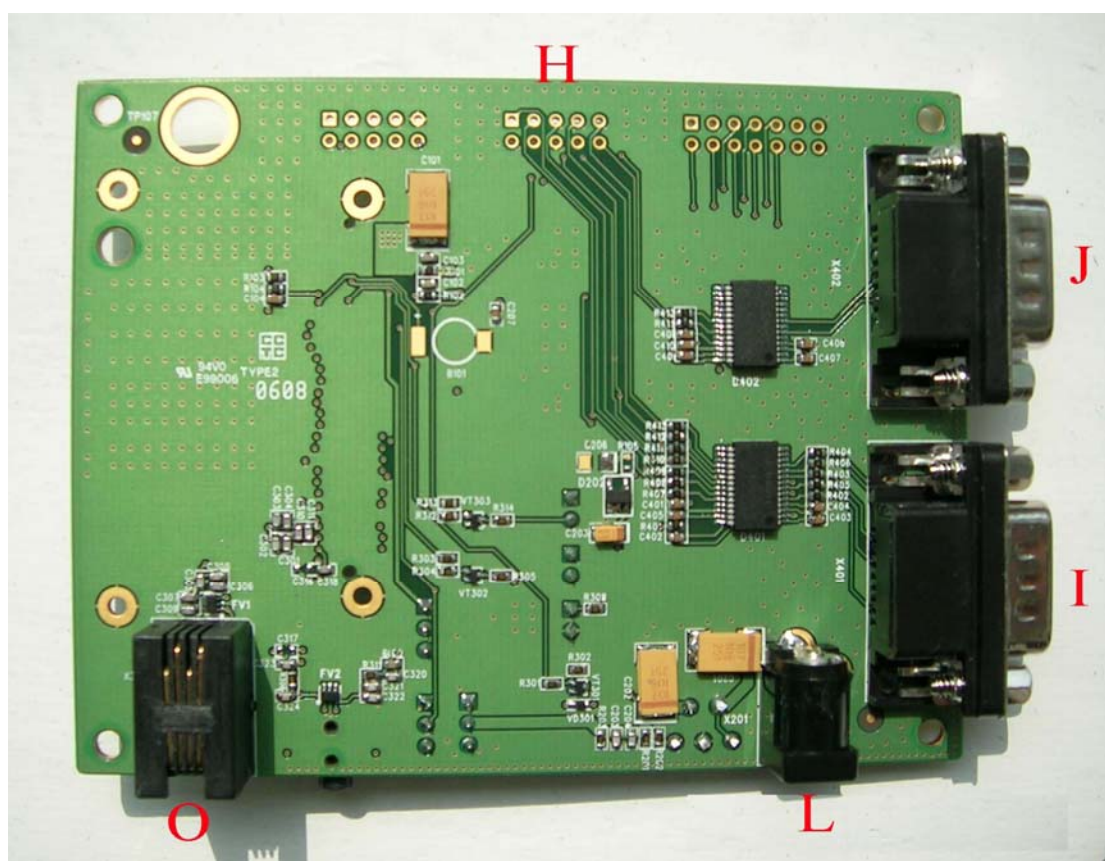


Figure 2: EVB BOTTOM view

- A: SIM340DTE with SIM340DZ 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 SIM340DZ
- H: main and debug serial port
- I: MAIN serial port for downloading, AT command transmitting, data exchanging
- J: DEBUG serial port
- L: source adapter interface
- M: light
- N: buzzer
- O: headphones interface

Operating of module may interfere with medical devices like hearing aides and pacemakers. Please always keep the module more than 20 centimeters away from such medical devices when the module is powered on.

The module has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

The module generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If the module does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio technician for help

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference;
- (2) This device must accept any interference received, including interference that may cause undesired operation.

2. EVB accessory

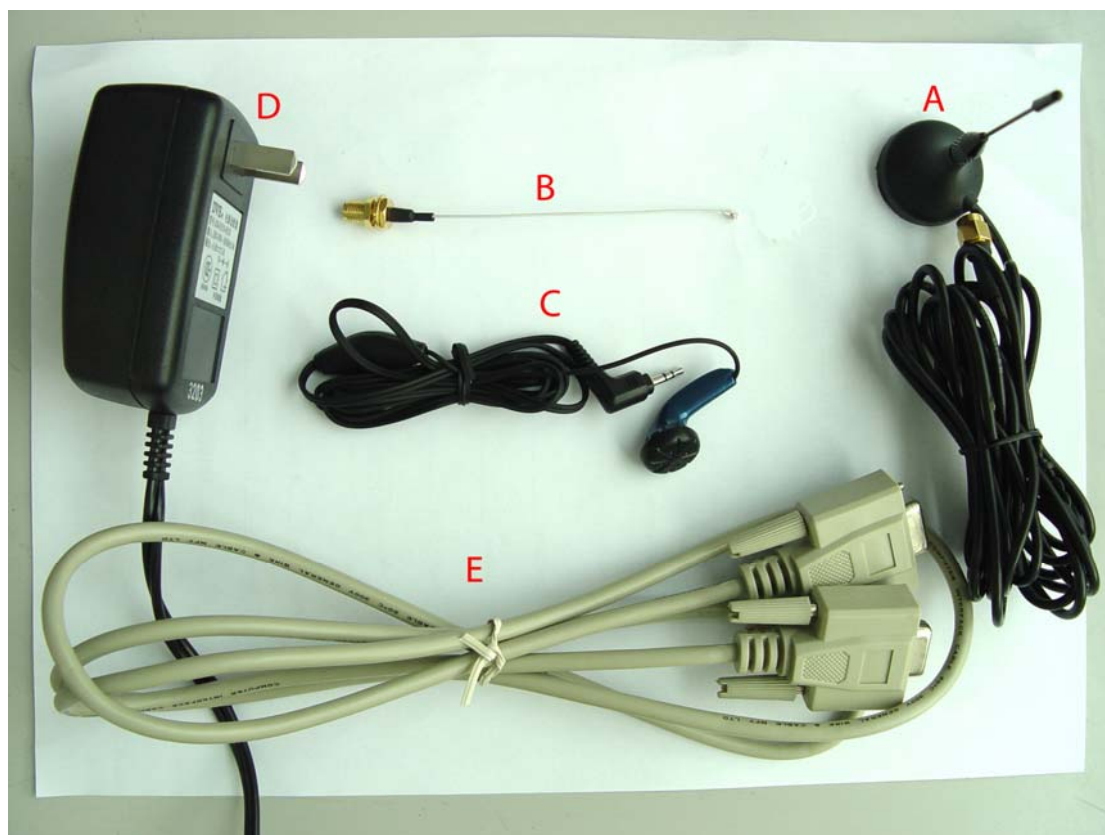


Figure 3: EVB accessory

A: antenna

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

3. Accessory Interface

3.1 Power Interface

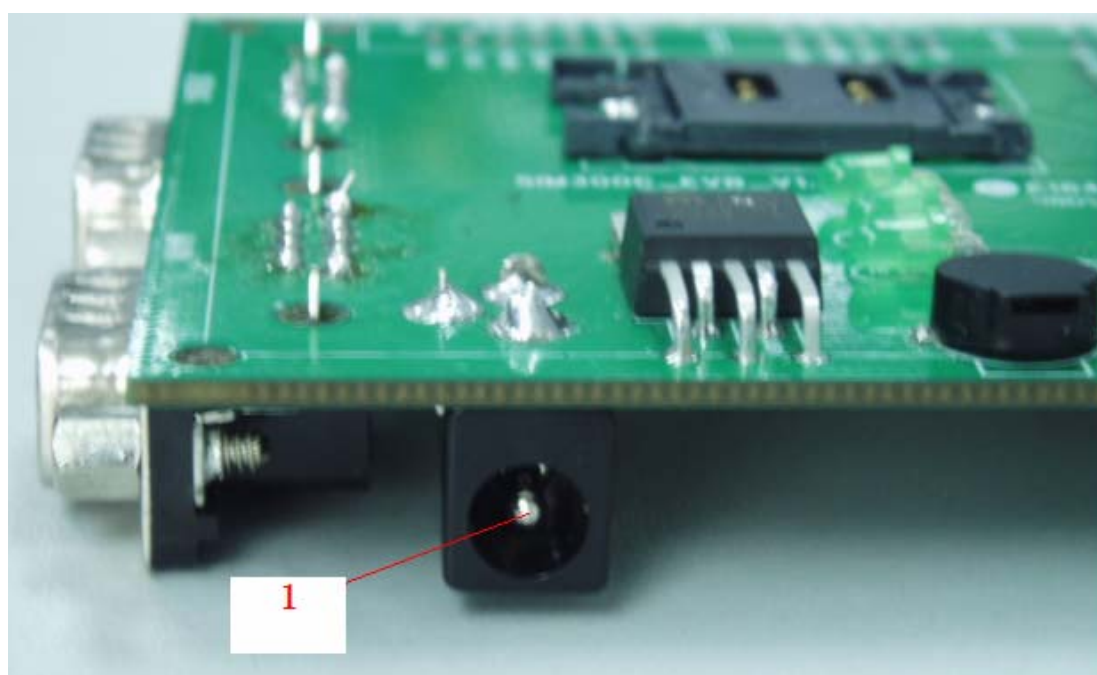


Figure 4: Power Interface

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

3.2 Audio Interface

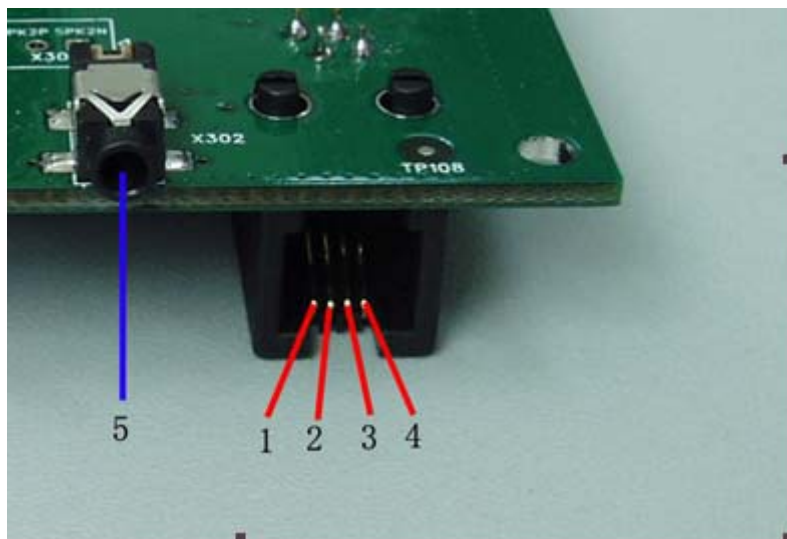


Figure 5: Audio Interface

Headset interface:

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

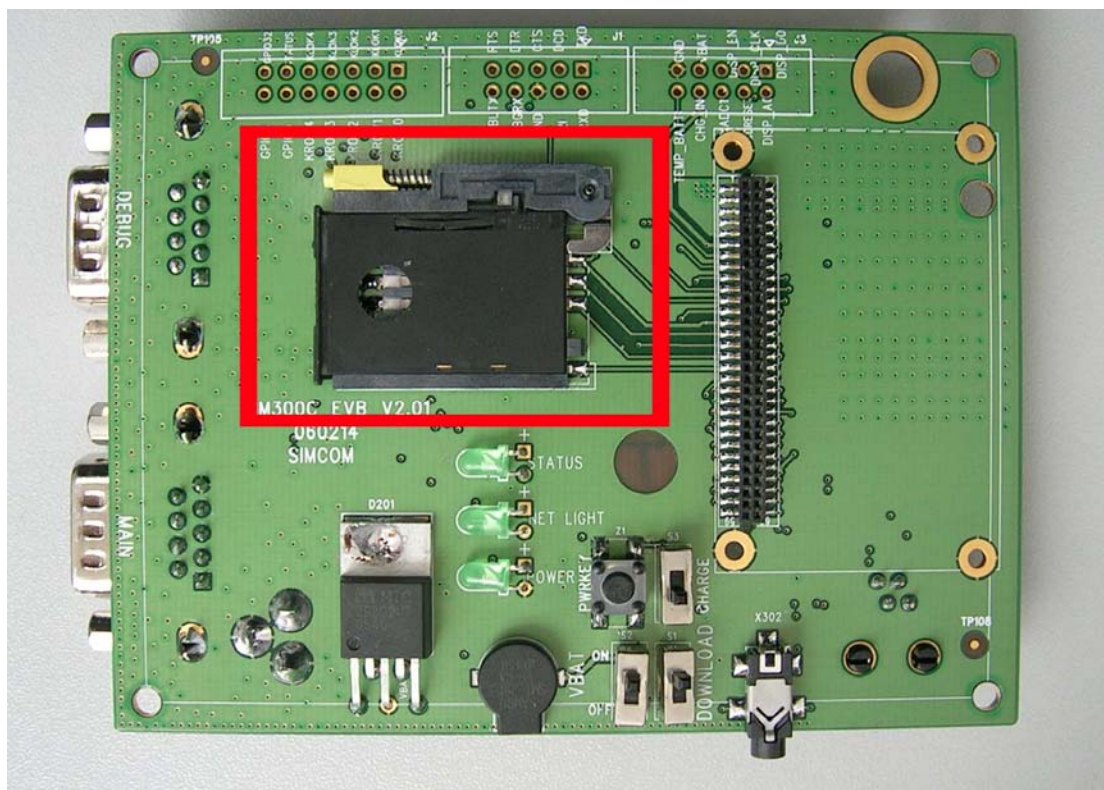


Figure 6: SIM card interface

3.4 Antenna Interface



Figure 7: Antenna Interface

3.5 RS232 Interface

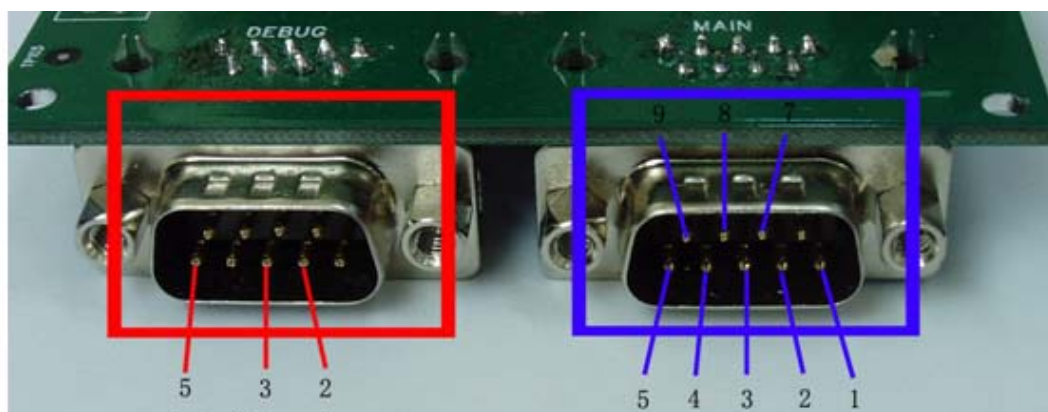


Figure 8: Serial Ports

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

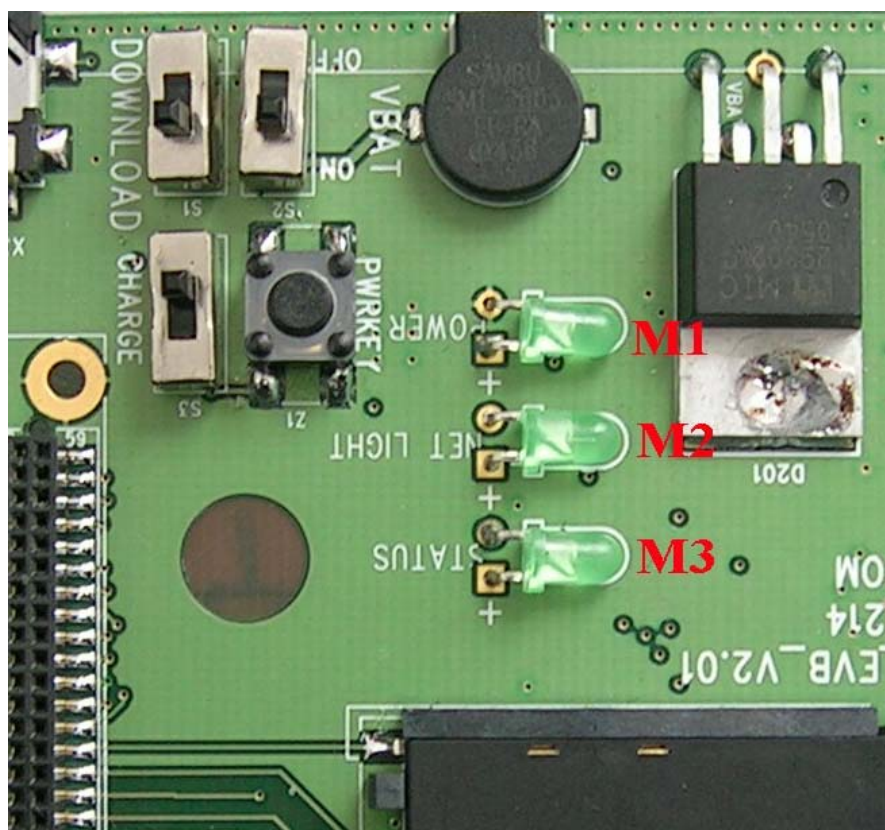


Figure 9: StatusLED

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	Bright: Module runs normally Extinct: System is powered down or module runs unconventionally

4. Test Interface

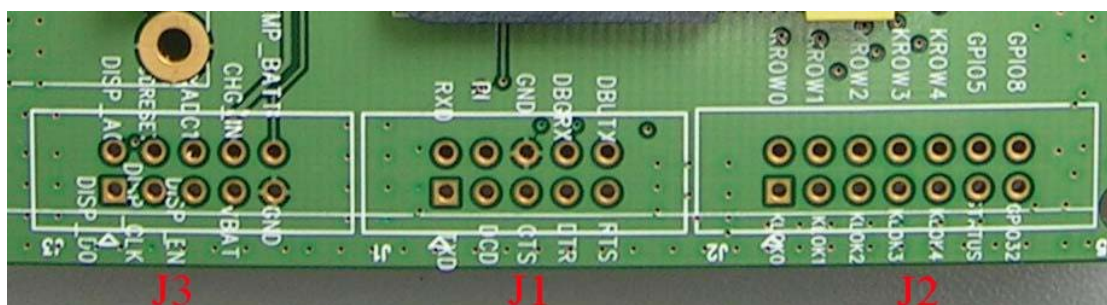


Figure 10: Test interface overview

4.1 Serial Interface

J1---RS232 Interface

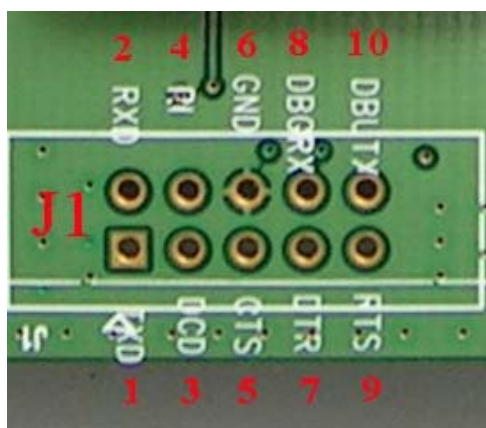


Figure 11: J1 Interface

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---GPIO

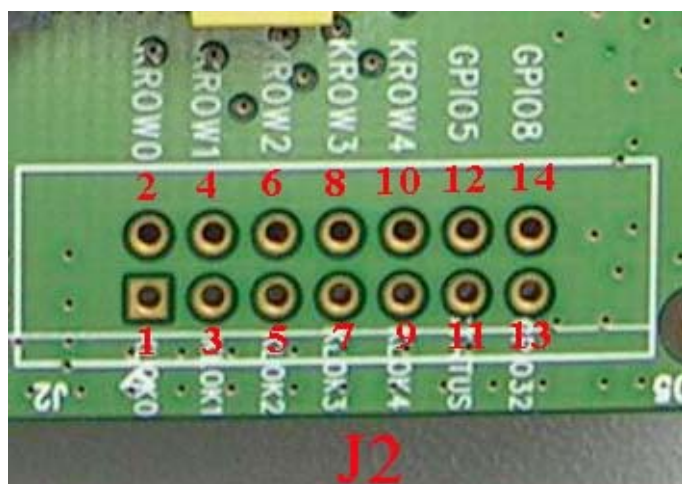


Figure 12: J2 Interface

KEY & CTRL Pin List

Pin	Signal	I/O	Description
1	NC		Keypad array interface
2	KROW0	I	
3	NC		
4	NC		
5	NC		
6	NC		
7	NC		
8	NC		
9	NC		
10	NC		
11	STATUS	O	status of module :on or off
12	NC		
13	NC		
14	GPIO8	O	Control signal of BUZZER

4.3 J3---LCD & I/O

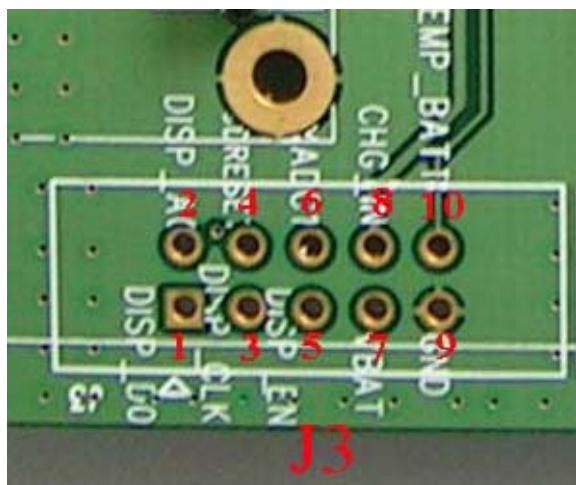


Figure 13: J3 Interface

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	NC		
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 battery temperature

5. EVB and accessory equipment

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

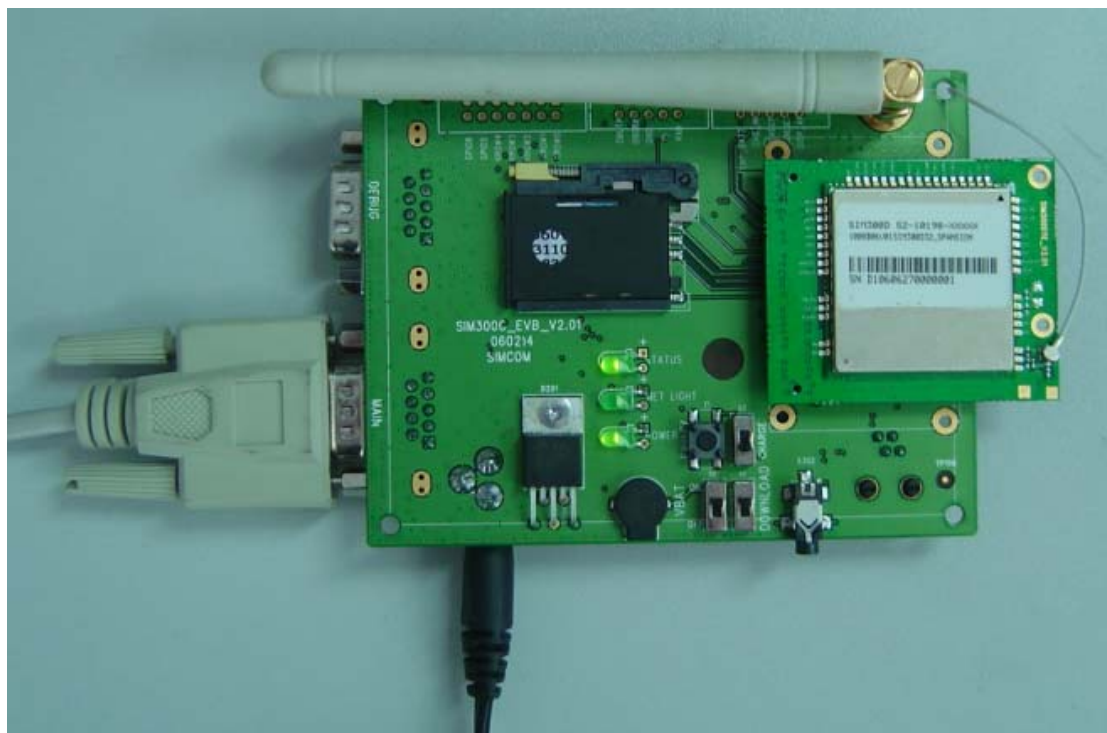


Figure 14: EVB and accessory equipment

6. Illustration:

6.1 Running:

- (1) Connect the SIM340DTE with SIM340DZ module to the 60pins connector on SIM340DZ 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 SIM340DZ module begins running.

You can see the light M2 on the EVB flashing at a certain frequency. By the state, you can judge whether the EVB and SIM340DZ 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 SIM340DZ 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 SIM340DTE with SIM340DZ 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 SIM340DZ 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

Turn off SIM340DZ module: press the PWRKEY for about 1 second, SIM340DZ module will be turned off.

6.5 Charging

Connect the SIM340DTE with SIM340DZ 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 SIM340DZ will go to the charging state.

7. 60 PIN assignment of DIP connector of EVB board

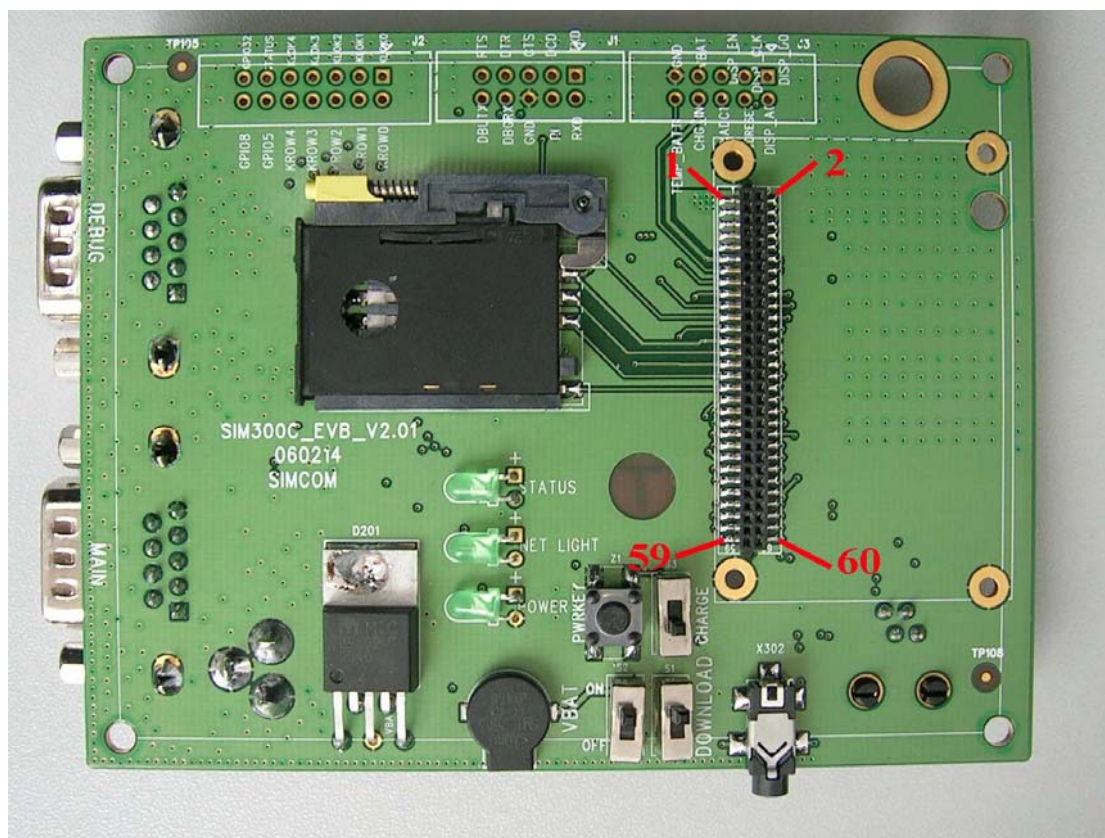


Figure 15: DIP connector of EVB board

Connection diagrams

PIN NO.	PIN NAME	I/O	PIN NO.	PIN NAME	I/O
2	GND		1	VBAT	I
4	GND		3	VBAT	I
6	GND		5	VBAT	I
8	GND		7	VBAT	I
10	GND		9	VBAT	I
12	ADC1	I	11	CHG_IN	I
14	VRTC	I	13	TEMP_BAT	I
16	NETLIGHT	O	15	NC	O
18	NC		17	PWRKEY	I

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20	NC		19	STATUS	O
22	NC		21	NC	
24	NC		23	GPIO8	I/O
26	NC		25	VSIM	O
28	KROW0	I	27	SIM_RST	O
30	NC		29	SIM_I/O	I/O
32	NC		31	SIM_CLK	O
34	NC		33	SIM_PRESENT	I
36	NC		35	NC	
38	SPI_EN	O	37	DCD	O
40	SPI_CLK	O	39	DTR	I
42	SPI_DO	I/O	41	RXD	I
44	SPI_AO	O	43	TXD	O
46	NC		45	RTS	I
48	DBGRX	I	47	CTS	O
50	DBGTX	O	49	RI	O
52	AGND		51	AGND	
54	MIC1P	I	53	SPK1P	O
56	MIC1N	I	55	SPK1N	O
58	MIC2P	I	57	SPK2P	O
60	MIC2N	I	59	SPK2N	O