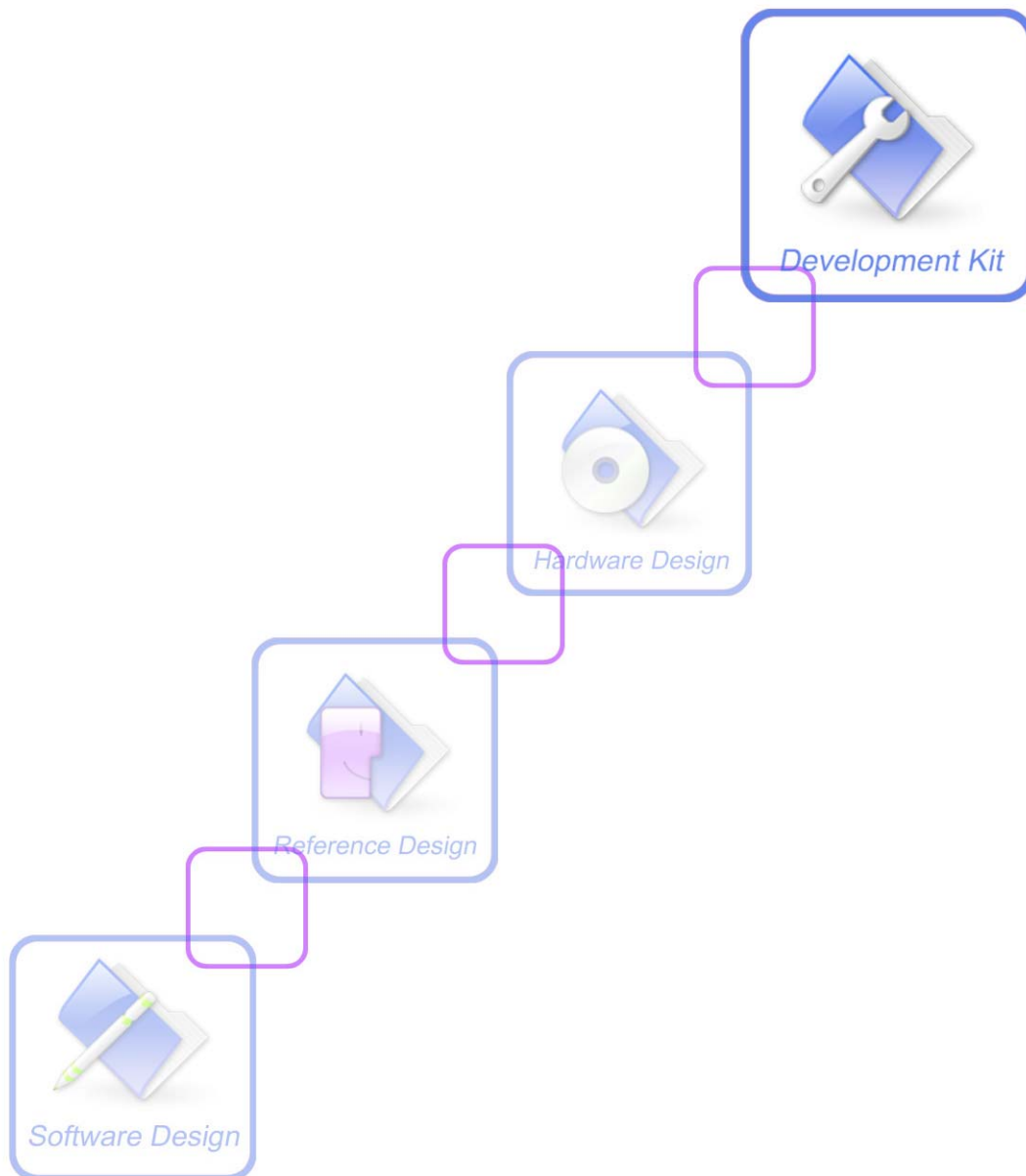




Development Kit Manual

SIM840W-EVB_UGD_V1.00



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Contents

Contents	3
Version History	4
1. SIM840W EVB	6
2. EVB accessory	8
3. Accessory Interface	9
3.1 Power Interface	9
3.2 Audio Interface.....	10
3.3 SIM card interface.....	11
3.4 Antenna Interface	12
3.5 RS232 Interface.....	13
3.6 Operating Status LED	14
4. Test Interface.....	15
4.1 J103	15
4.2 J201	16
4.3 J104	17
5. EVB and accessory equipment.....	19
6. Illustration:	20
6.1 Running:.....	20
6.2 Connecting Net and calling	20
6.3 Downloading.....	20
6.4 Turns off.....	20

Figure Index

Figure 1: EVB TOP view	6
Figure 2: EVB BOTTOM view.....	7
Figure 3: EVB accessory.....	8
Figure 4: Power Interface.....	9
Figure 5: Audio Interface	10
Figure 6: SIM card interface	11
Figure 7: Antenna Interface.....	12
Figure 8: Serial Ports.....	13
Figure 9: StatusLED.....	14
Figure 10: Test interface overview	15
Figure 11: J103 Interface.....	15
Figure 12: J201 Interface	16
Figure 13: J104 Interface	17
Figure 14: EVB and accessory equipment	19

Version History

Data	Version	Description of change	Author
2011-6-22	1.00	Origin	Lee

SCOPE

This device complies with part 15, part 22 and part 24 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. (For FCC).

WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. (For IC).

This document gives the usage of SIM840W EVB, user can get useful information about the SIM840W EVB quickly through this document.

This document takes SIM840W EVB as an example.

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

1. SIM840W EVB

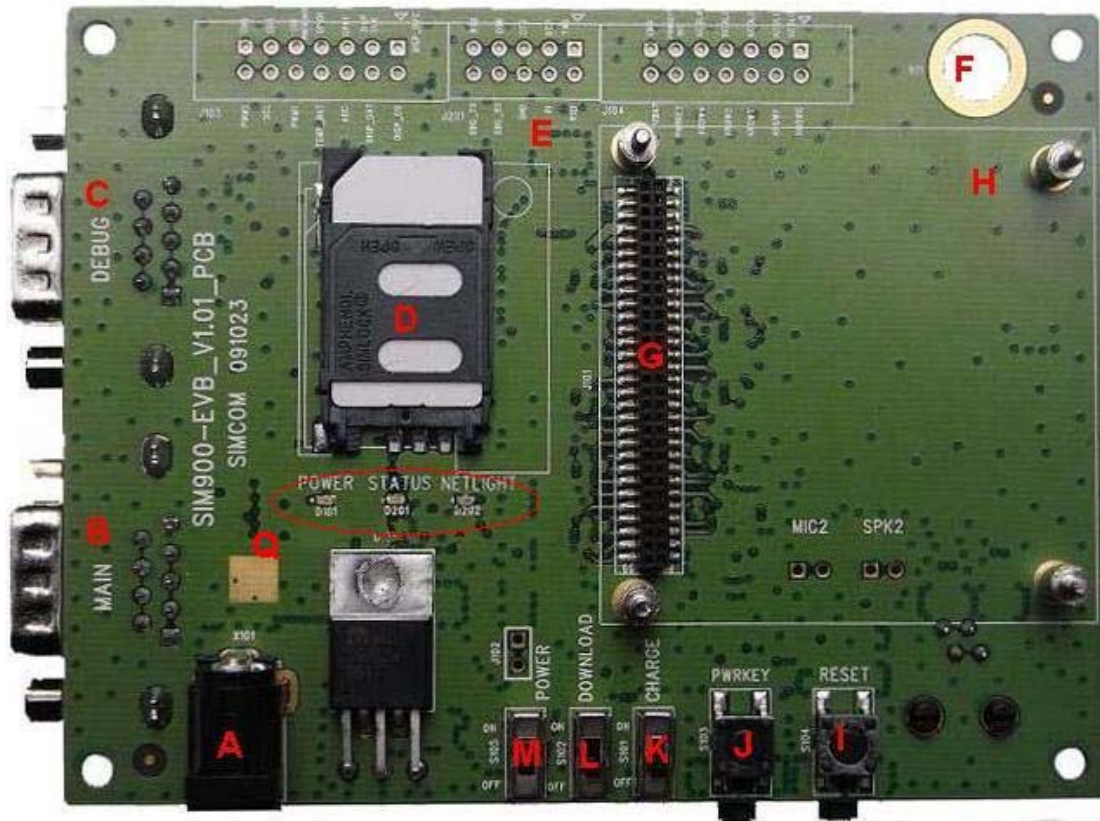


Figure 1: EVB TOP view



Figure 2: EVB BOTTOM view

- A: Source adapter interface
- B: MAIN serial port for downloading, AT command transmitting, data exchanging
- C: DEBUG serial port
- D: SIM card interface
- E: Test point interface
- F: Antenna fix hole
- G: SIM840W-TE with SIM840W module interface
- H: Module fix hole
- I: Reset key (reset the module)
- J: Power key (module ON/OFF control)
- K: Charge switch (charge ON/OFF control)
- L: Download switch (download control)
- M: Power switch (power ON/OFF control)
- N: Headphones interface
- O: Headset interface
- P: Line in interface
- Q: Status light

2. EVB accessory



Figure 3: EVB accessory

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

3. Accessory Interface

3.1 Power Interface

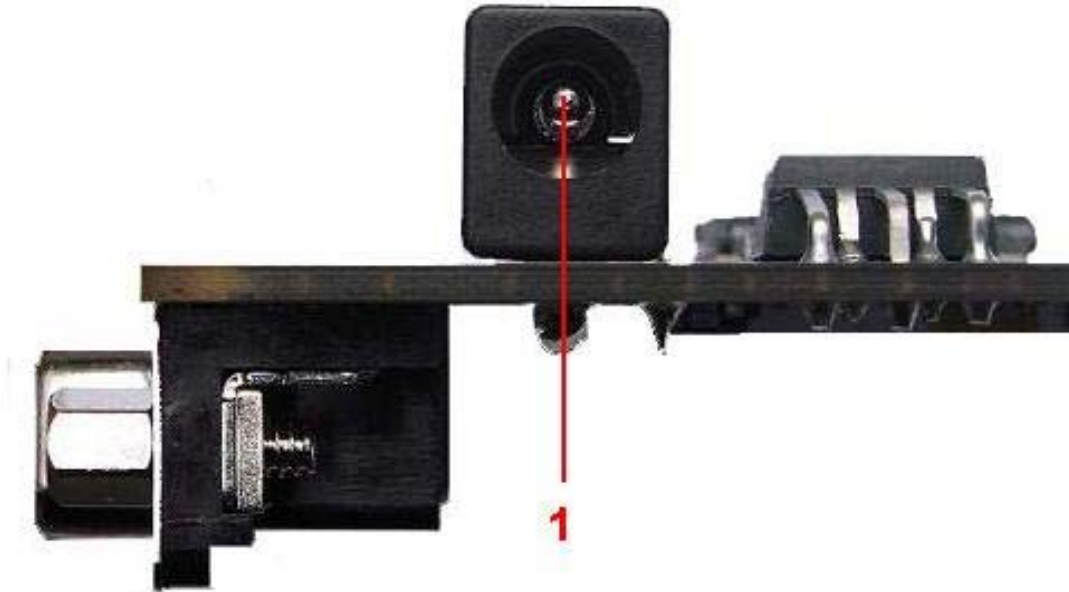


Figure 4: Power Interface

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

3.2 Audio Interface

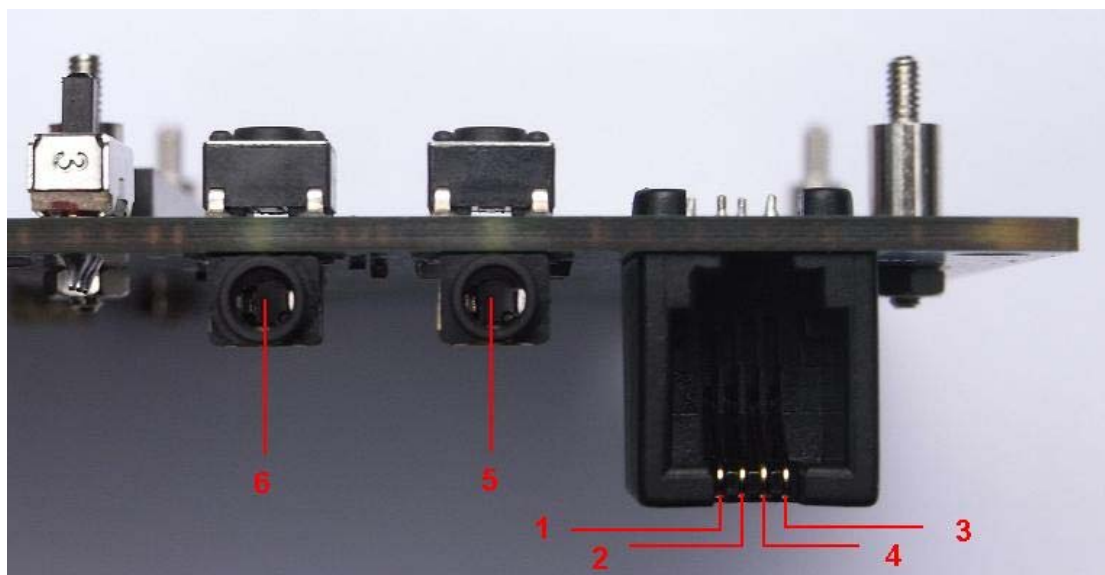


Figure 5: Audio Interface

Headset interface:

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

Earphone interface:

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

Line in interface:

Pin	Signal	Input/Output	Description
6	Line in R/L	I/O	Line in signal

3.3 SIM card interface

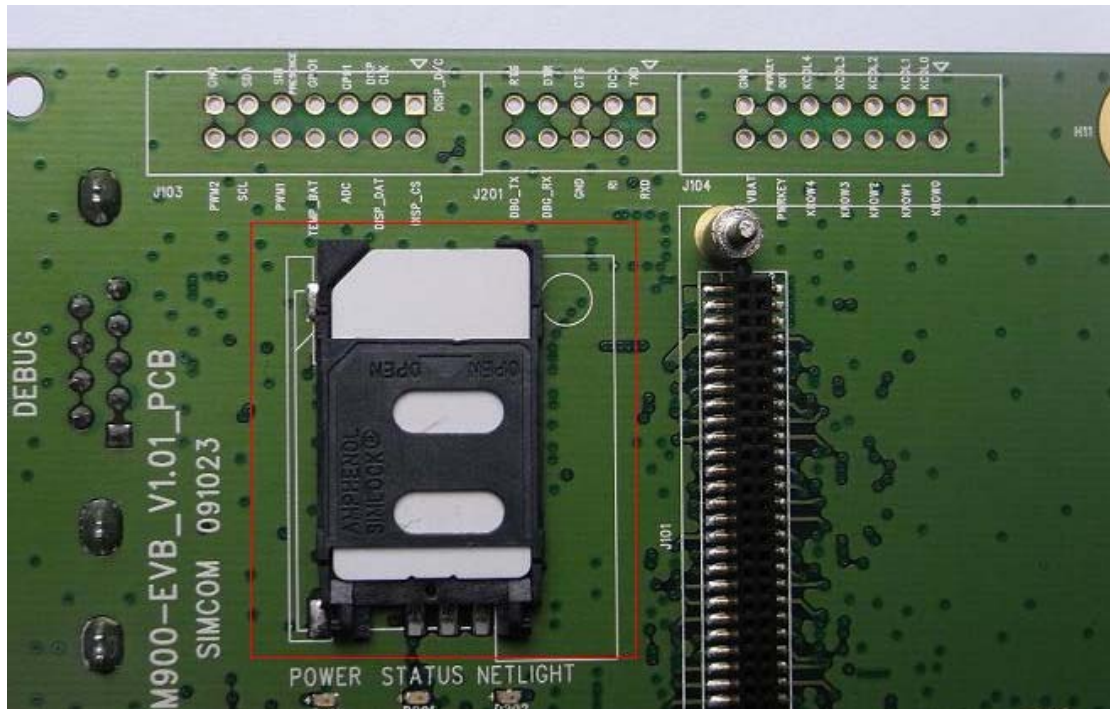


Figure 6: SIM card interface

3.4 Antenna Interface



Figure 7: Antenna Interface

3.5 RS232 Interface

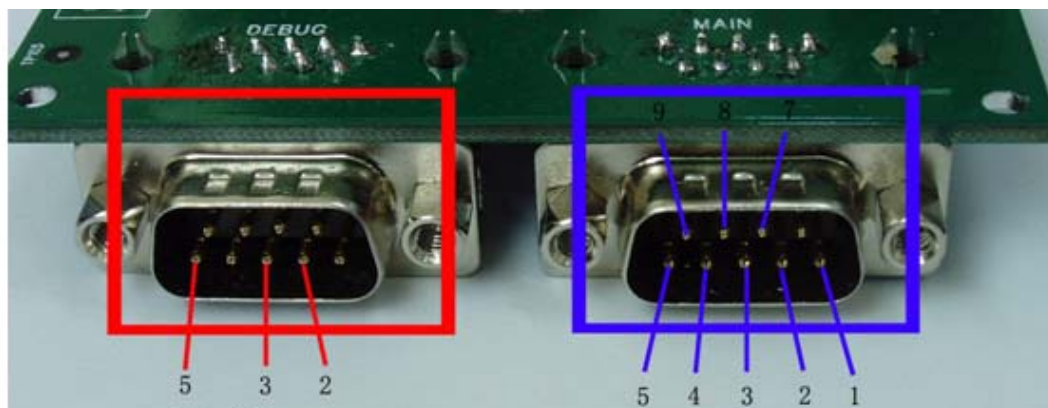


Figure 8: Serial Ports

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

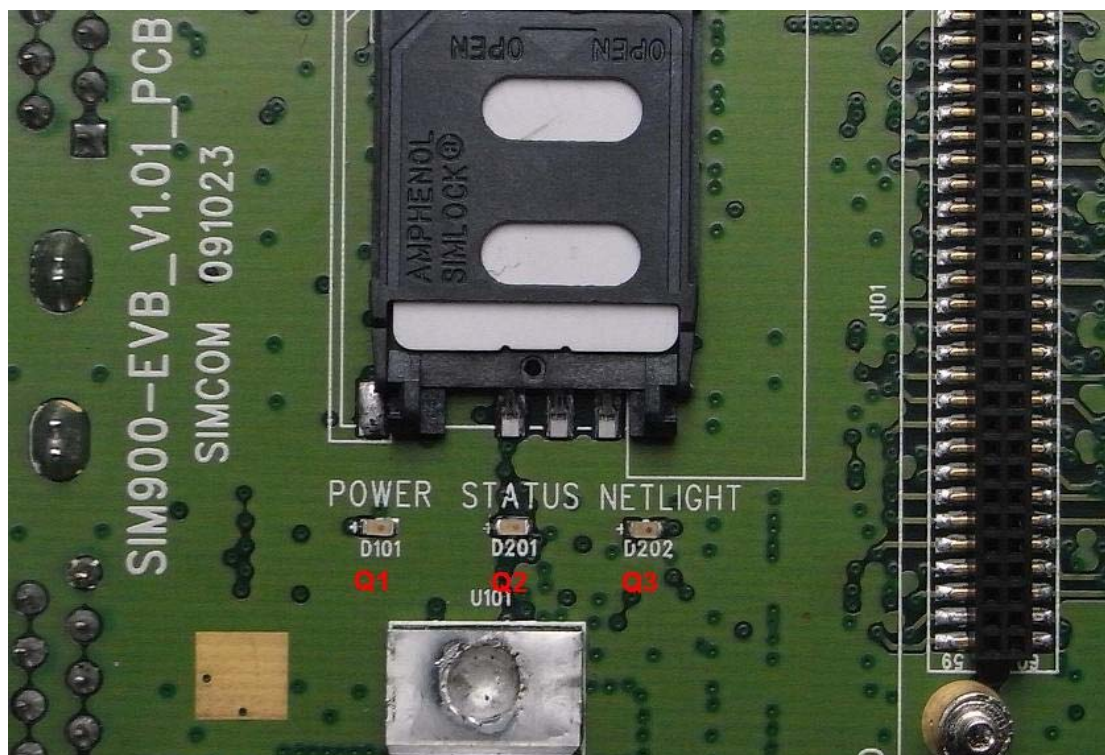


Figure 9: StatusLED

Working state of status LED as list:

Name	Description	STATUS
Q1	VBAT ON/OFF indicator	Bright: VBAT ON; Extinct: VBAT OFF
Q2	GSM part status indicator	Bright: Module runs normally Extinct: System is powered down or module runs unconventionally
Q3	GSM_NET status indicator	Blinking at a certain frequency according various GSM net status

4. Test Interface

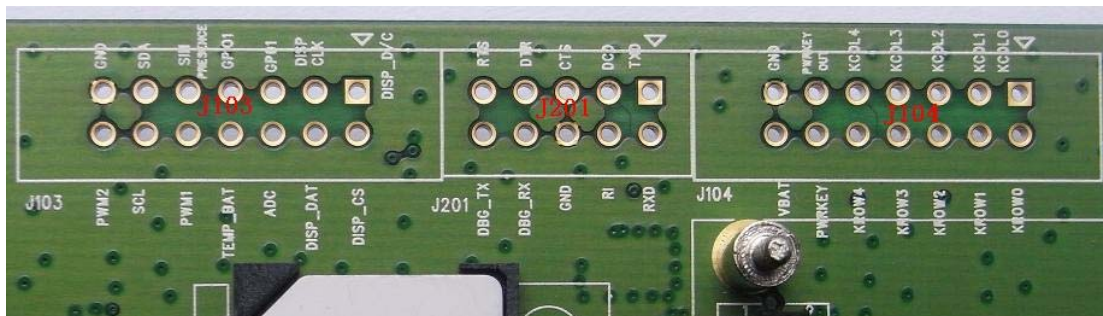


Figure 10: Test interface overview

4.1 J103

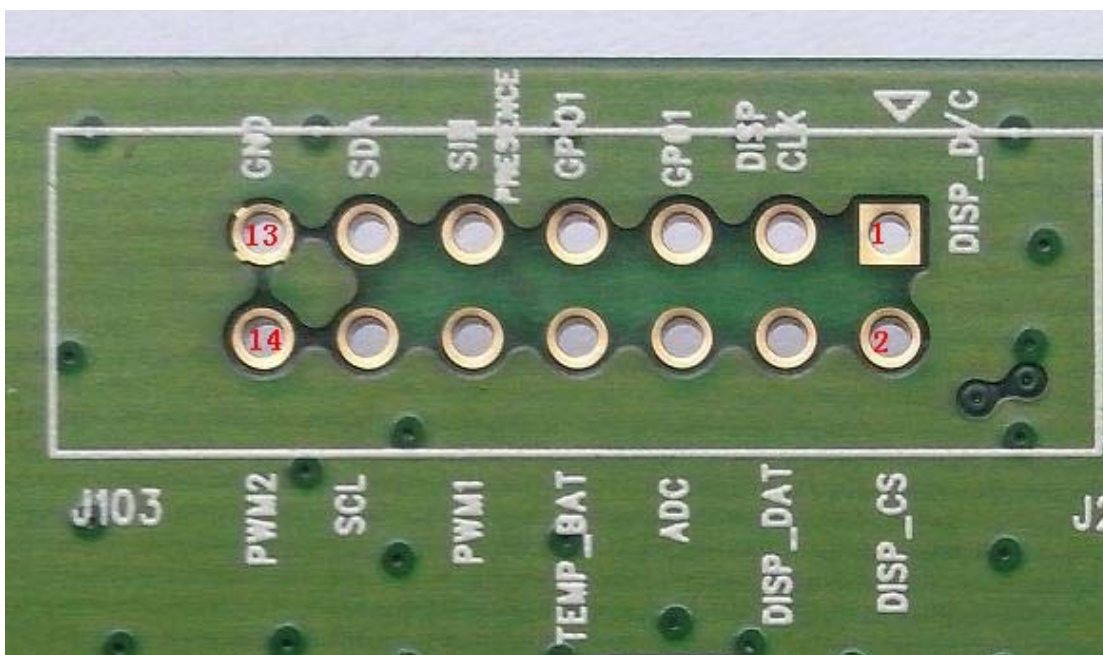


Figure 11: J103 Interface

J103 Interface Pin List:

Pin	Signal	I/O	Description
1	DISP_D/C	O	Display data or address select
2	DISP_CS	O	Display select output
3	DISP_CLK	O	Display clock output
4	DISP_DAT	I/O	Display data line

SIM840W EVB User Guide

5	GPO1	O	GPO
6	ADC	I	ADC IN
7	GPIO1	I/O	GPIO
8	TEMP_BAT	I	ADC input
9	SIMPRESENCE	I	SIM detect input
10	PWM1	O	PWM output
11	SDA	I/O	I2C BUS DATA
12	SCL	O	I2C BUS CLOCK
13	GND	POWER	GND
14	PWM2	O	PWM output

4.2 J201

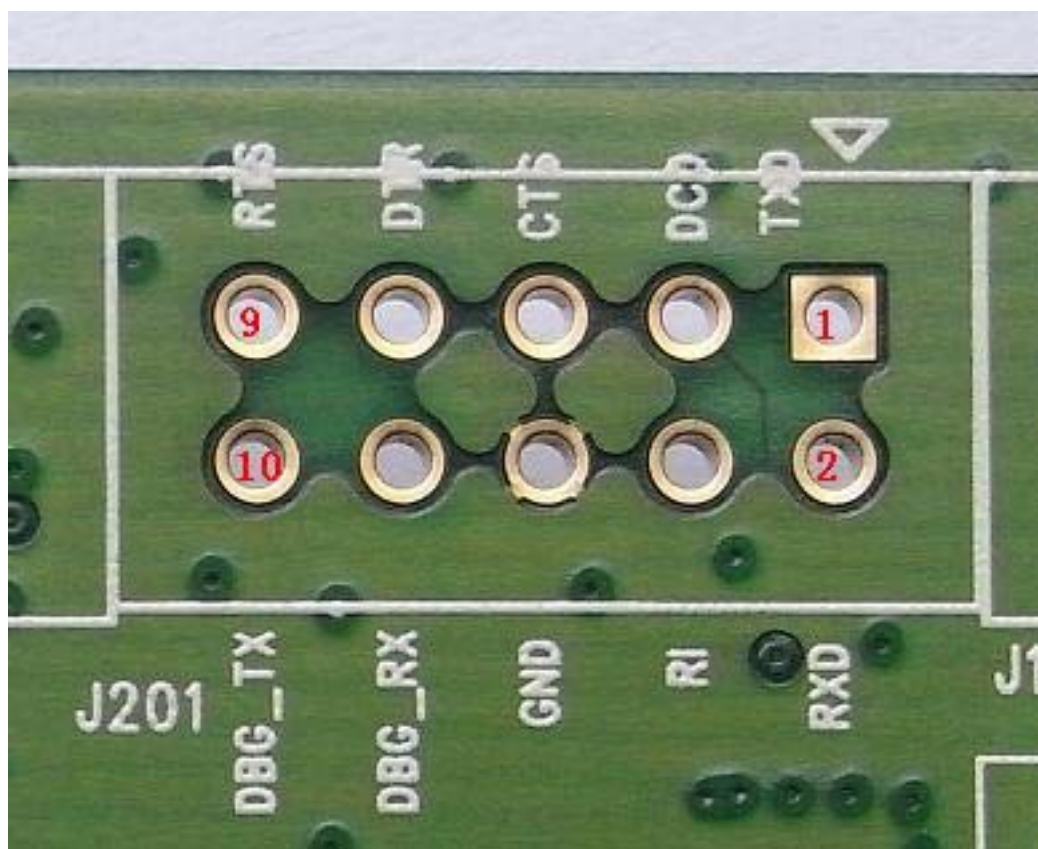


Figure 12: J201 Interface

J201 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

4.3 J104

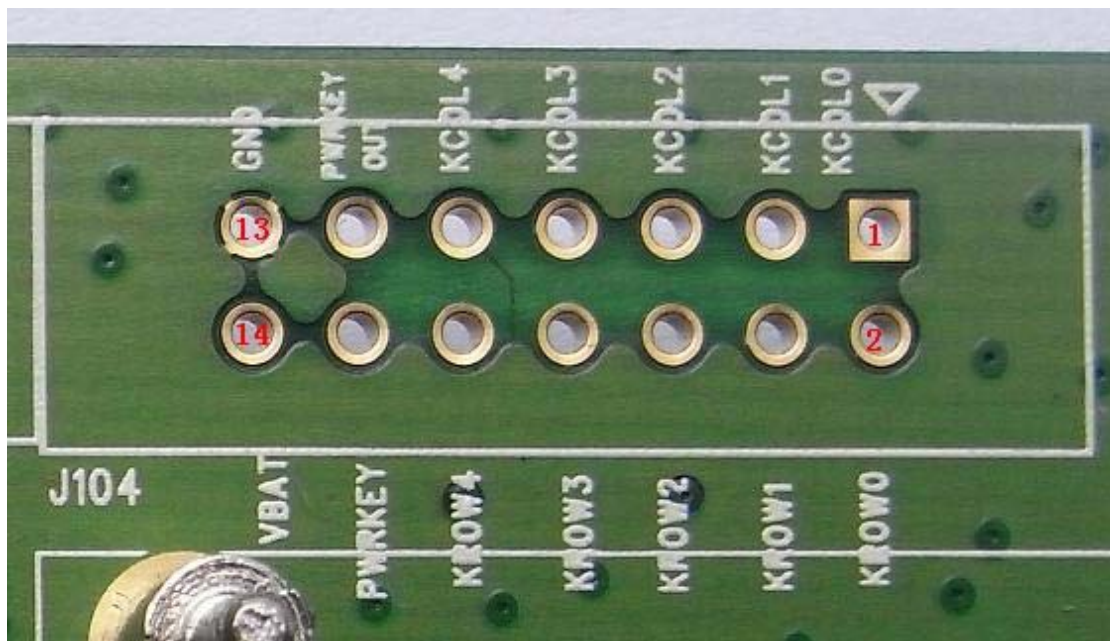


Figure 13: J104 Interface

J104 Interface Pin List:

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

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 SIM840W-TE with SIM840W module to the 60pins connector on SIM840W EVB, inserting 5V direct current source adapter, switching the S101,S102 switch on **off** state, S105 switch on **ON** state;
- (2) Press the PWRKEY for about 1 second, and then SIM840W module begins running.

You can see the light Q3 on the EVB flashing at a certain frequency. By the state, you can judge whether the EVB and SIM840W 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 SIM840W 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 SIM840W-TE with SIM840W 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 SIM840W 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 S105 switch on **ON** state, S102 switch on **ON** state, then EVB provide the function of downloading.

6.4 Turns off

Turn off SIM840W module: press the PWRKEY for about 2 second, SIM840W module will be turned off.

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