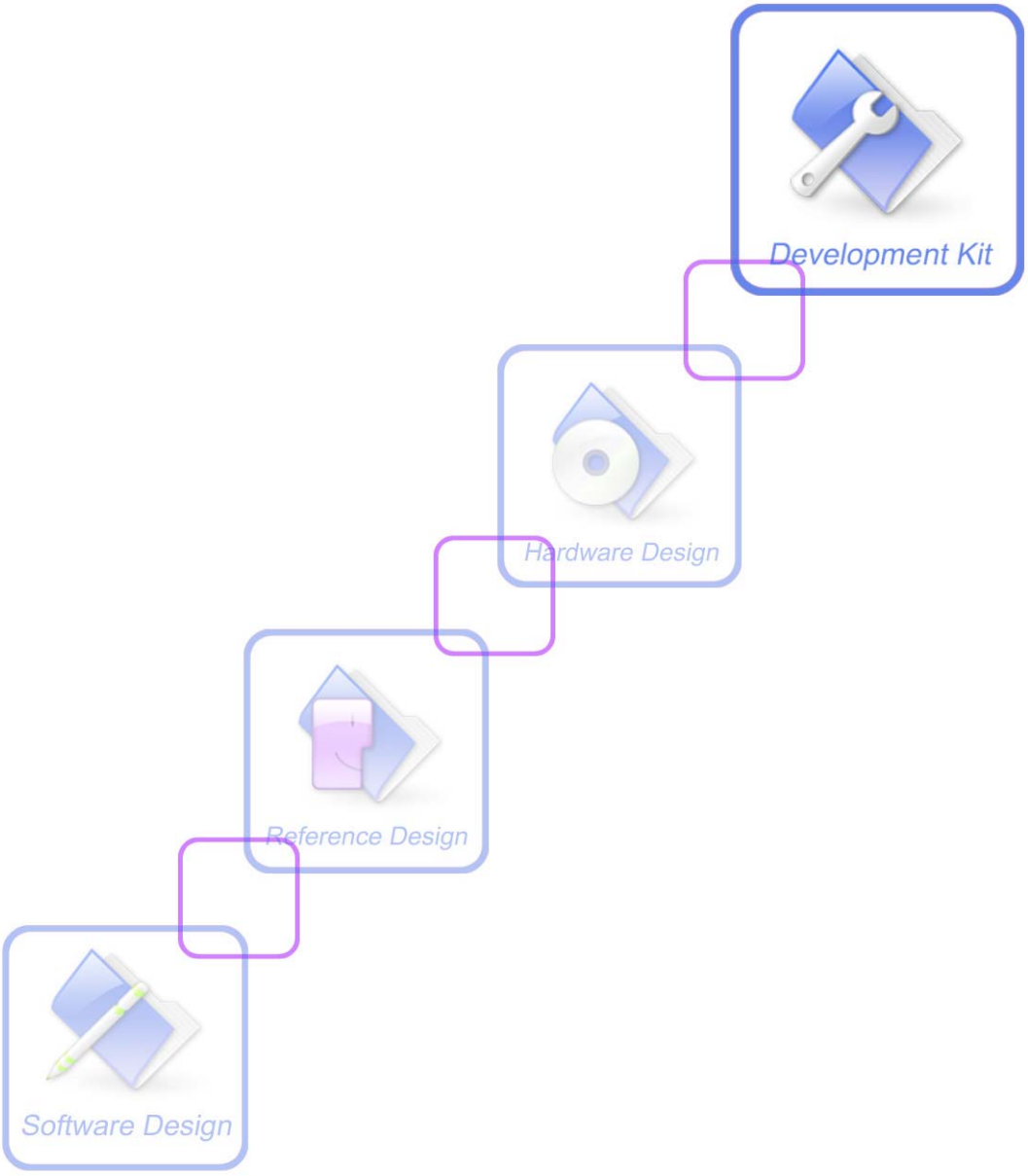
SIM800C_EVB kit_ User Guide_V1.00



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Version History

Data	Version	Description of change	Author
2015-11-12	1.00	Origin	Yanwu.Wang

SCOPE

This document describes how to use SIM800C EVB to do test; user can get useful info about the SIM800C EVB quickly through this document.

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

1. SIM800C EVB

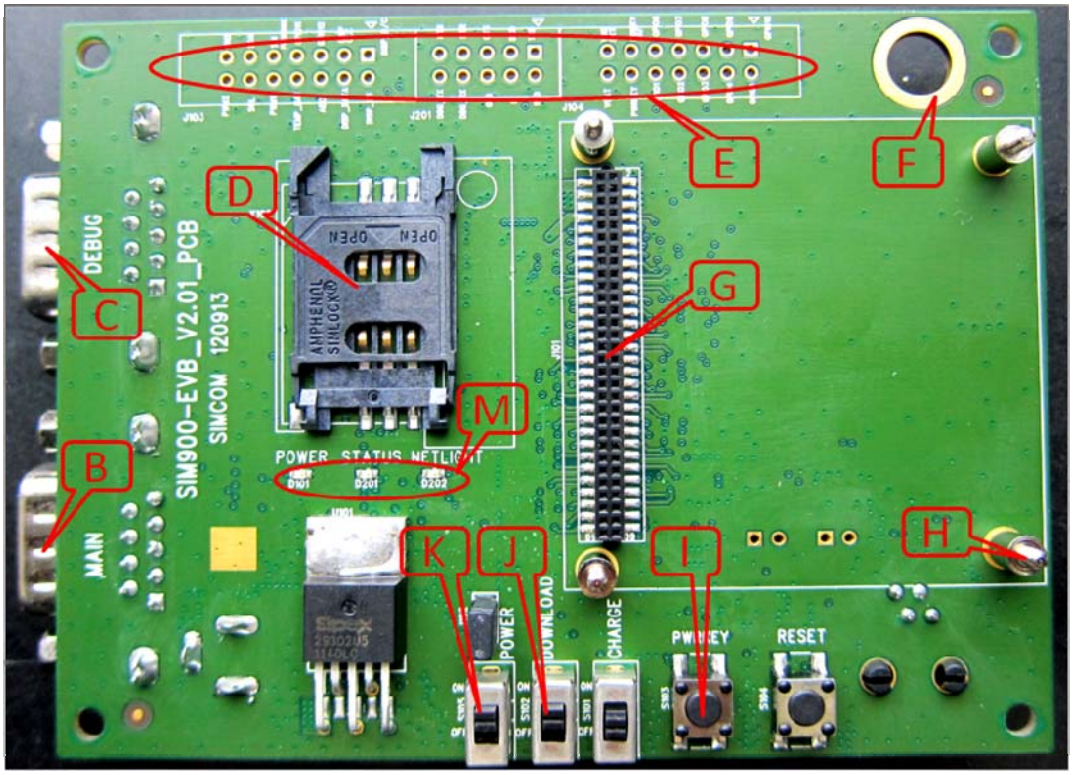


Figure 1: EVB TOP view

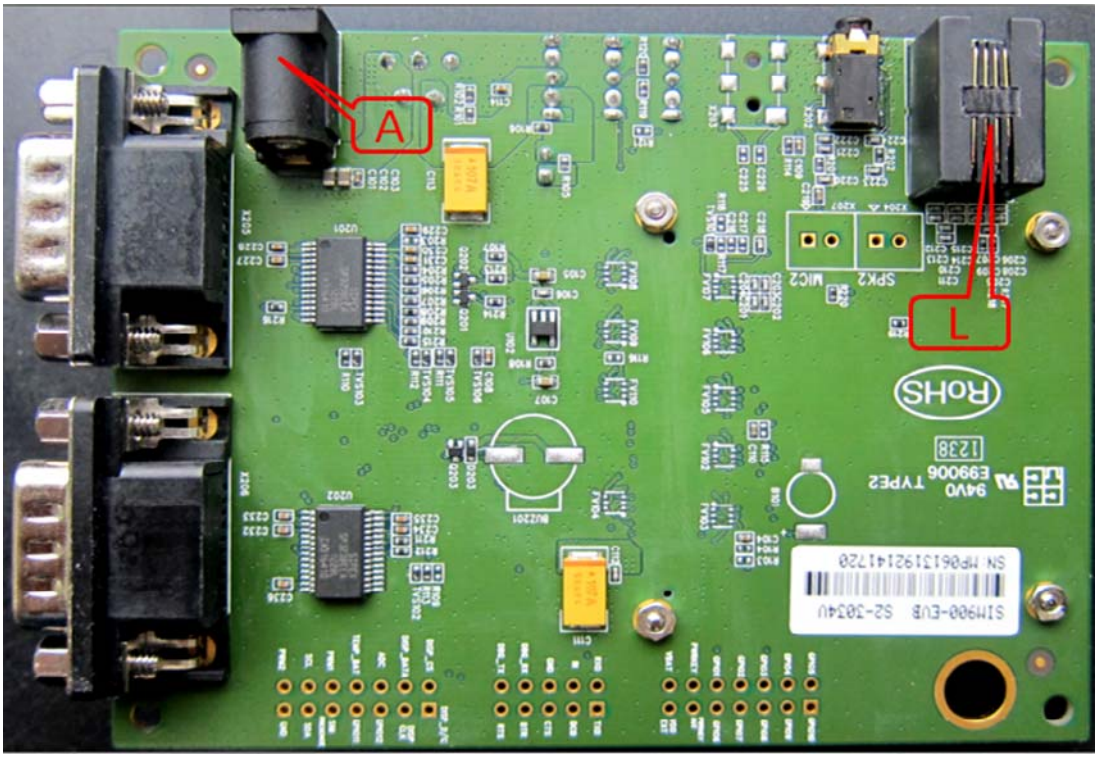


Figure 2: EVB BOTTOM view

A: DC jack
B: MAIN serial port
C: DEBUG serial port
D: SIM card holder
E: Test point
F: Antenna fix hole
G: SIM800C-TE with SIM800C module interface
H: Module fix hole
I: Power key
J: Download switch
K: Power switch
L: Headphones jack
M: LED indicator

2. EVB Accessory

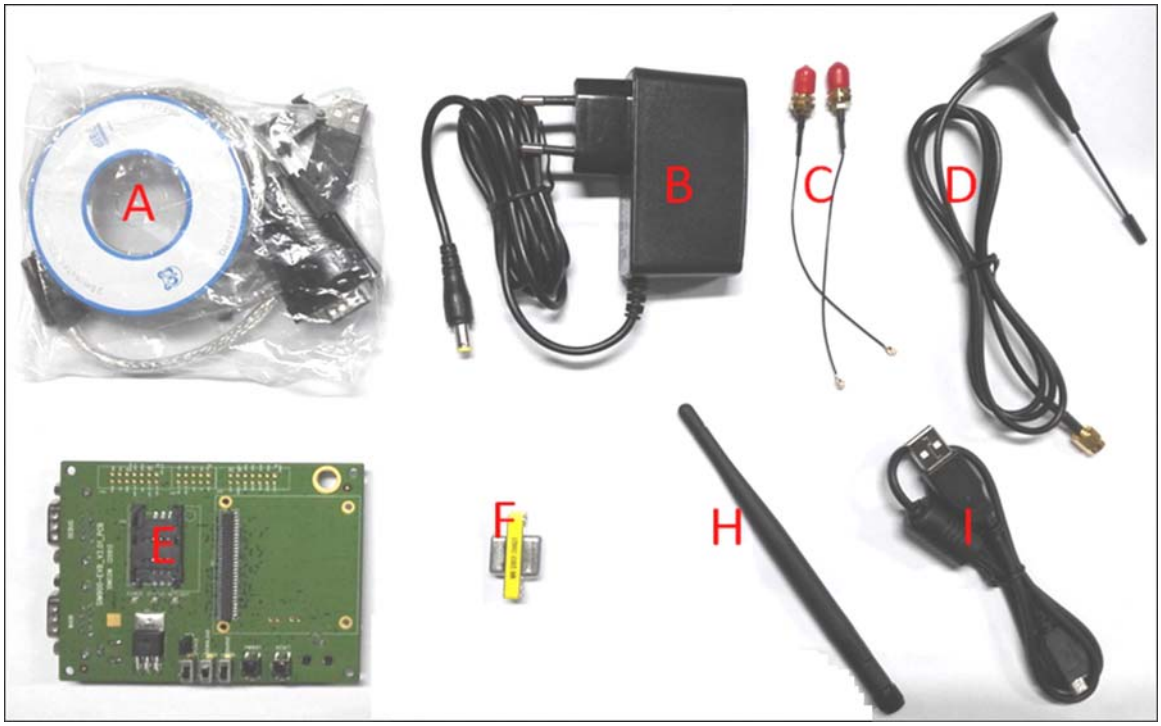


Figure 3: EVB Accessory

A: USB-to-RS232 cable
B: 5V DC adapter
C: GSM/BT antenna converter
D: GSM antenna
E: SIM900 EVB
F: Mini gender changer
H :BT antenna
I: USB data cable

Note: Only SIM800C-EVBKIT-BT has BT antenna.

3. Accessory Interface

3.1 Power Interface

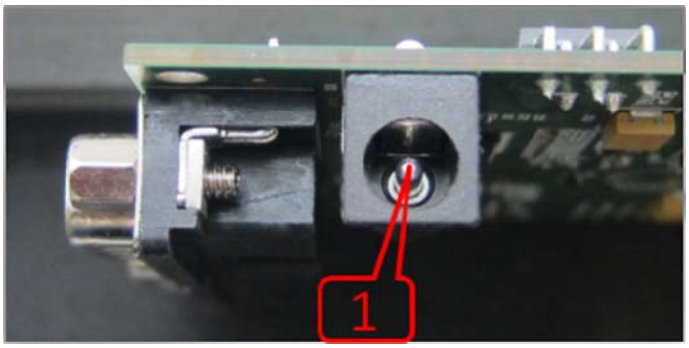


Figure 4: Power Interface

Pin	Signal	I/O	Description
1	Adapter input	I	5V/2.0A DC source input

3.2 Audio Interface

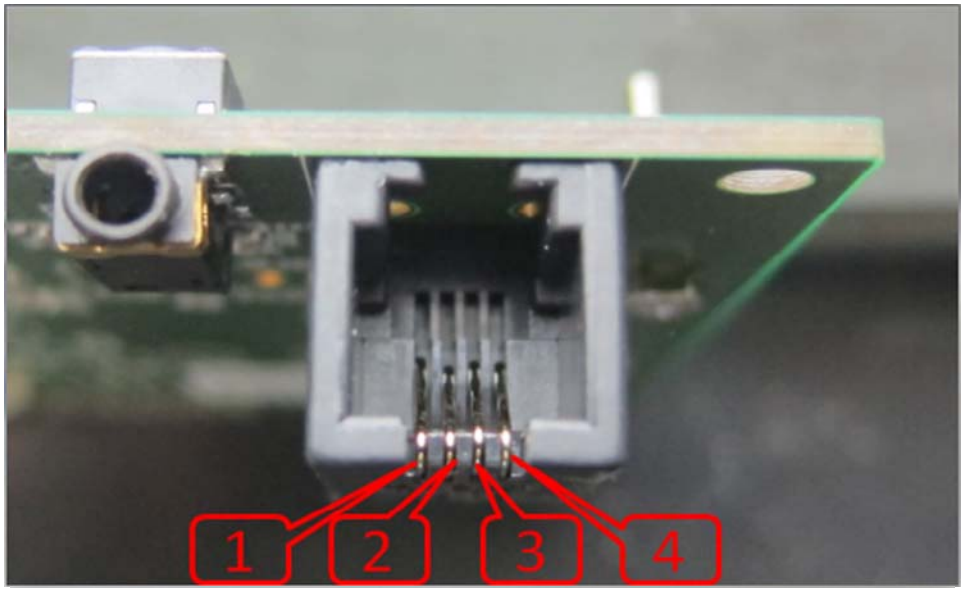


Figure 5: Audio Interface

Headset interface:

Pin	Signal	I/O	Description
1	MICP	I	Positive microphone input
2	SPKP	O	Positive receiver output
3	MICN	I	Negative microphone input
4	SPKN	O	Negative receiver output

3.3 SIM card interface

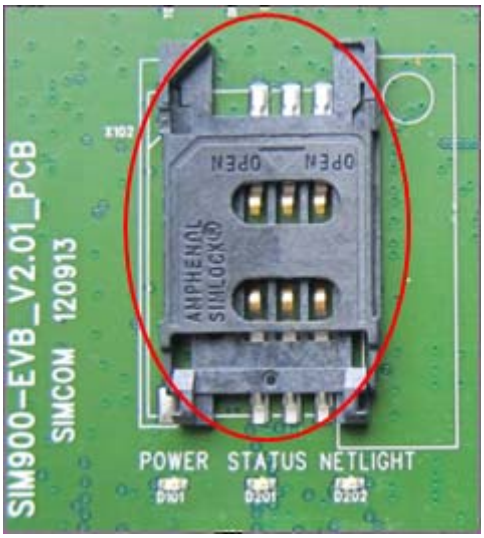


Figure 6: SIM card interface

3.4 Antenna Interface

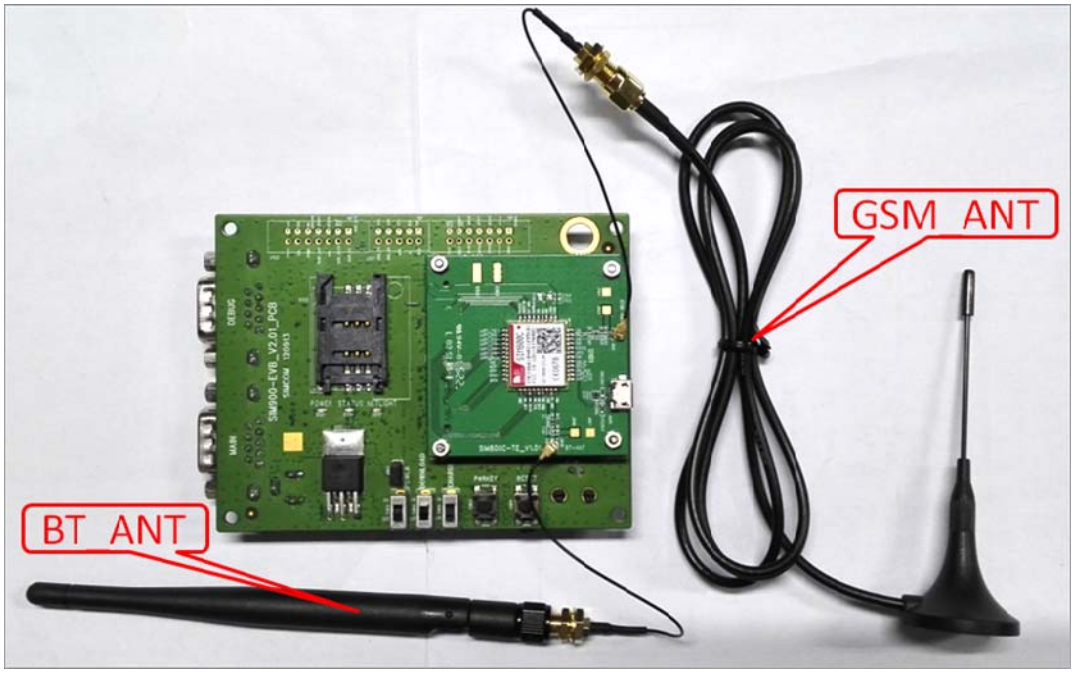


Figure 7: Antenna Interface

3.5 Serial port Interface

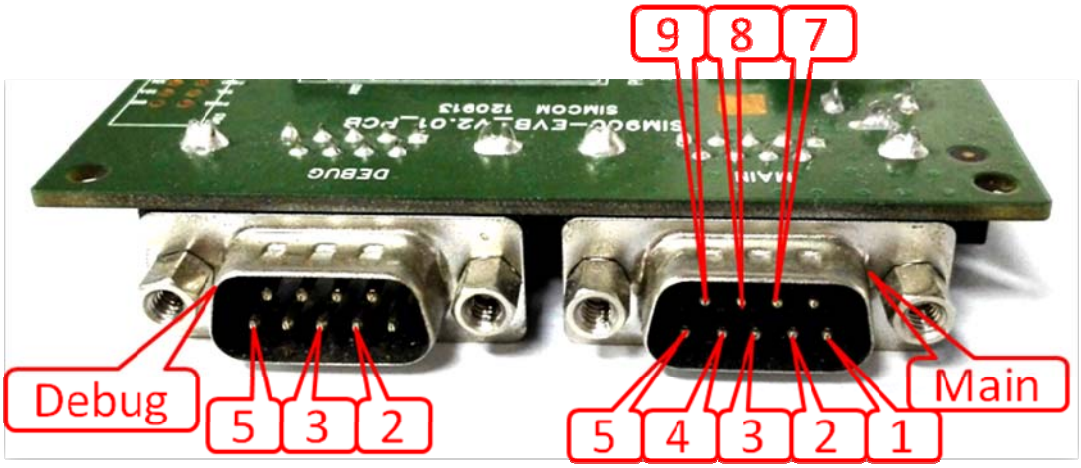


Figure 8: Serial Ports

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 LED Indicator

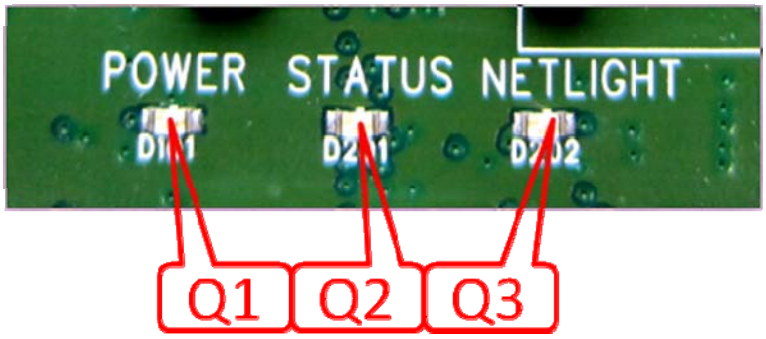


Figure 9: LED Indicator

Working state of LED as list:

Name	Description	STATUS
Q1	Power ON/OFF indicator	Bright：EVB Power ON; Extinct: EVB Power OFF
Q2	Module status indicator	Bright: Module runs normally Extinct: System is powered down
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

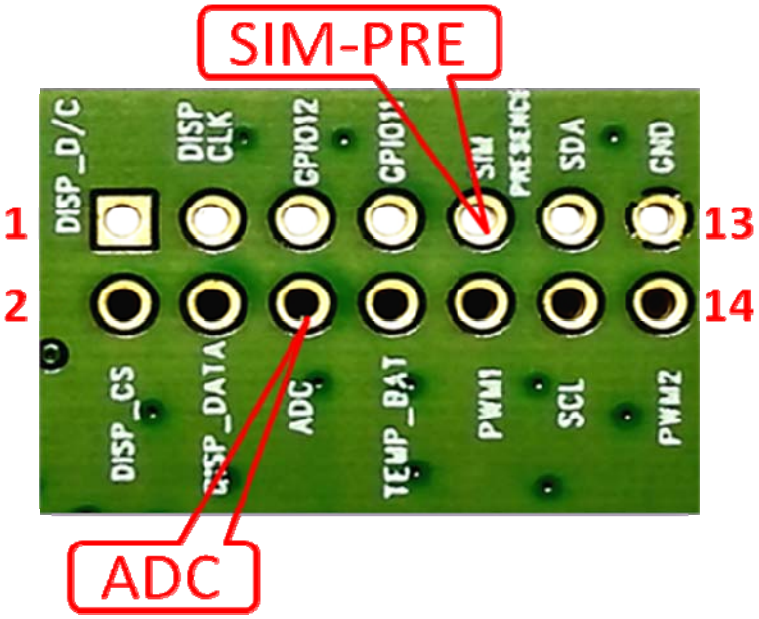


Figure 11: J103 Interface

J103 Interface Pin List:

Pin	Signal	I/O	Description
6	ADC	I	ADC input
9	SIMPRESENCE	I	SIM detect input

4.2 J201

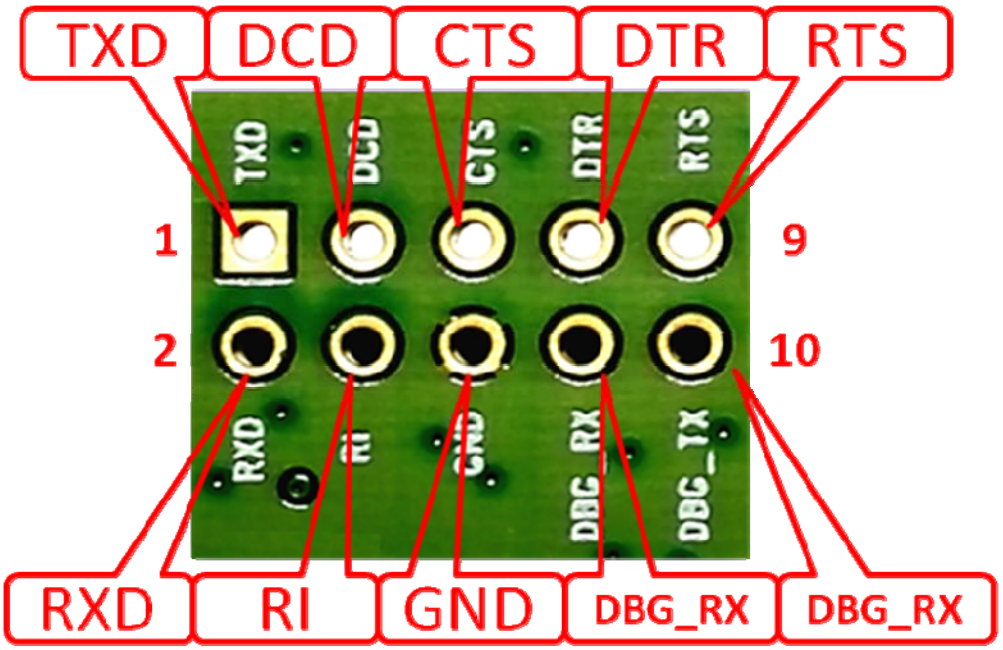


Figure 12: J201 Interface

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

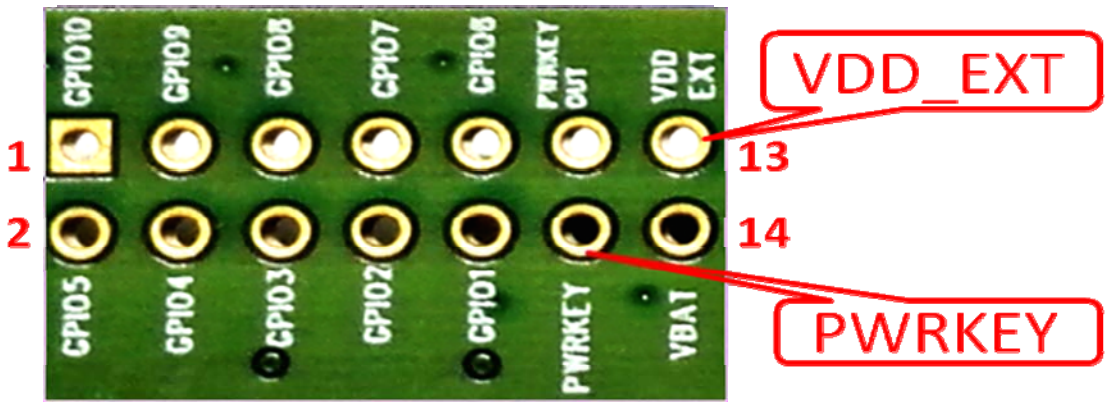


Figure 13: J104 Interface

J104 Interface Pin List:

Pin	Signal	I/O	Description
12	PWRKEY	I	POWER KEY IN
13	VDD_EXT	POWER	VEXT

5. Illustration:

5.1 Power on module:

(1) Connect the SIM800C-TE to the 60pins connector on SIM900 EVB, plug in 5V DC adapter, switch S105 to "**ON"** state; keep S101 and S102 at "**OFF"** state,

(2) Press the PWRKEY for more than 1 second and then release, SIM800C module power on.

After the module is powered on, the light Q3 will flash at a certain frequency. Through the state of LED, you can judge registering status of the module. For detailed description, please refer to SIM800C HD document.

Note: You should equip four sets of screws for better grounding to achieve a better performance.

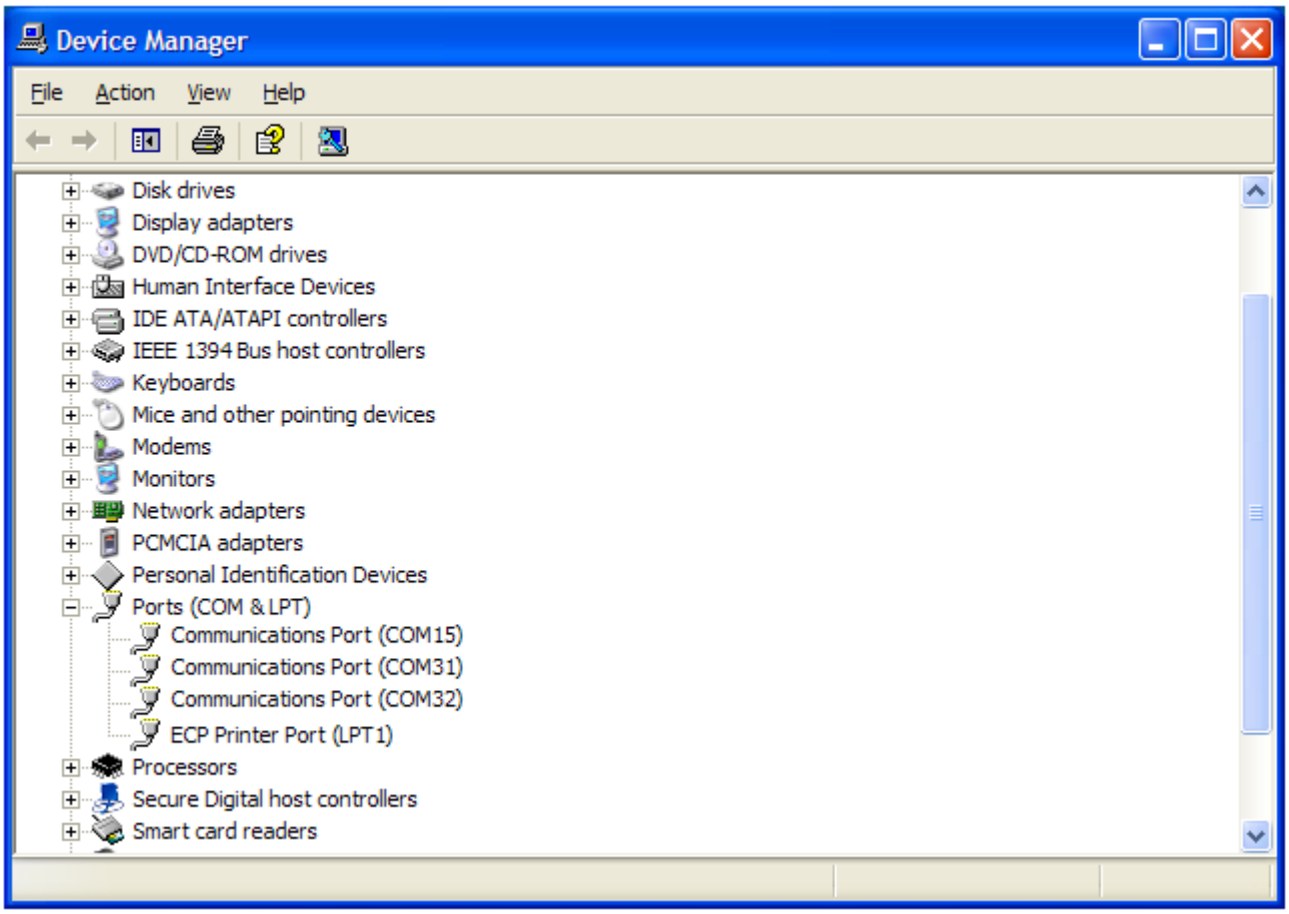
5.2 Registering Network and making a call

(1) Connect the antenna to the SIM800C-TE, insert SIM card.

(2) Connect the serial port cable to the MAIN serial port; Open the Hyper Terminal (AT command windows) on your computer.

First, check the serial port number:

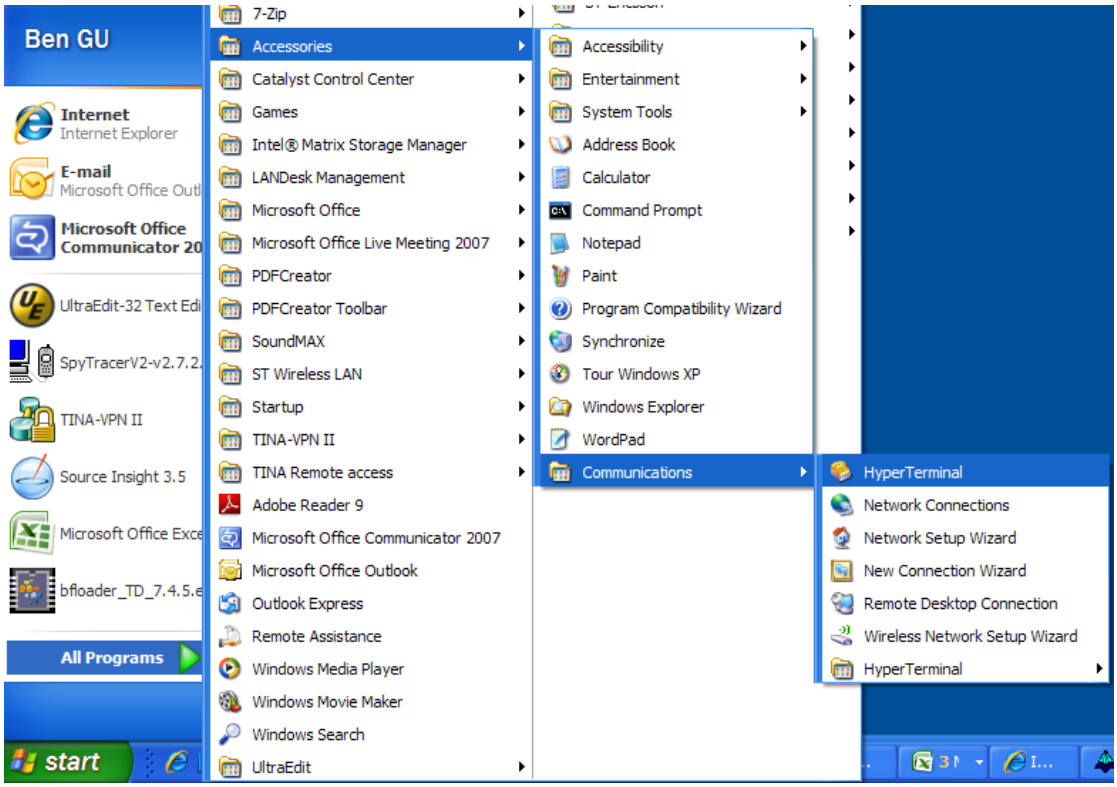
My computer (right click) →Manage → Device Manager → Ports (COM&LPT)

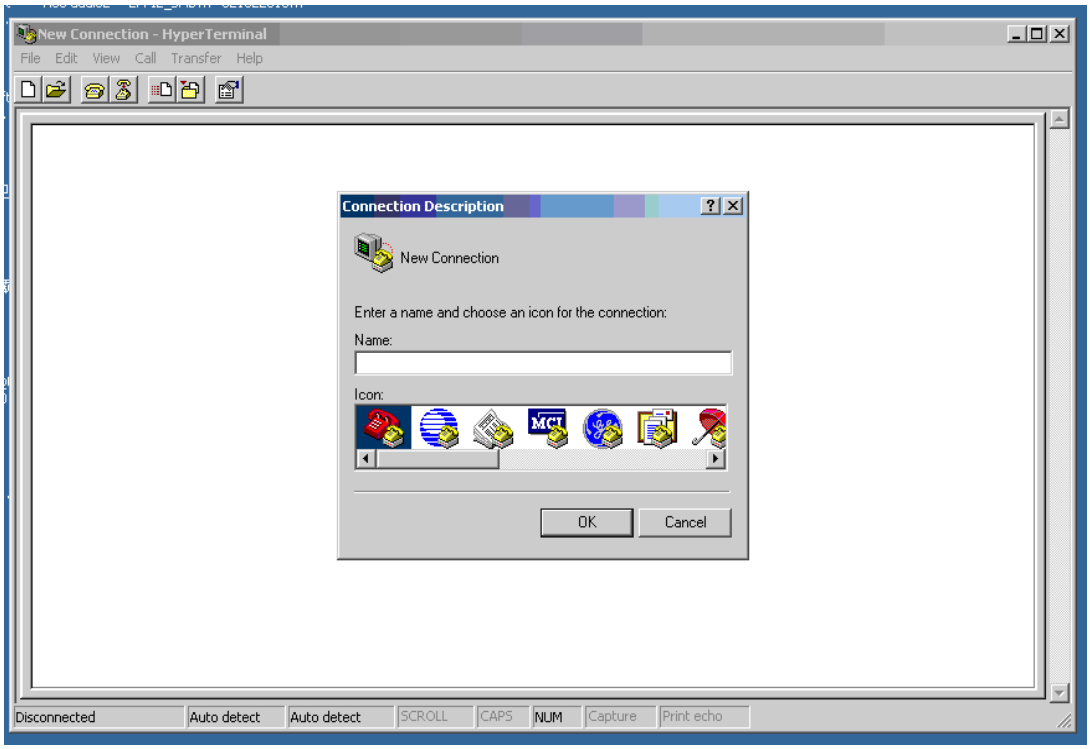


Second, use the Hyper Terminal to call the module as following:

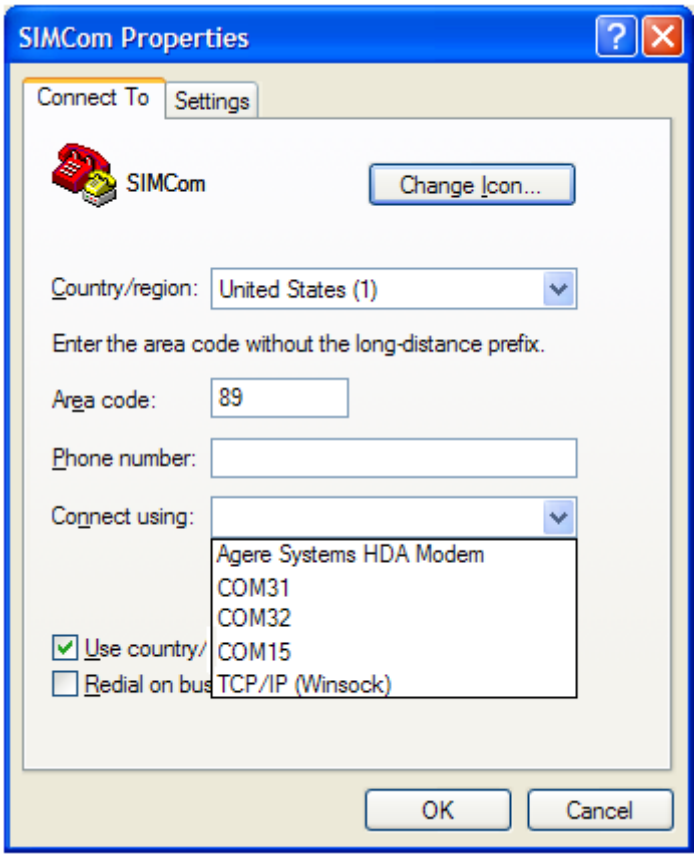
a. Open the HyperTerminal

START→ All Programs → Accessory →Communication → HyperTerminal.

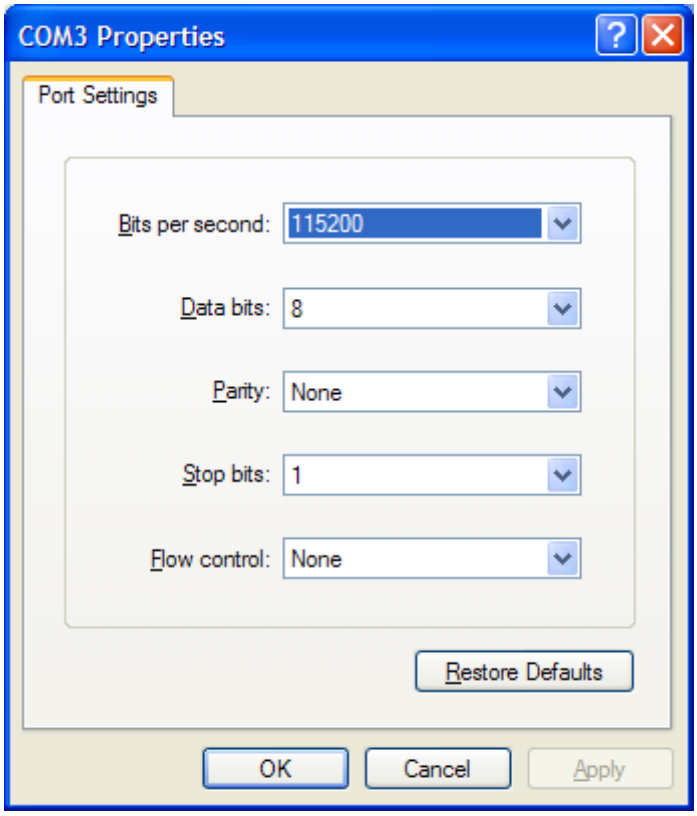

Ben GU
Internet
Internet Explorer
E-mail
Microsoft Office Outl
Microsoft Office
Communicator 20
UltraEdit-32 Text Edi
SpyTracerV2-v2.7.2
TINA-VPN II
Source Insight 3.5
Microsoft Office Exce
bfloader_TD_7.4.5.e
All Programs
start
7-Zip
Accessories
Catalyst Control Center
Games
Intel® Matrix Storage Manager
LANDesk Management
Microsoft Office
Microsoft Office Live Meeting 2007
PDFCreator
PDFCreator Toolbar
SoundMAX
ST Wireless LAN
Startup
TINA-VPN II
TINA Remote access
Adobe Reader 9
Microsoft Office Communicator 2007
Microsoft Office Outlook
Outlook Express
Remote Assistance
Windows Media Player
Windows Movie Maker
Windows Search
UltraEdit
Accessibility
Entertainment
System Tools
Address Book
Calculator
Command Prompt
Notepad
Paint
Program Compatibility Wizard
Synchronize
Tour Windows XP
Windows Explorer
WordPad
Communications
HyperTerminal
Network Connections
Network Setup Wizard
New Connection Wizard
Remote Desktop Connection
Wireless Network Setup Wizard
HyperTerminal


New Connection - HyperTerminal
File Edit View Call Transfer Help
Connection Description
New Connection
Enter a name and choose an icon for the connection:
Name:
Icon:
OK
Cancel
Disconnected
Auto detect
Auto detect
SCROLL
CAPS
NUM
Capture
Print echo

b. Configure the serial port number



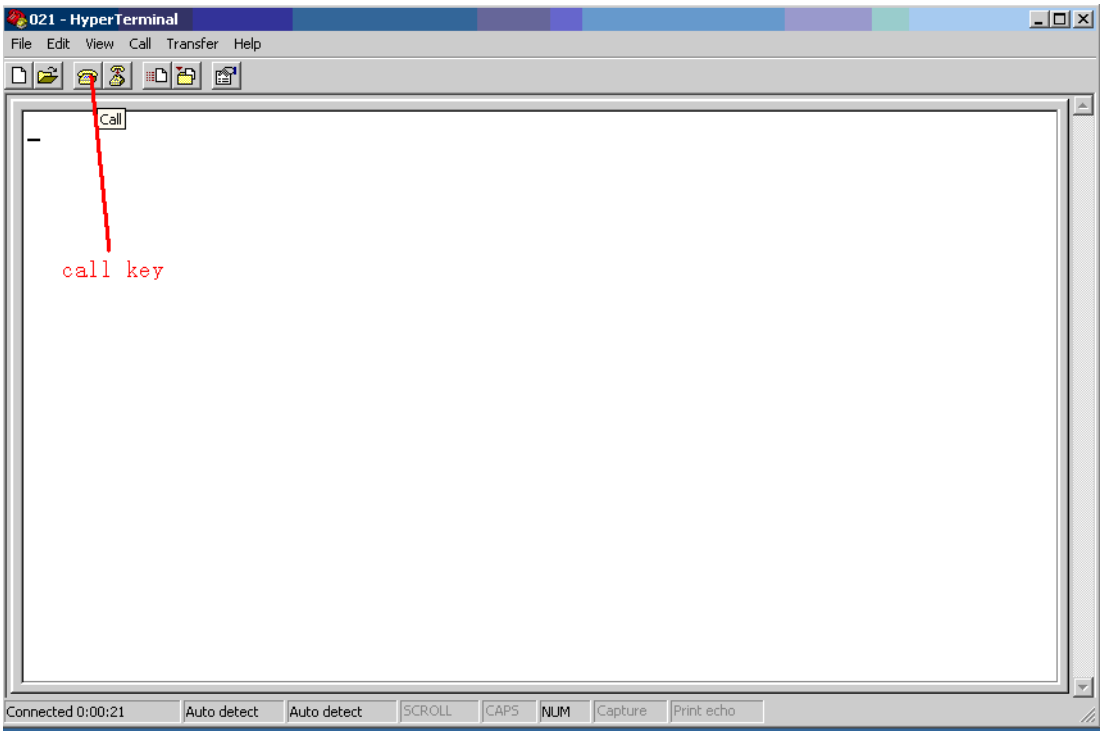
c. Set the baud rate and flow control



User can set the baud rate from 1200bps to 115200bps, and the flow control set to “None”

(3) Act on the step of running which mentioned above, power on the module, typing the AT command in the HyperTerminal, and then the SIM800C module will execute its corresponding function.

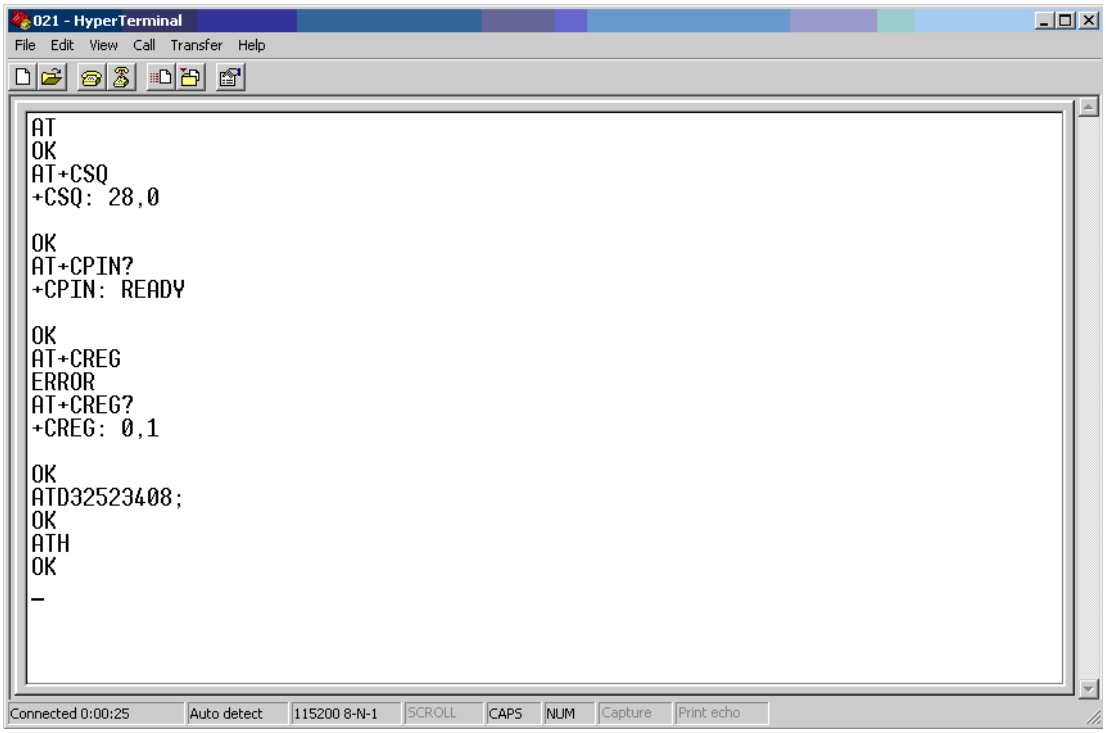
a. Connect the module.



Click the "**call**" icon.

b. Typing the AT command. When module is powered on with autobauding enabled, user must firstly send "AT" to synchronize the baud rate. The default setting of the module is autobauding.

c. Use AT command to make a call.



5.3 Software Upgrade

Customer could upgrade module's firmware through USB or UART interface.

1) Upgrade module's firmware through USB port

- Keep S101, S102 and S105 at 'OFF' state, connect the Module-TE to the 60pins connector on SIM900 EVB;
- Plug in 5V DC adapter to EVB, switch S105 to 'ON' state; keep S101 and S102 at 'OFF' state;
- Connect SIM800C-TE module to pc through USB cable;
- Insert the USB will be prompted to install the driver for the first time;
- Open the upgrade tool, click "Start All" button;
- Again insert the USB, the upgrade tool will automatically enter the upgrade process;

Note : Must be properly installed MTK chip driver.

2) Upgrade module's firmware through UART port

- Keep S101, S102 and S105 at '**OFF**' state, connect the Module-TE to the 60pins connector on SIM900 EVB;
- Plug in 5V DC adapter to EVB;
- Connect EVB MAIN UART port and the PC USB port through the USB-to-RS232 cable;
- Open the upgrade tool, click 'Start All' button after configuration options
- Switch S105 and S102 to 'On' state, the upgrade tool will automatically enter the upgrade process.

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