

## Breakout SIM808 User Manual



### 1. Preparation:

<b>Board</b>	<b>BK-SIM808</b>
<b>Serial tool</b>	<b>TERMITE26.rar</b>

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**OEM PCBA** : <http://www.buypcb.com>  
**Retail Store** : <http://www.aliexpress.com/store/605000>  
**Golden supplier on Alibaba** : <http://and-global.en.alibaba.com>  
**Email** : [info@and-global.com](mailto:info@and-global.com)  
**Tel** : +86-755-28099797



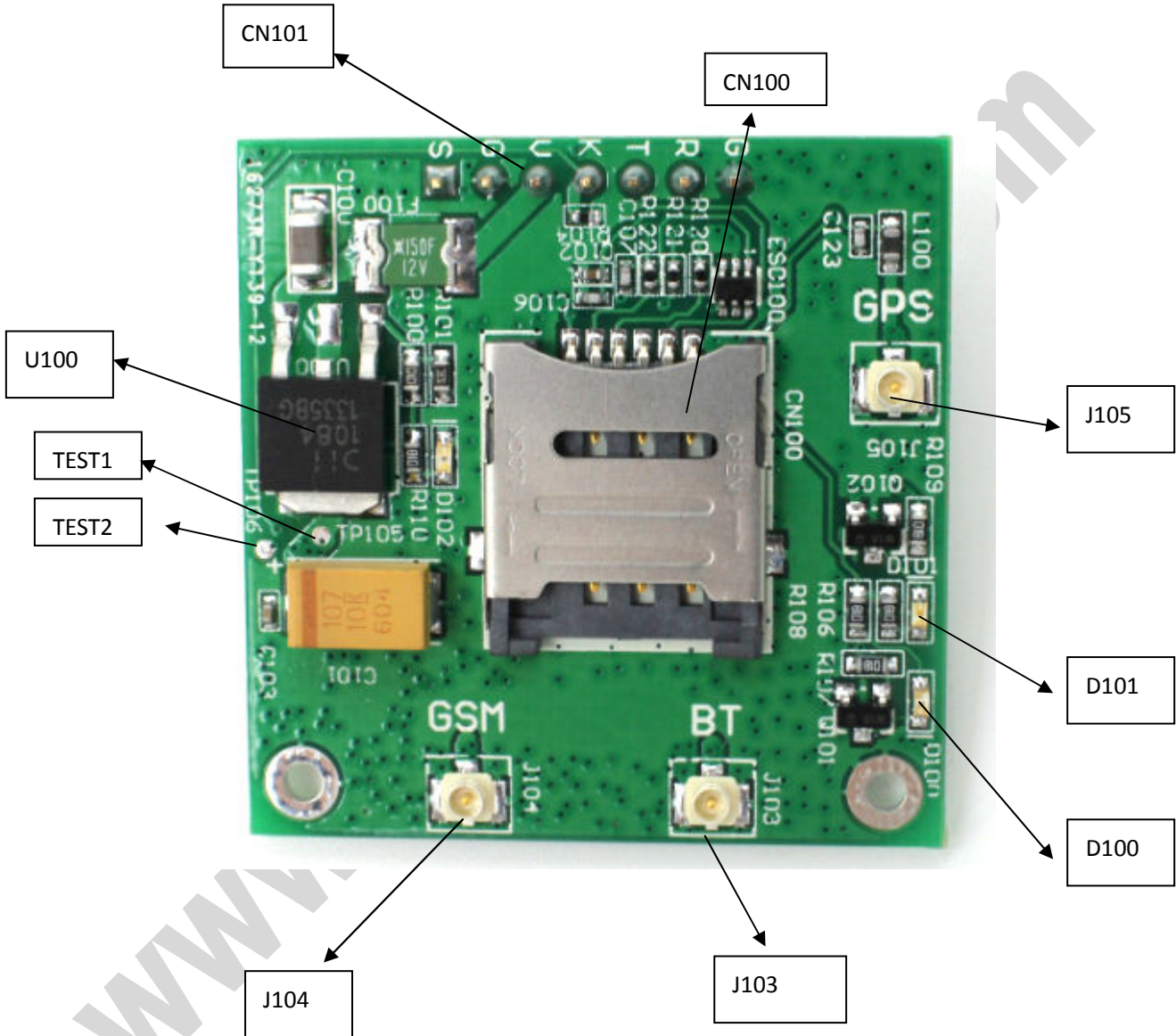
## 2. Overview

### 2.1 Module feature

- Quad-Band GSM 850/900/1800/1900MHz
- GPRS multi-slot class 12/10
- GPRS mobile station class B
- Compliant to GSM phase 2/2+
  - Class 4 (2 W @ 850/900 MHz)
  - Class 1 (1 W @ 1800/1900MHz)
- Control via AT commands (3GPP TS 27.007,27.005 and SIM Com enhanced AT Commands)
- Supply voltage range:3.4v~4.4v
  
- Low power consumption
  
- Operation temperature:-40°C to +85 °C
  
- GPS Receiver type
- 22tracking/66 acquisition-channel GPS L1 C/A code
  
- Sensitivity
  - Tracking: -165 dBm
  - Cold starts: -147 dBm
- Time-To-First-Fix
  - Cold start: 30s (typ)
  - Warm start: 28s (typ)
  - Hot start: 1s (typ)
- Accuracy
  - Horizontal Position: <2.5m CEP
  
- Support Bluetooth function

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**2.2 PCBA overview**



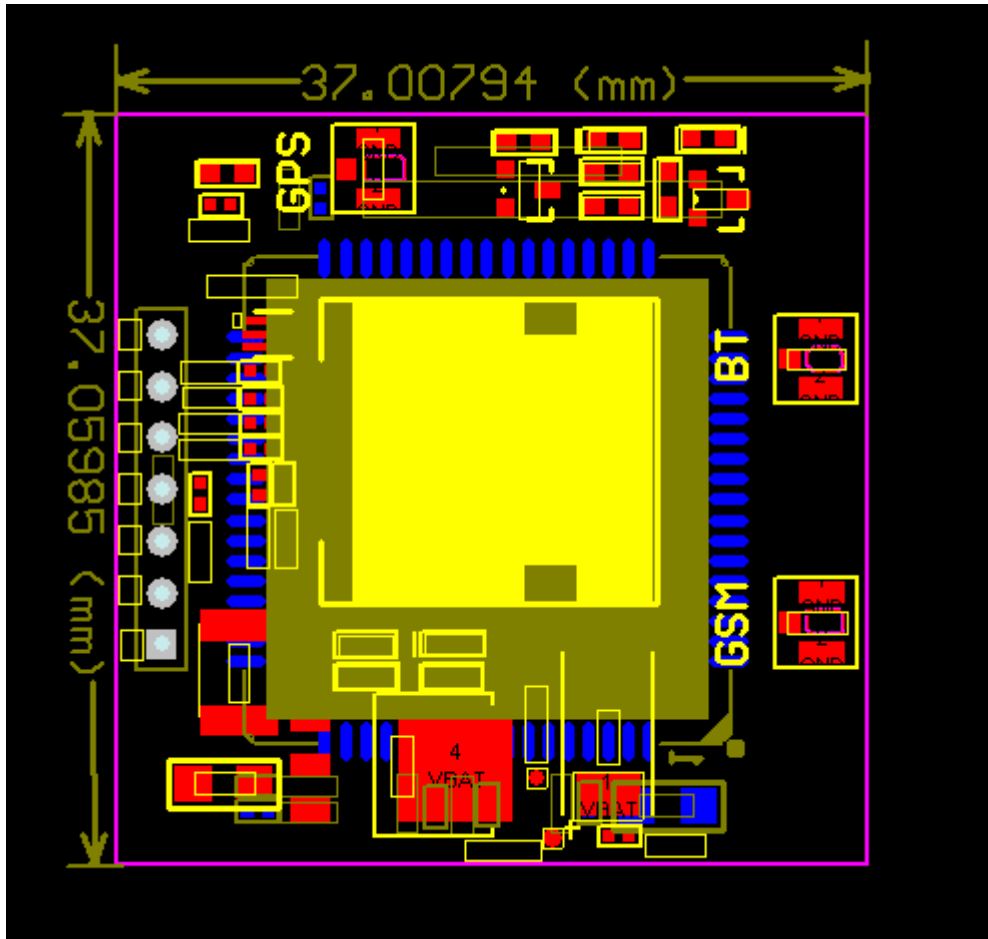
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CN100	Micro SIM card socket
CN101	6pin 2.54mm header interface
D102	Power indicator(RED)
D100	GSM NET LIGHT indicator(Green)
D101	GPS 1PPS LED indicator(Blue)
U100	The power conversion chip
J104	GSM ANT
J105	GPS ANT
J103	Bluetooth ANT
Reference voltage test point	UNIT (V)
TEST1	3.8V
TEST2	2.8V

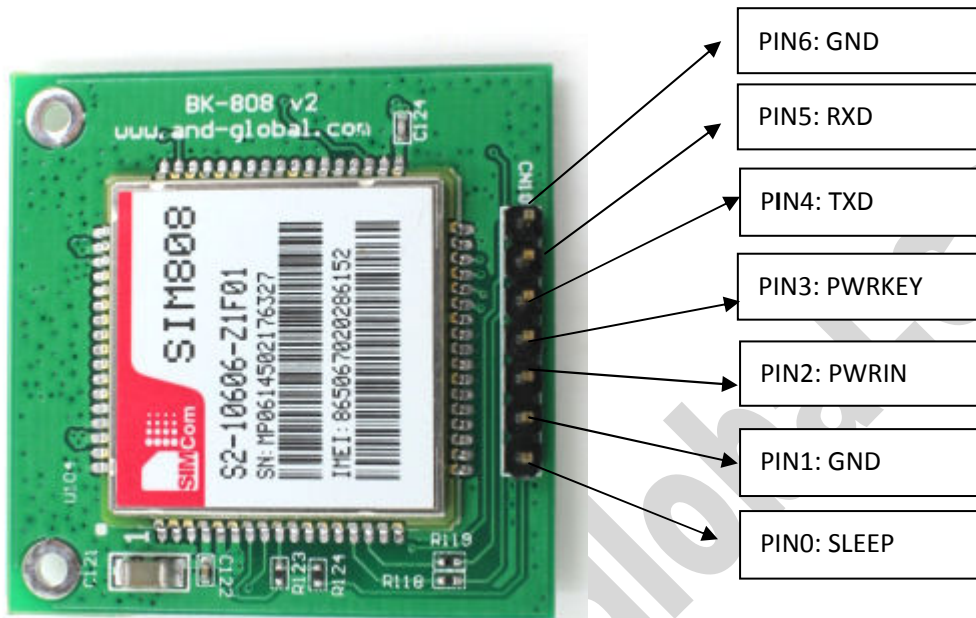
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**2.3 PCBA dimension: 37\*37mm.**



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### 3. Pin definition



**Note: PWRIN range is from 5.0V to 10V, 5.0V is recommended, TXD /RXD are TTL level which can be directly connected with MCU.**

#### 3.1 Pin definition of 6pin connector

Pin name	Pin number	Mark on PCB	Description	Comment
SLEEP	0	S	control module into sleep mode	Connect with DTR via R124
GND	1,6	G	GND	
PWRIN	2	V	The power supply	5V-10V
PWRKEY	3	K	Power down	Shorted with GND via R104 by default
TXD	4	T	Transmit Data	TTL Series data Output
RXD	5	R	Receives Data	TTL Series data Input

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### 3.2 How to use TXD and RXD (Default baud rate is 9600bps)


## 4. How to test the Dev808 EVB by AT command

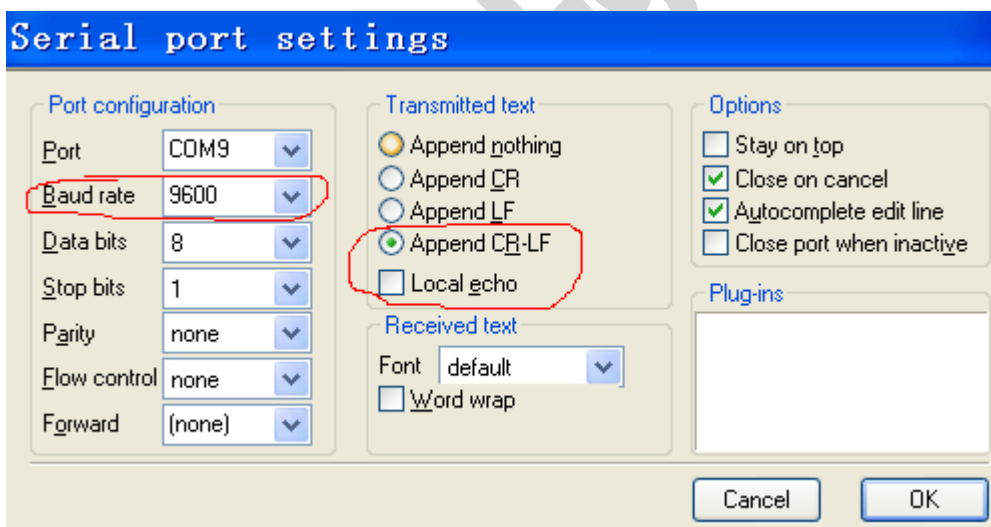
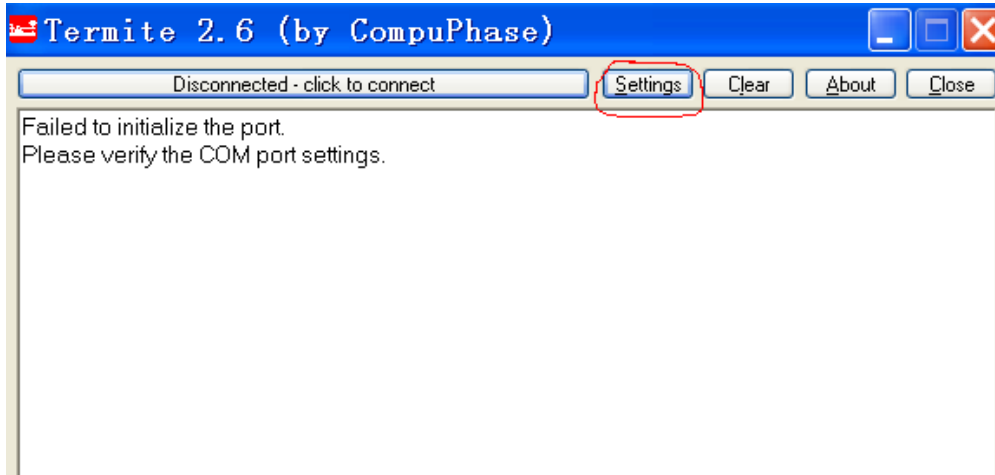
4.1 Installing GSM antenna, GPS antenna and SIM card for BK-SIM808 Board, Feed power supply to PWRIN pin, LED indicator D102 will be lighted. (Note: PWRIN range is from 5.0V to 10V. 5.0V is recommended)

4.2 D100 LED indicator, Blink quickly shows un-registration network, Blink slowly shows registration successful.

(Note: Should confirm whether SIM card is inserted)

Status	SIM808 behavior
Off	SIM808 is not running
64ms On/800ms Off	SIM808 not registered the network
64ms On/3000ms Off	SIM808 registered the network
64ms On/300ms Off	PPP GPRS communication is established

4.4 Open serial software  and choose right serial number, Baud rate as Custom as below:



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```
COM9 9600 bps, 8N1, no handshake [Settings] [Clear] [About] [Close]
AT
OK
AT+GSV
SIMCOM_Ltd
SIMCOM_SIM808
Revision:1418B01SIM808M32_BT
OK
AT+IPR=9600
OK
AT&W
OK
AT+CSQ
+CSQ: 23,0
OK
ATD10086;
OK
ATH
OK
AT+CGNSPWR=1
OK
AT+CGNSINF
+CGNSINF: 1,1,20150915094913.000,22.637698,114.033162,96.400,0.26,239.8,1,,2,1,2,3,1,0,,6,5,
OK
AT+BTPower=1
OK
AT+BTSCAN=1,20
OK
+BTSCAN: 0,1,"HUAWEI MT2-L02",14:b9:68:36:40:60,-50
```

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## 5. AT command sample:

AT

OK

AT+CSQ

+CSQ: 31, 0

OK

### 5.1 How to make a call

ATD10086;

OK

ATH

OK

### 5.2 How to make a TCP/IP connection

AT +CREG?

+CREG: 0, 1

OK

AT+ CGREG?

+CGREG: 0, 1

OK

AT+ CGATT?

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+CGATT: 1

OK

AT+GSV

SIM COM \_Ltd

SIMCOM\_SIM808

Revision: 1308B02SIM808M32

OK

AT+IPR=9600

OK

AT+CSTT="CMNET"

OK

AT+CIICR

OK

AT+CIFSR

10.132.214.222

AT+CDNSGIP="www.sim.com"

OK

+CDNSGIP: 1,"www.sim.com","58.32.231.146"

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AT+CDNSGIP="a b c d e f"

OK

+CDNSGIP: 0, 11

AT+CIPSTART="TCP", "WWW.SIM.COM", 80

OK

CONNECT OK

AT+CIPSEND

> TER THIS IS GAOJIAZE!

SEND OK // sending Data is OK

HTTP/1.1 400 Bad Request

Content-Type: text/html

Date: Mon, 11 Oct 2010 02:33:29 GMT

Connection: close

Content-Length: 20

<h1>Bad Request</h1>

CLOSED

AT+CIPSTART="TCP", "WWW.SIM.COM", 80

OK

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CONNECT OK

AT+CIPSEND

> DNS TEST

SEND OK

### 5.3 How to get GPS information

AT+CGNSPWR=1

OK

AT+CGNSINF

+CGNSINF:1,1,20150915094913.000,22.637698,114.033162,96.400,0.26,239.8,1,,2.1,2.3,1.0,,6,5,,,52,,

OK

command	Illustration	Value
AT+GSV	Inquire module vendor information	
AT+IPR	Setting GSM baud rate	9600
AT+CSQ	inquire Signal quality	
ATD	Make a call	ATD10086;
ATA	Pick up a call	ATA
ATH	Hang up	ATH
AT+CREG?	Inquire GSM registered	
AT+CGREG?	Inquire GPRS registered	
AT+CGATT?	Check if the MS is connected to the GPRS network	
AT+CSTT	Set wireless access point	CMNET
AT+CIICR	Launch GPRS connection	

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## AND Technologies Co., ltd

AT+CIFSR	Get the IP address	
AT+CDNSGIP	Query the IP address of given domain name	<a href="http://www.sim.com/">www.sim.com/</a> a b c d e f
AT+CIPSTART	Start up connection	TCP,WWW.SIM.COM,80
AT+CIPSEND	Send data through connection	
AT+CGNSPWR	Open GPS	1
AT+CGPSINF	Get current GPS location info	

### 6.Package list:

Name	Qty	Unit
BK-SIM808	1	Pc

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