

Breakout SIM7000 User Manual



1. Preparation:

Board	BK-SIM7000
Serial tool	sscom32E.exe

AND Wireless : <http://www.and-global.com>

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

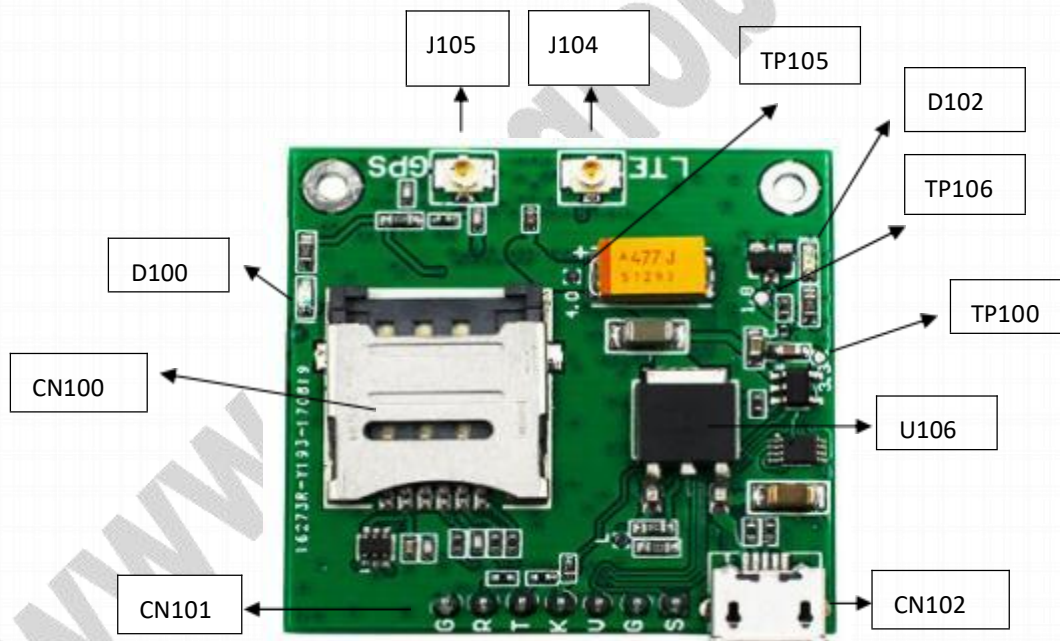
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2. Overview

2.1 Module feature

- ✎ Multi-Band LTE module which supports LTE CAT-M1(eMTC) and NB-IoT
- ✎ GPRS/EDGE 900/1800MHz
- ✎ Control Via AT Command, Rich interfaces including UART,USB2.
- ✎ Supply voltage range:3.0v~4.3v, Typ:3.8V
- ✎ Dimension: 24x24x2.6mm
- ✎ Operation temperature:-40°C to +85 °C
- ✎ GNSS(GPS, GLONASS and BeiDou/Compass, Galileo, QZSS)

2.2 BOARD overview



CN100	Micro SIM card socket
CN101	7pin 2.54mm header interface
CN102	USB interface

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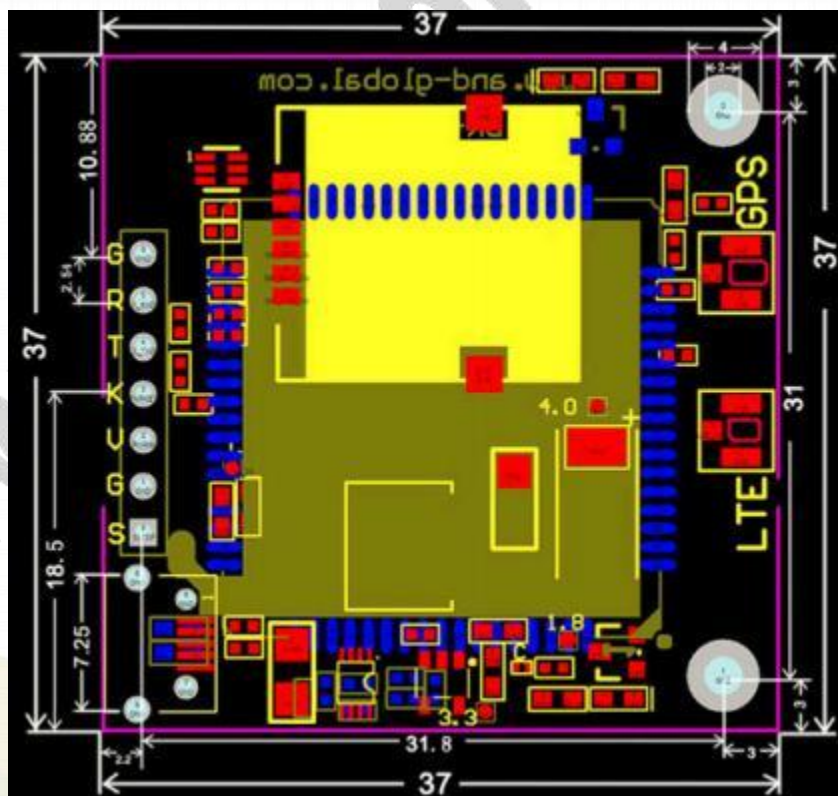
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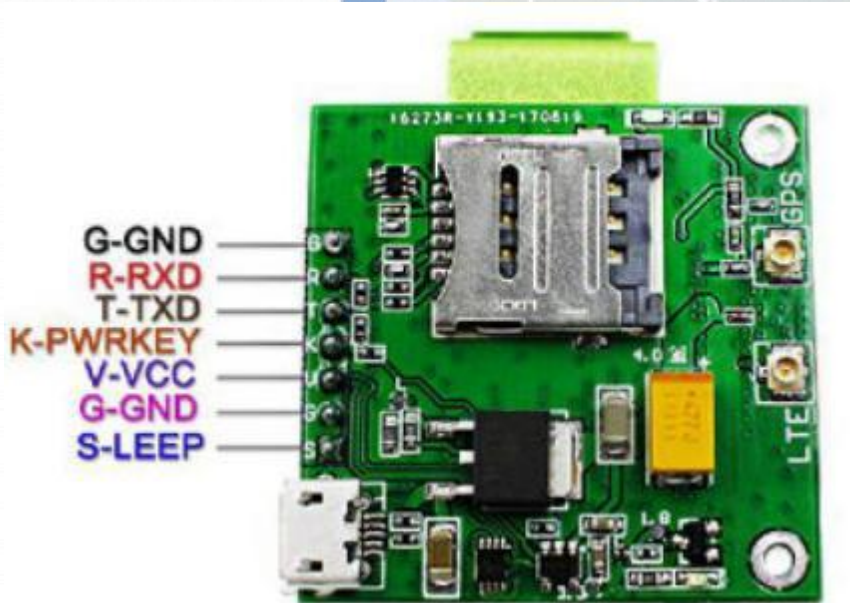
D102	Power indicator(RED)
D100	NET LIGHT indicator(Green)
U106	The power conversion chip
J104	LTE ANT
J105	GPS ANT
TP105	4.0V
TP100	3.3V
TP106	1.8V

2.3 PCBA dimension: 37*37mm.



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3. Pin definition



Note: VCC range is from 5.0V to 10V, 5.0V is recommended. VCC cannot be present with USB POWER. 即 USB 电源不能与 VCC 同时供电.

TXD /RXD are 3.3V TTL level which can be directly connected with 3.3V 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 Q102
GND	1,6	G	GND	
VCC	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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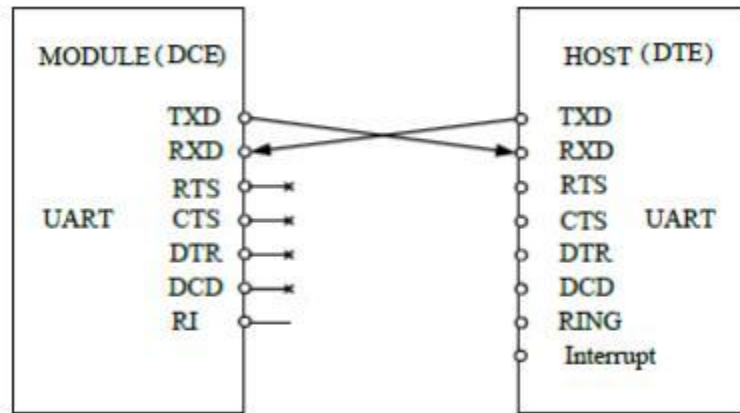
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3.2 How to use TXD and RXD (Default baud rate is 115200bps)



4. How to test the BK-SIM7000 by AT command via UART

4.1 Installing GSM antenna, GPS antenna and SIM card for BK-SIM7000 Board. (Note: Please use NB-IoT card, not normal Mobile phone card.)

4.2 Feed power supply to VCC pin, RED LED indicator will be lighted. (Note: VCC range is from 5.0V to 10V. 5.0V is recommended.)

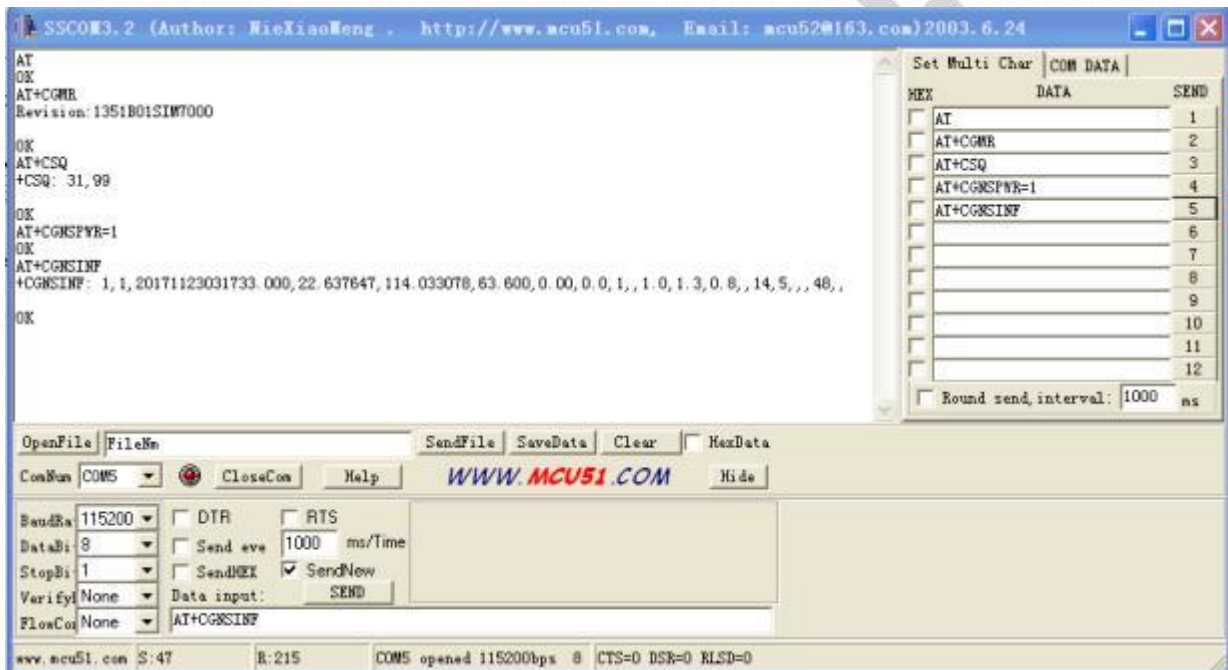
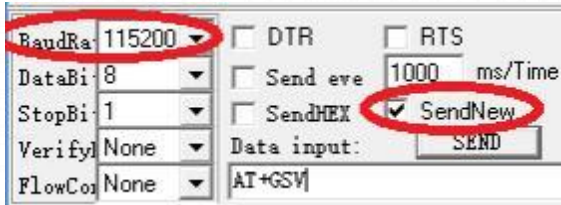
4.3 GREEN LED indicator, Blink quickly shows un-registration network , Blink slowly shows registration successful. (Note: Should confirm whether correct NB-IoT SIM card is inserted)

Status	SIM868 behavior
Off	Powered off
64ms On/ 800ms Off	Not registered the network
64ms On/ 3000ms Off	Registered to the network
64ms On/ 300ms Off	GPRS communication is established

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4.4 Open serial software **sscom32E** and choose right serial number, Baud rate as below, please keep “SendNew” selected:



5. How to test the BK-SIM7000 by AT command via USB

(NOTE: USB Power cannot be present with VCC POWER simultaneously)

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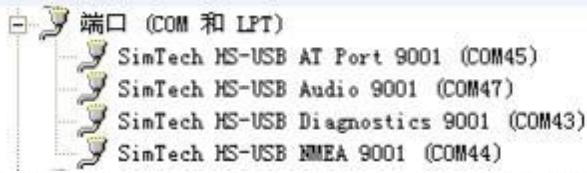
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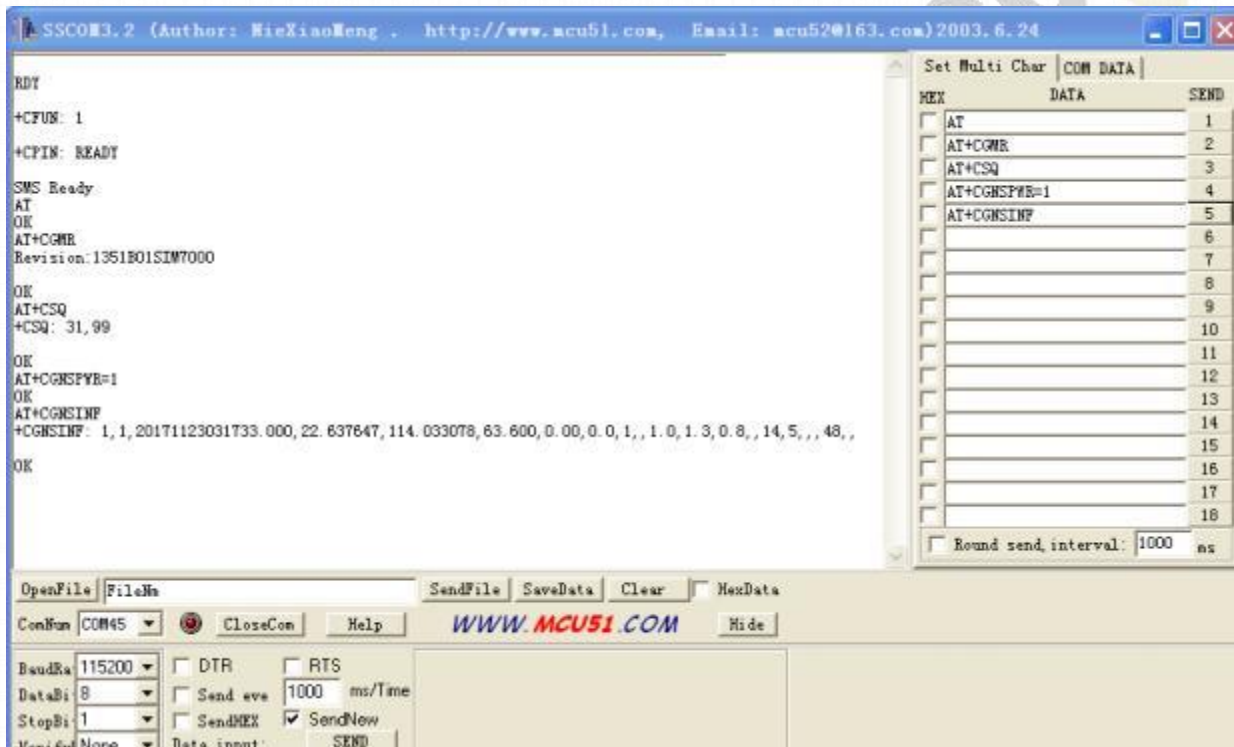
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5.1 Remove all connection on CN101 7pin connector, Power up the SIM7000 Breakout board only via USB, Install SIM7000_Windows7.rar driver following the computer indication. The computer will show as belows, it means that the driver is installed correctly.



5.2 Select AT Port 9001, 115200bps and SendNew, you can repeat all command in Item4.4.



6.Package list:

Name	Qty	Unit
BK-SIM7000	1	Pcs

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