

Breakout SIM7070 User Manual



1. Preparation:

Board	BK-SIM7070
Serial tool	sscom32E.exe

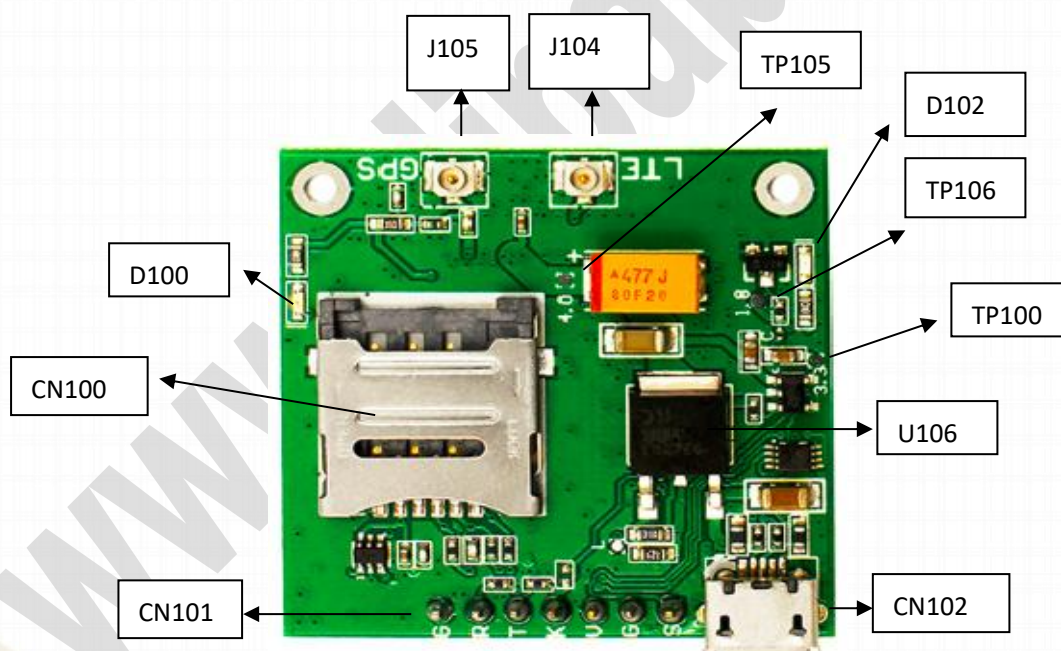
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2. Overview

2.1 Module feature

- Multi-Band LTE module which supports LTE CAT-M1(eMTC) and NB-IoT
- GPRS 850/900/1800/1900MHz
- Control Via AT Command, Rich interfaces including UART,USB.
- Module Supply voltage range:3.0v~4.6v, Typ:3.8V
- Dimension: 24x24x2.3mm
- Operation temperature:-40℃ to +85 ℃
- GNSS(GPS, GLONASS and BeiDou, Galileo

2.2 BOARD overview



CN100	Micro SIM card socket
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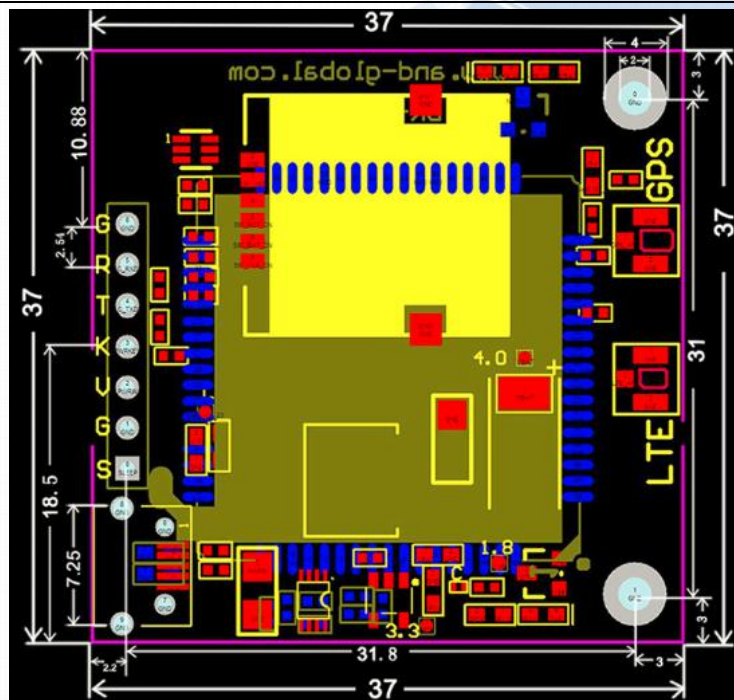


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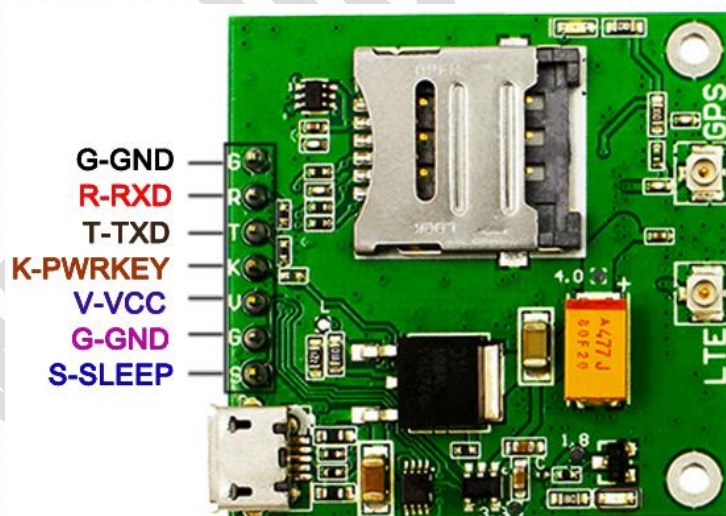
CN101	7pin 2.54mm header interface
CN102	USB interface
D102	Power indicator(RED)
D100	NET LIGHT indicator(Green)
U106	The power conversion chip
J104	LTE ANT
J105	GPS ANT
TP105	4.0V
TP100	3.3V
TP106	1.8V

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.

TXD /RXD are 3.3V TTL level which can be directly connected with 3.3V MCU.

After the PWRKEY continues to pull down more than 12S, the system will automatically

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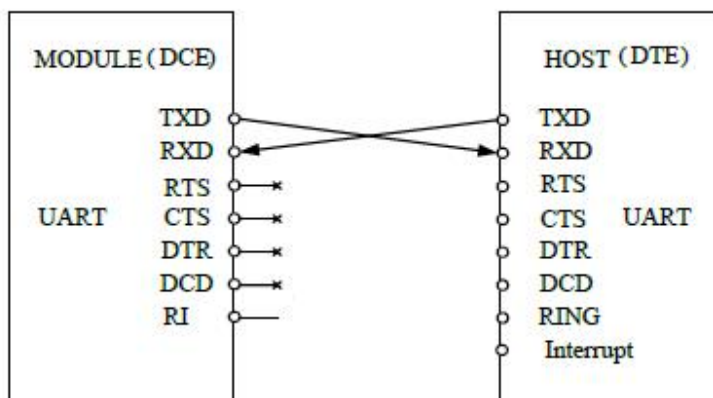
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reset. Therefore, long-term grounding is not recommended for PWRKEY pin.

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	System power on/off	Active low. Power on/Power off/Reset Function
TXD	4	T	Transmit Data	3.3V TTL Series data Output
RXD	5	R	Receives Data	3.3V TTL Series data Input

3.2 How to use TXD and RXD (Default baud rate is 115200bps)



4. How to test the BK-SIM7070 by AT command via UART

4.1 Installing LTE antenna, GPS antenna and SIM card for BK-SIM7070 Board. (Note: Please use NB-IoT card, not normal Mobile phone card.)

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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)

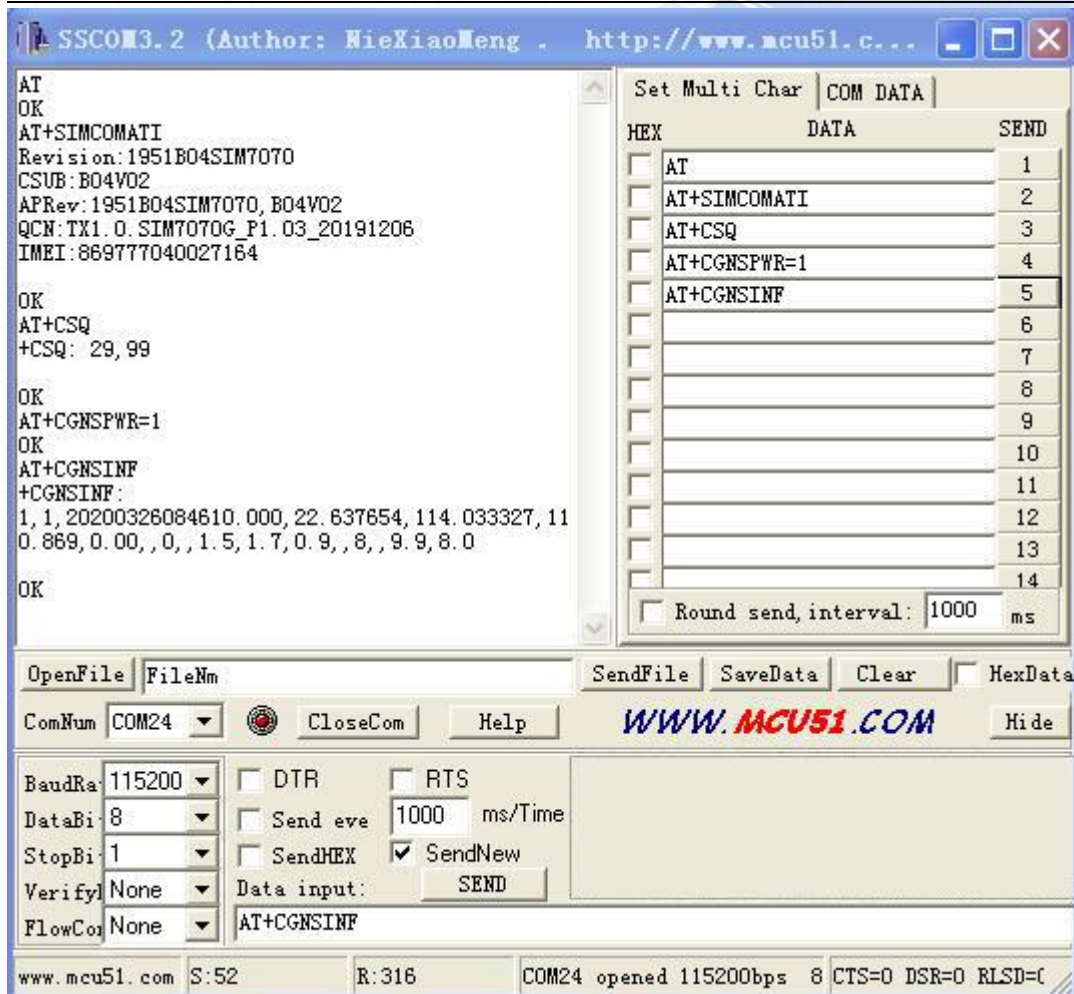
NETLIGHT pin status	Module status
64ms ON, 800ms OFF	No registered network
64ms ON, 3000ms OFF	Registered network
64ms ON, 300ms OFF	Data transmit
OFF	Power off or PSM mode



4.4 Open serial software  and choose right serial number, Baud rate as below, please keep "SendNew" selected:



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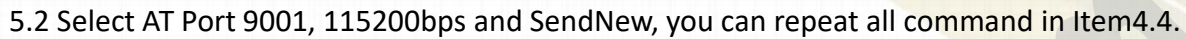


5. How to test the BK-SIM7070 by AT command via USB

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

5.1 Remove all connection on CN101 7pin connector, Power up the SIM7070 Breakout board only via USB, Install SIM7070_SIM7080 WIN7_WIN10_USB_Driver_V1.00.rar driver following the computer indication. The computer will show as belows, it means that the driver is installed correctly.

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