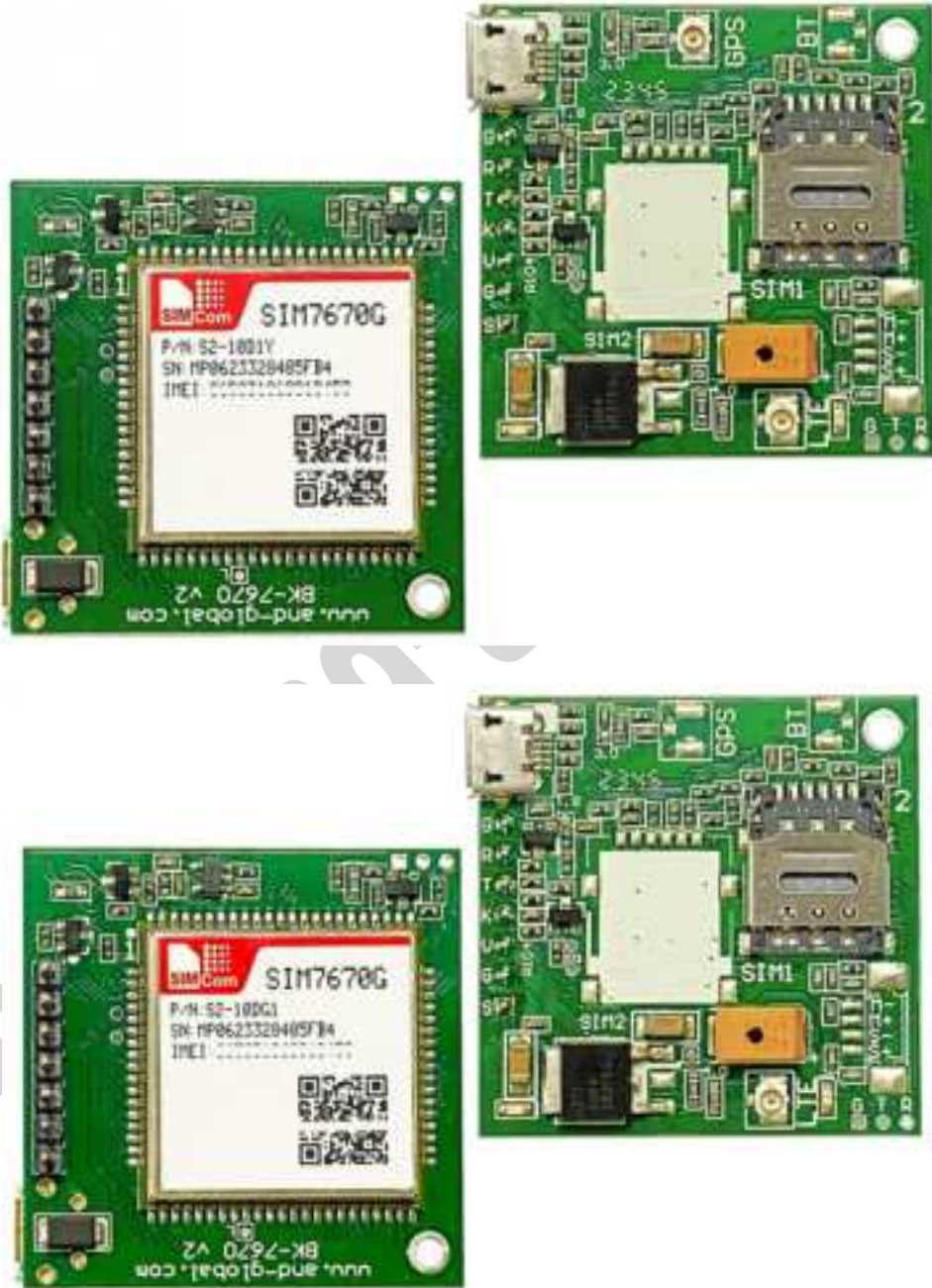




Breakout SIM7670 User Manual



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1. Preparation:

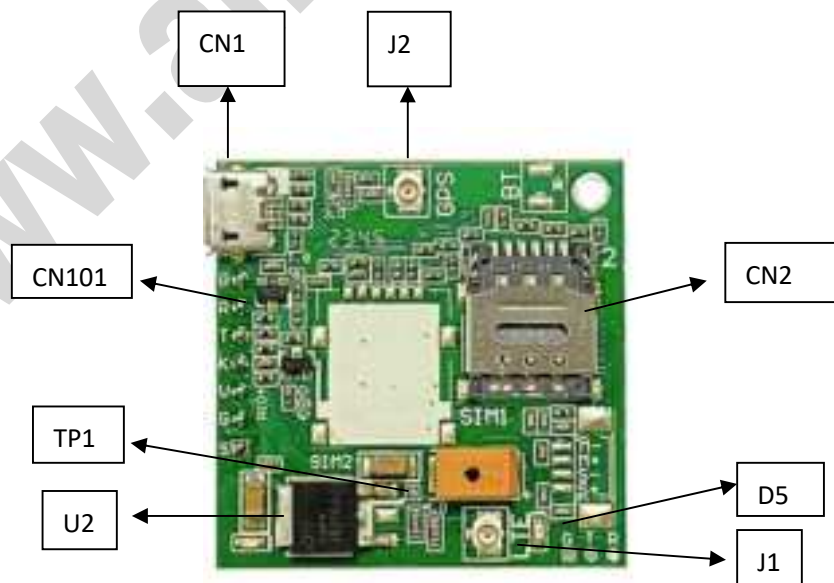
Board	BK-SIM7670
Serial tool	sscom32E.exe

2. Overview

2.1 Module feature

- The SIM7670 Series is the LTE Cat 1bis module based on the latest QCX216 chipset that supports wireless communication modes of LTE-FDD/LTE-TDD. It supports maximum 10Mbps downlink rate and 5Mbps uplink rate
- Control Via AT Command, Rich interfaces including UART,USB2.0
- Operation temperature:-40℃ to +85 ℃
- GNSS optional

2.2 BOARD overview



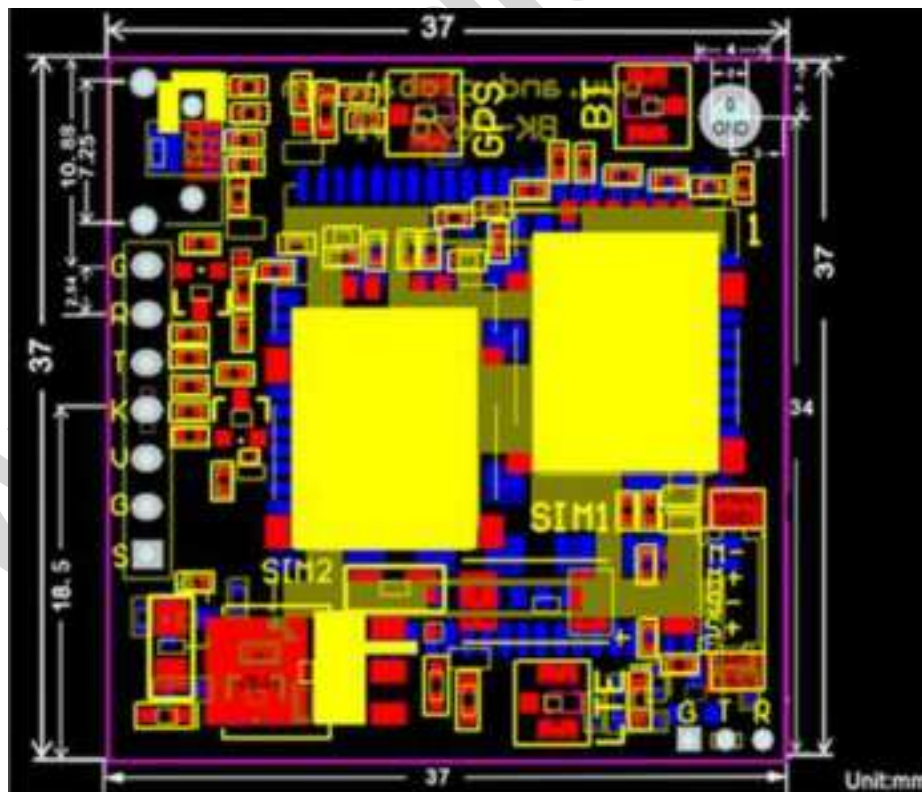
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CN2	Nano SIM card socket
CN101	7pin 2.54mm header interface
CN1	USB interface
D5	NET LIGHT indicator(Green)
U2	The power conversion chip
J1	LTE ANT
J2	GPS ANT(Optional)
TP1	4.0V

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. Please ensure 0.8A current for the VCC pin. TXD /RXD are 3.3V TTL level which can be directly connected with 3.3V MCU.

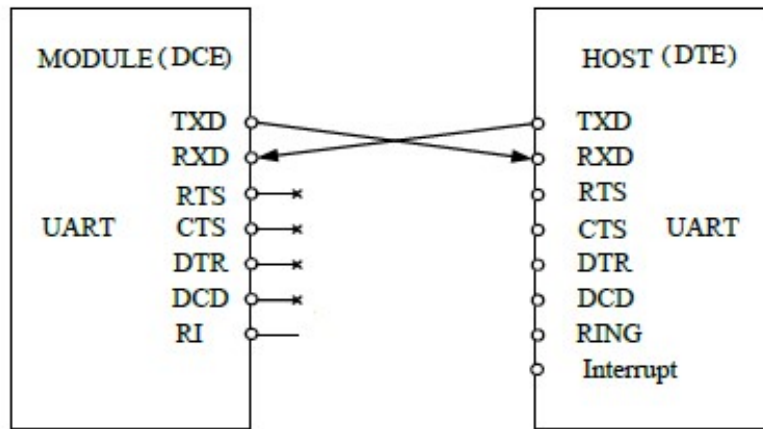
3.1 Pin definition of 6pin connector

Pin name	Pin number	Mark on PCB	Description	Comment
SLEEP	0	S	control module into sleep mode	Connect with DTR via Q4
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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3.2 How to use TXD and RXD (Default baud rate is 115200bps)



4. How to test the BK-SIM7670 by AT command via UART

4.1 Installing LTE antenna, GPS antenna and NanoSIM card for BK-SIM7670 Board.

4.2 Feed power supply to VCC pin. (Note: VCC range is from 5.0V to 10V. 5.0V is recommended.)

4.3 GREEN LED indicator, Blinking shows registration successful.

NETLIGHT pin status	Module status
Always On	Searching Network
200ms ON, 200ms OFF	Data Transmit/Registered
OFF	Power off / Sleep

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

The image shows the configuration window of the SSCom32E software. The 'BaudRate' dropdown menu is set to '115200'. The 'SendNew' checkbox is checked. Other settings include 'DataBits' at 8, 'StopBits' at 1, 'Verify' at None, 'FlowControl' at None, 'DTR' and 'RTS' checkboxes are unchecked, 'Send even' is set to 1000 ms/Time, 'SendHEX' is unchecked, 'Data input' is set to 'SEND', and 'AT+GSV' is selected in the 'Data input' field.

The image shows the main window of the SSCom32E software. The left pane displays the results of AT commands: AT+SIMCOMATI, Manufacturer: SIMCOM INCORPORATED, Model: SIM7670G-MNSV, Revision: 2360B01SIM767IM5A_M, SIM767IM5A_B01V01_231017, IMEI: 865031060010302, OK, AT+IPREX=115200, OK, AT+CPIN?, +CPIN: READY, OK, AT+CSQ, +CSQ: 27,0, OK, AT+CPSI?, +CPSI: LTE, Online, 460-00, 0x262C, 46717970, 102, EUTRAN-BAND41, 40936, 5, 5, -11, -89, -78, 1, OK, AT+CGNSSPWR=1, OK, AT+CGNSSINFO, +CGNSSINFO: 3, 10, 03, 01, 04, 22, 637638, N, 114, 033063, E, 161123, 031211.000, 74, 7, 0.04, 188.84, 2, 11, 1.60, 1.37, 13. The right pane shows a list of commands to send, with 'AT+CGNSSINFO' selected. The 'Round send interval' is set to 1000 ms.

HEX	DATA	SEND
☐	AT+SIMCOMATI	1
☐	AT+IPREX=115200	2
☐	AT+CPIN?	3
☐	AT+CSQ	4
☐	AT+CPSI?	5
☐		6
☐	AT+CGNSSPWR=1	7
☐	AT+CGNSSINFO	8
☐		9
☐		10
☐		11
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5. How to test the BK-SIM7670 by AT command via USB

5.1 Remove all connection on CN101 7pin connector, Power up the SIM7670 Breakout board only via USB, SIM7670G is driver free under win10



5.2 Select the 1st one, COM44, 115200bps and SendNew, you can repeat all command in Item4.4.

6.Package list:

Name	Qty	Unit
BK-SIM7670	1	Pcs

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