



*AND Technologies Co., Ltd*

## Breakout SIM7600 User Manual



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

OEM PCBA : <http://www.buypcb.com>

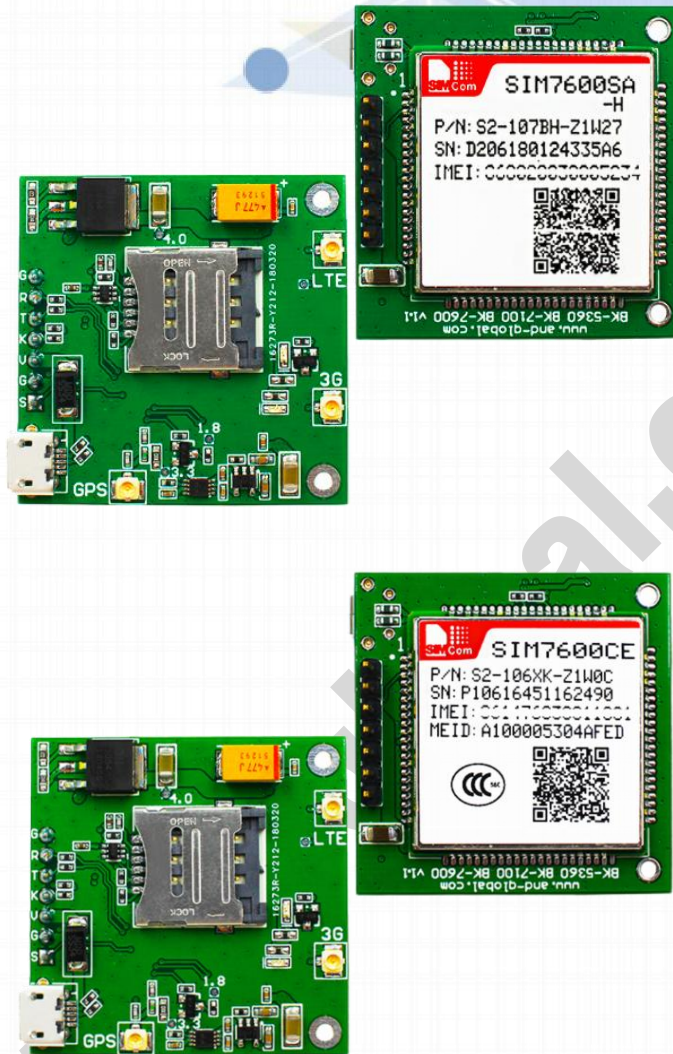
Retail Store : <http://www.aliexpress.com/store/605000>

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## 1. Preparation:

Board	BK-SIM7600
Serial tool	sscom32E.exe

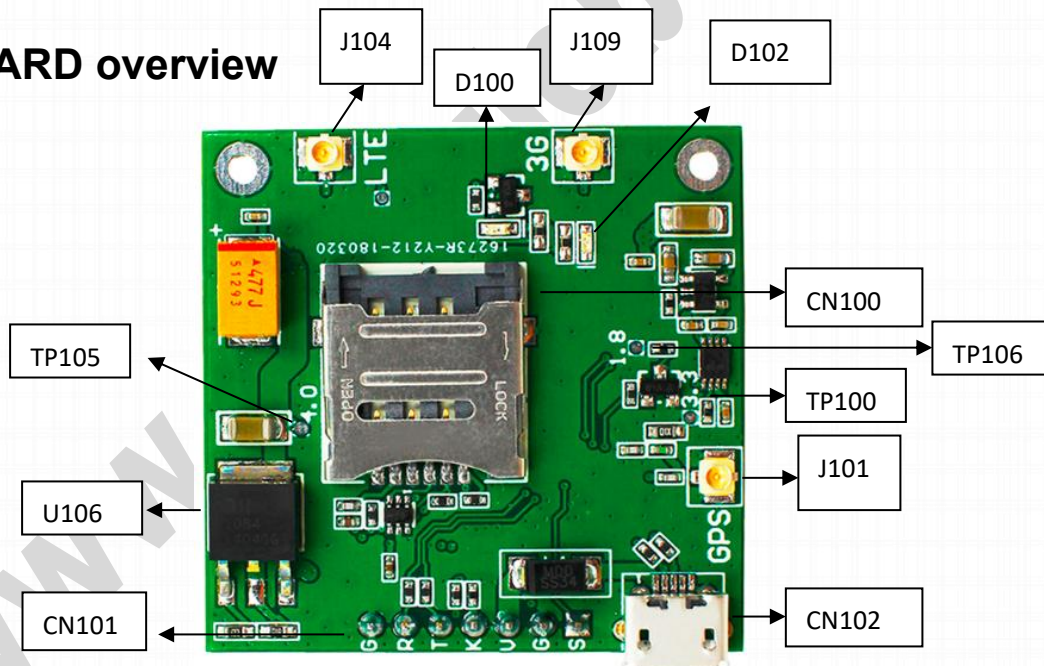
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## 2. Overview

### 2.1 Module feature

- SIM7600X-H is a complete multi-band LTE-FDD/LTE-TDD/HSPA+/UMTS/EDGE/GPRS/GSM module solution in LCC type which supports LTE CAT4 up to 150Mbps for downlink and 50Mbps for uplink data transfer.
- Stand-alone GPS
- Control Via AT Command, Rich interfaces including UART,USB2.0
- Supply voltage range:3.4v~4.2v, Typ:3.8V
- Dimension: 30x30x2.9mm
- Operation temperature:-40°C to +85 °C

### 2.2 BOARD overview



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

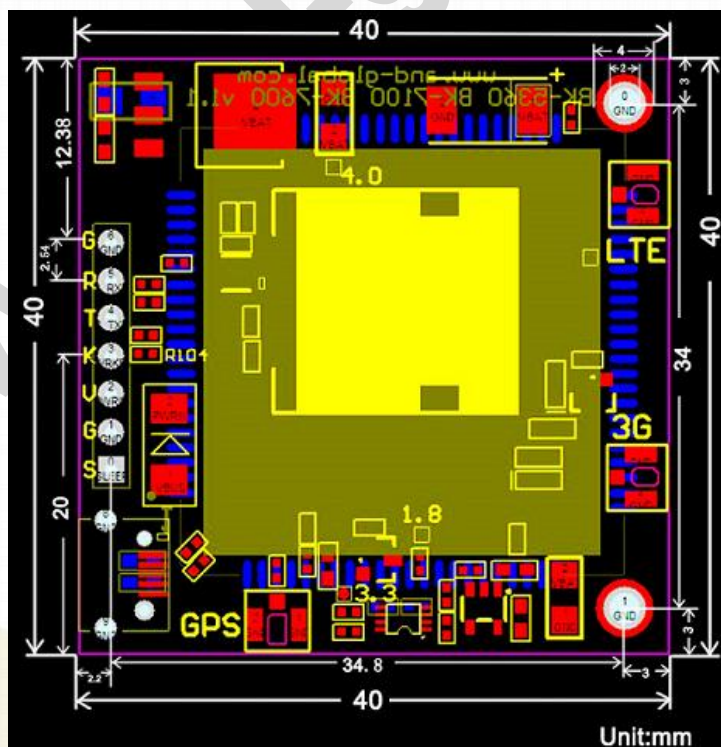
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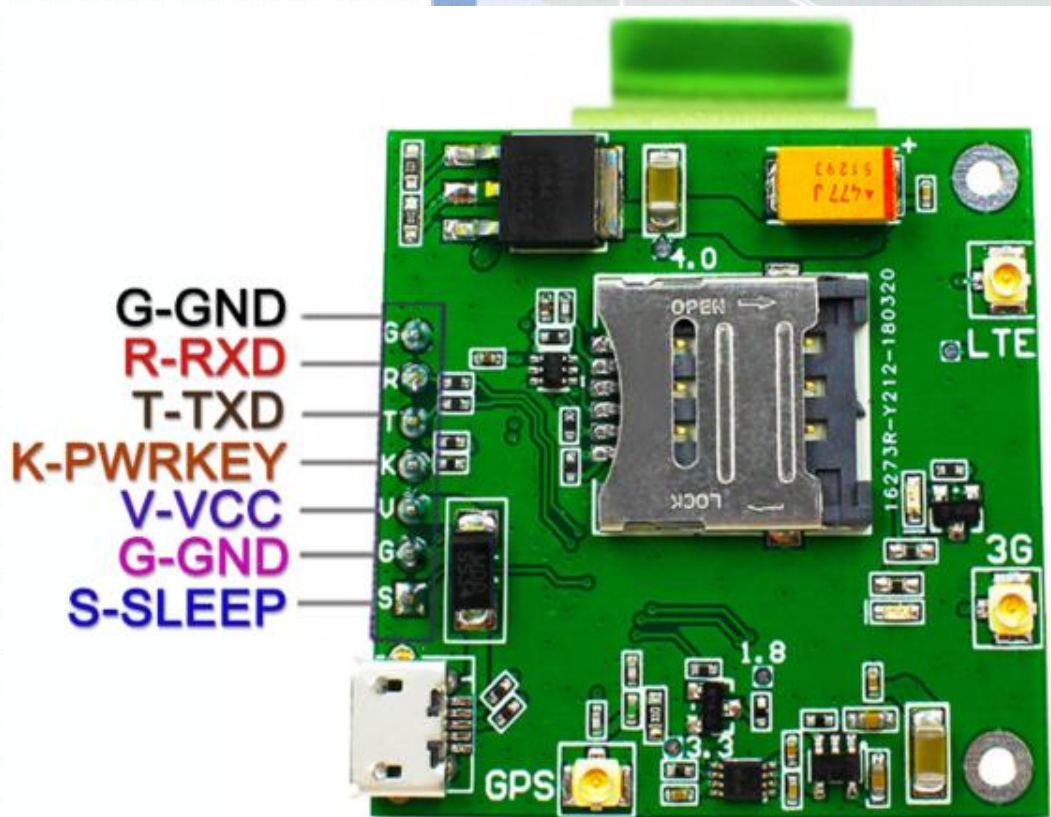
D102	Power indicator(RED)
D100	NET LIGHT indicator(Green)
U106	The power conversion chip
J109	Auxiliary antenna
J101	GPS antenna
J104	LTE antenna
TP105	4.0V
TP100	3.3V
TP106	1.8V

**2.3 PCBA dimension: 40\*40mm**



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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.**

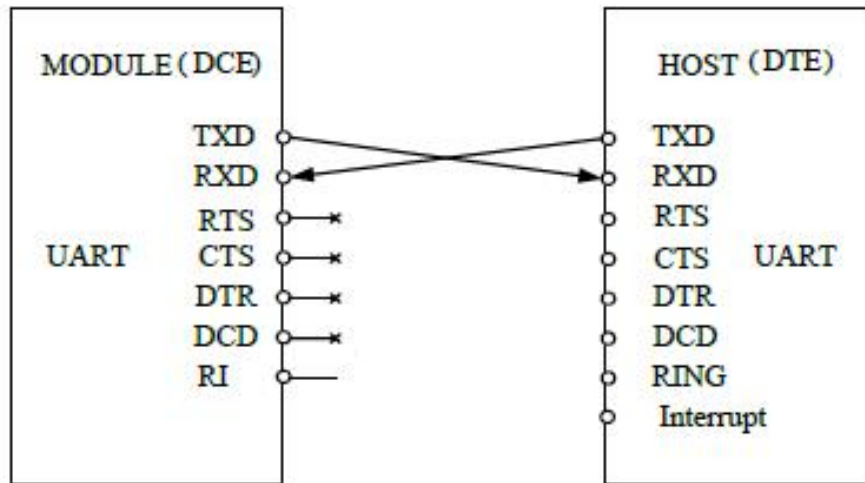
#### 3.1 Pin definition of 6pin connector

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 on/off the module	Shorted with GND via R104 by default
TXD	4	T	Transmit Data	TTL Series data Output
RXD	5	R	Receive 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-SIM7600 by AT command via UART

4.1 Installing 3G antenna ,GPS antenna, and sim card for BK-SIM7600 Board.

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, Blinking shows registration successful.

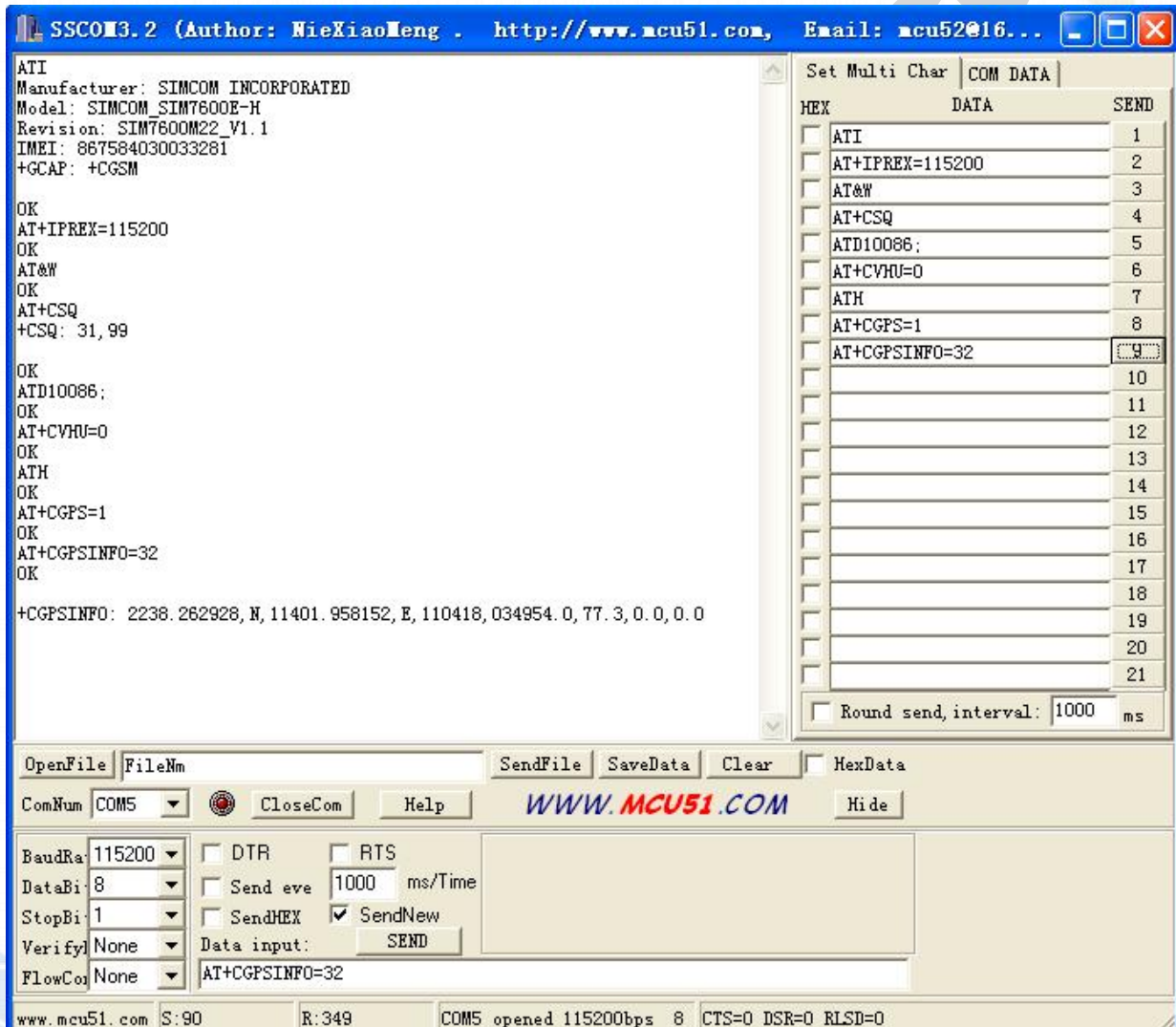
NETLIGHT Pin Status	Module Status
Always On	Searching Network/Call Connect
200ms ON, 200ms OFF	Data Transmit
800ms ON, 800ms OFF	Registered network
OFF	Power off / Sleep

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

BaudRa	115200	<input type="checkbox"/> DTR	<input type="checkbox"/> RTS
DataBi	8	<input type="checkbox"/> Send eve	1000 ms/Time
StopBi	1	<input type="checkbox"/> SendHEX	<input checked="" type="checkbox"/> SendNew
Verify	None	Data input:	SEND
FlowCo	None	AT+GSV	



SSCOM3.2 (Author: NieXiaoMeng . http://www.mcu51.com, Email: mcu52@16...)

```

ATI
Manufacturer: SIMCOM INCORPORATED
Model: SIMCOM_SIM7600E-H
Revision: SIM7600M22_V1.1
IMEI: 867584030033281
+GCAP: +CGSM

OK
AT+IPREX=115200
OK
AT&W
OK
AT+CSQ
+CSQ: 31,99

OK
ATD10086;
OK
AT+CVHU=0
OK
ATH
OK
AT+CGPS=1
OK
AT+CGPSINFO=32
OK

+CGPSINFO: 2238.262928,N,11401.958152,E,110418,034954.0,77.3,0.0,0.0
    
```

HEX	DATA	SEND
<input type="checkbox"/>	ATI	1
<input type="checkbox"/>	AT+IPREX=115200	2
<input type="checkbox"/>	AT&W	3
<input type="checkbox"/>	AT+CSQ	4
<input type="checkbox"/>	ATD10086;	5
<input type="checkbox"/>	AT+CVHU=0	6
<input type="checkbox"/>	ATH	7
<input type="checkbox"/>	AT+CGPS=1	8
<input type="checkbox"/>	AT+CGPSINFO=32	9
<input type="checkbox"/>		10
<input type="checkbox"/>		11
<input type="checkbox"/>		12
<input type="checkbox"/>		13
<input type="checkbox"/>		14
<input type="checkbox"/>		15
<input type="checkbox"/>		16
<input type="checkbox"/>		17
<input type="checkbox"/>		18
<input type="checkbox"/>		19
<input type="checkbox"/>		20
<input type="checkbox"/>		21

Round send, interval: 1000 ms

OpenFile | FileNm | SendFile | SaveData | Clear | HexData

ComNum COM5 | CloseCom | Help | WWW.MCU51.COM | Hide

BaudRa 115200 | DataBi 8 | StopBi 1 | Verify None | FlowCo None

www.mcu51.com S:90 R:349 COM5 opened 115200bps 8 CTS=0 DSR=0 RLSD=0

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## 5. How to test the BK-SIM7600 by AT command via USB

5.1 Remove all connection on CN101 7pin connector, Power up the SIM7600 Breakout board only via USB, Install SIM7100\_SIM7500\_SIM7600 Series Windows USB driver\_V1.00.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.

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SSCO3.2 (Author: NieXiaoJeng . http://www.mcu51.com, Email: mcu52@163...)

```

ATI
Manufacturer: SIMCOM INCORPORATED
Model: SIMCOM_SIM7600E-H
Revision: SIM7600M22_V1.1
IMEI: 867584030033281
+GCAP: +CGSM

OK
AT+IPREX=115200
OK
AT&W
OK
AT+CSQ
+CSQ: 31,99

OK
ATD10086;
OK
AT+CVHU=0
OK
ATH
OK
AT+CGPS=1
OK
AT+CGPSINFO=32
OK

+CGPSINFO: 2238.263768,N,11401.995635,E,110418,035450.0,76.5,0.0,0.0
    
```

Set Multi Char | COM DATA

HEX	DATA	SEND
<input type="checkbox"/>	ATI	1
<input type="checkbox"/>	AT+IPREX=115200	2
<input type="checkbox"/>	AT&W	3
<input type="checkbox"/>	AT+CSQ	4
<input type="checkbox"/>	ATD10086;	5
<input type="checkbox"/>	AT+CVHU=0	6
<input type="checkbox"/>	ATH	7
<input type="checkbox"/>	AT+CGPS=1	8
<input type="checkbox"/>	AT+CGPSINFO=32	9
<input type="checkbox"/>		10
<input type="checkbox"/>		11
<input type="checkbox"/>		12
<input type="checkbox"/>		13
<input type="checkbox"/>		14
<input type="checkbox"/>		15
<input type="checkbox"/>		16
<input type="checkbox"/>		17
<input type="checkbox"/>		18
<input type="checkbox"/>		19
<input type="checkbox"/>		20
<input type="checkbox"/>		21

Round send, interval: 1000 ms

OpenFile FileNm SendFile SaveData Clear HexData

ComNum COM16 CloseCom Help WWW.MCU51.COM Hide

BaudRa 115200 DTR RTS  
 DataBi 8 Send eve 1000 ms/Time  
 StopBi 1 SendHEX SendNew  
 Verify None Data input: SEND  
 FlowCoj None AT+CGPSINFO=32

www.mcu51.com S:90 R:349 COM16 opened 115200bps 8 CTS=0 DSR=0 RLSD=0

## 6.Package list:

Name	Qty	Unit
BK-SIM7600	1	Pcs

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