

BK-SIM7000C

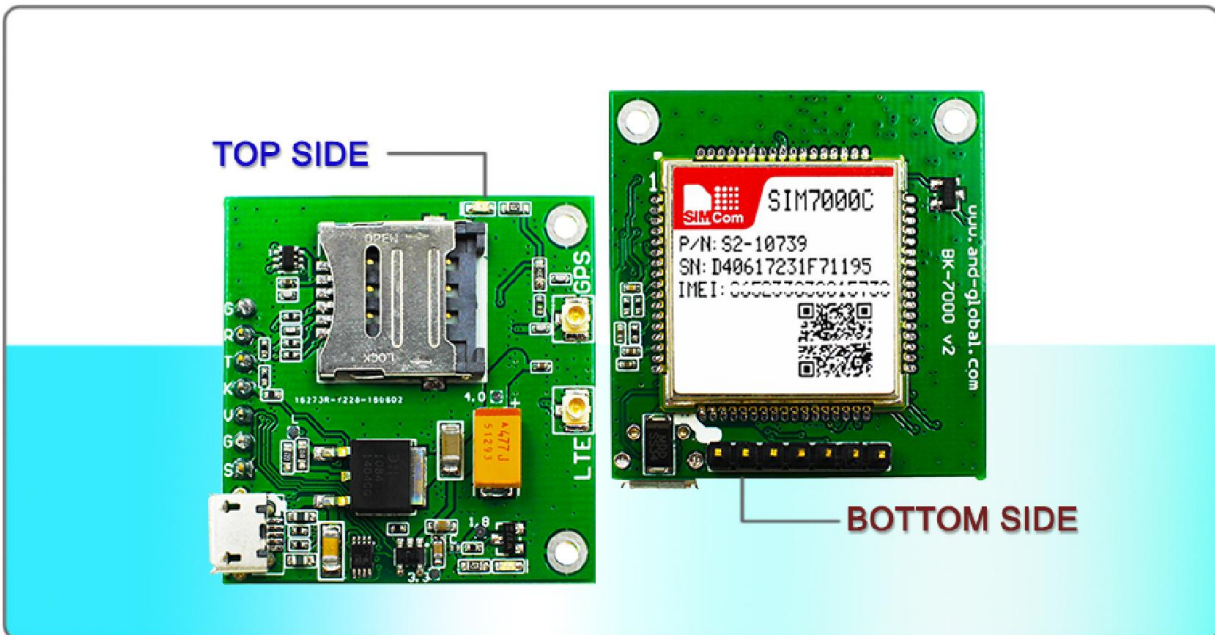
CAT-M1(eMTC)

BK-SIM7000C

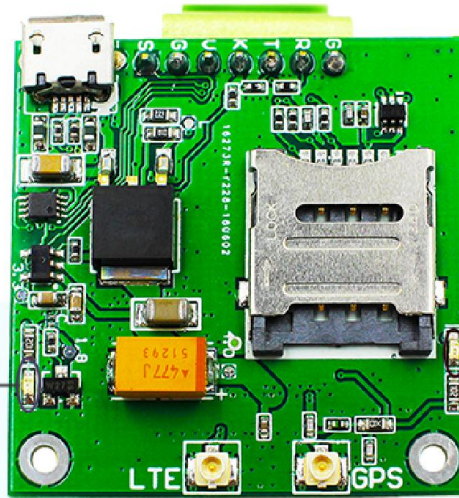
- FDD-LTE : B1/B3/B5/B8
- GPRS/EDGE 900/1800 MHz



For China bands,LTE CATM1 EMTC NB Multimode module SIM7000C,MINI SIM7000C board SIM7000C breakout board



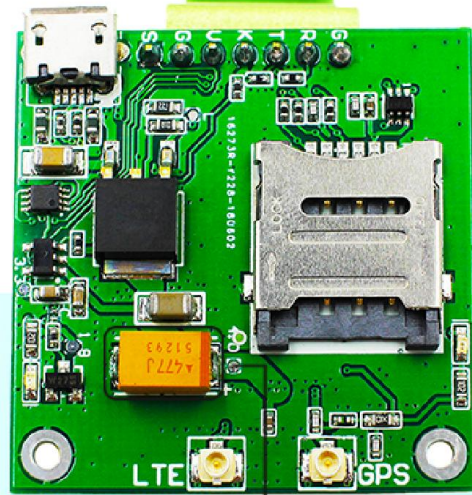
4G LTE LED-RED



GPS 1PPS LED-GREEN

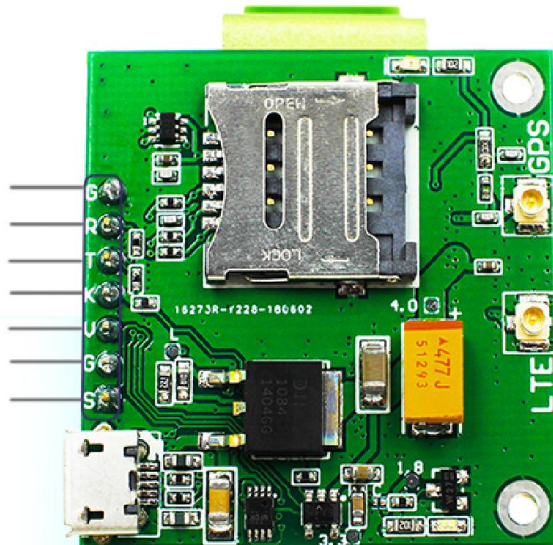


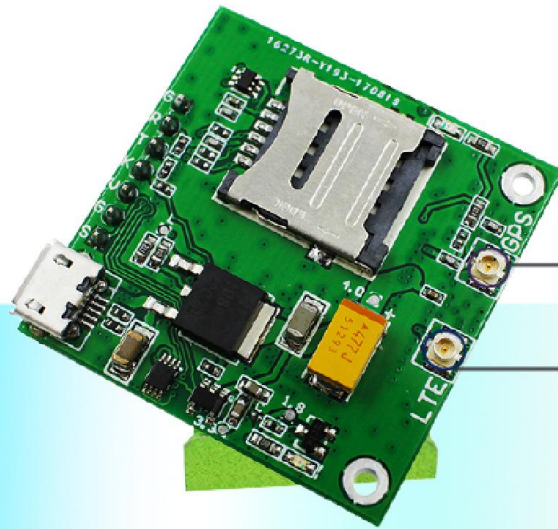
POWER



470UF TanCap For Power Stability

- G-GND
- R-RXD
- T-TXD
- K-PWRKEY
- V-VCC
- G-GND
- S-SLEEP

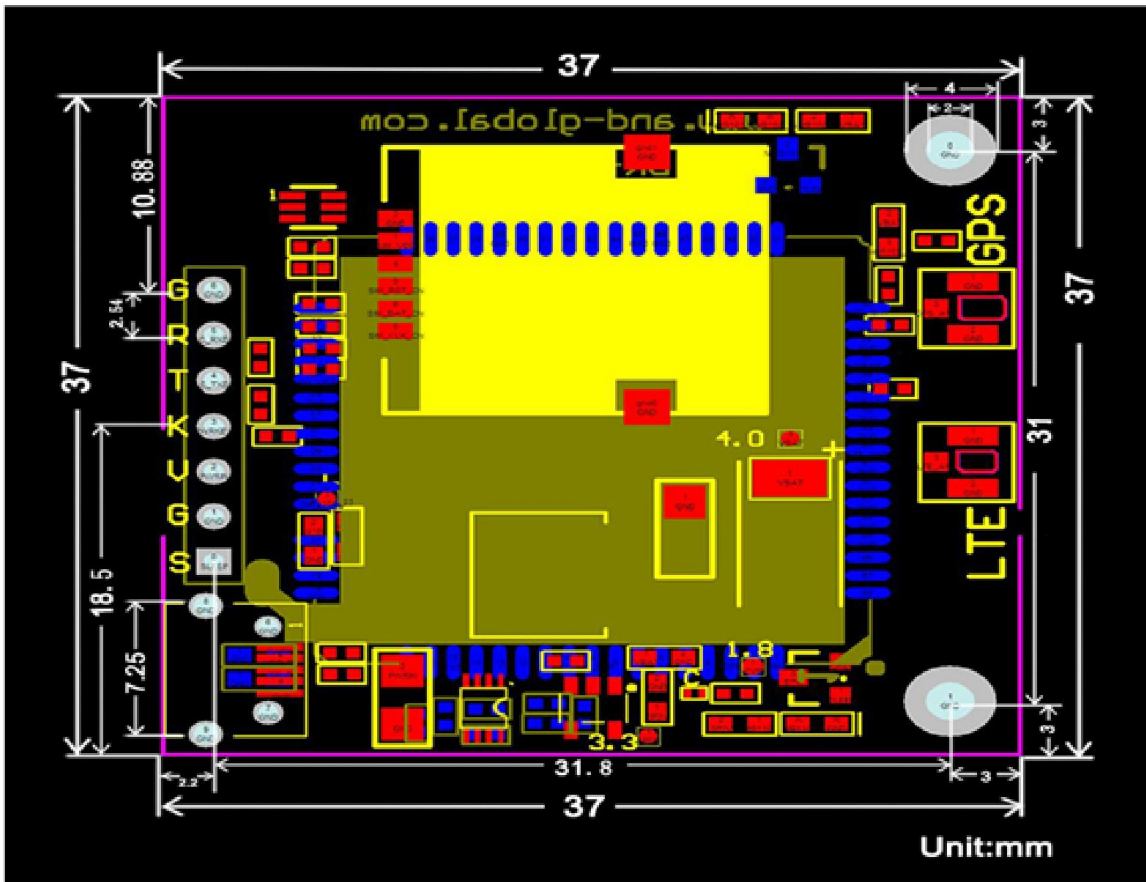




GPS Antenna Connector

LTE Antenna Connector

Dimension Drawing



Introduction

INTRODUCTION

SIMCOM SIM7000C is Multi-Band LTE-TDD/LTE-FDD and Dual-Band GSM/GPRS/EDGE module solution in a SMT type which supports LTE CAT M1(eMTC) and NB-IoT up to 375kbps for downlink data transfer.

SIMCOM SIM7000C has strong extension capability with rich interfaces including UART, USB2.0, GPIO etc. the module provides much flexibility and ease of integration for customer's application. The biggest advantage of the product is low power consumption.

SIMCOM SIM7000C is designed for applications that need low latency, medium throughput data communication in a variety of radio propagation conditions. Due to the unique combination of performance, security and flexibility, this module is ideally suited for M2M applications, such as metering, telematics, asset tracking, remote monitoring, E-health, mobile pos terminals and sharing bike.

Key Benefits

- With Power Save Mode(PSM) and Extended Discontinuous Reception(eDRX), SIM7000C can extend battery life to 10 years
- SIM7000C provides deeper coverage enhancement compared to GSM
- The package and AT commands of SIM7000C mostly are compatible with SIM900 and SIM800 series

SPECIFICATION

General features

Quad-Band FDD-LTE B1/B3/B5/B8
GPRS/EDGE 900/1800 MHz Output power
- GSM900: 2W
- DCS1800: 1W
Control Via AT Commands Supply voltage range: 3.0V~ 4.3V, Typ:3.8V
Operation temperature: -40°C to +85°C
Dimension: 24 x 24 x 2.6mm Weight: 3.0g
GNSS (GPS, GLONASS and BeiDou/Compass, Galileo, QZSS)

LTE CAT-M1(eMTC)- Uplink up to 375kbps, Downlink up to 300kbps NB-IoT- Uplink up to 66kbps, Downlink up to 34kbps EDGE Class- Uplink up to 236.8Kbps, Downlink up to 236.8KbpGPRS- Uplink up to 85.6Kbps, Downlink up to 85.6KbpsDa

Specifications for SMS
Point to point MO and MT
Text and PDU mode

Consumption
Power off: 7uA
PSM: 9uA
Sleep: 1mA
Idle: 11mA

Other Featur

USB Driver for Microsoft Windows XP/Vista/7/8
USB Driver for Windows CE/Mobile
USB Driver for Linux/Android
Firmware update via USB
TCP/IP
UDP
PPP
SMS
EMAIL
FTP/HTTP/SSL
VoLTE *
FOTA *

Interfaces

USB2.0 x1 (high-speed)
UART x2 (7-wire UART and 2-wire UART interface multiplex from GPIO)
SIM card x1 (1.8V and 3V)
I2C x1
GPIO x5
ADC x1

Certifications

RoHS / REACH / TA (doing) /CCC * / CTA *

BK-SIM7000 Board user manual V1.0	2017-12-04 12:28	Adobe Acrobat ...	514 KB
BK-SIM7000 Schematics V1	2017-12-04 12:07	Adobe Acrobat ...	54 KB
SIM800F_SIM900_SIM5300E_Migratio...	2017-11-29 11:36	Adobe Acrobat ...	2,348 KB
SIM7000 Series_AT Command Manu...	2017-11-29 11:35	Adobe Acrobat ...	2,002 KB
SIM7000 系列_TCP/IP_应用文档_V1.00	2017-11-29 11:36	Adobe Acrobat ...	640 KB
SIM7000_Windows7	2017-12-04 12:07	360压缩 RAR 文件	9,936 KB
SIM7000C_SPEC_CN-2017-8-16	2017-11-29 11:35	Adobe Acrobat ...	527 KB
SIM7000系列_HTTP_应用文档_V1.00	2017-11-29 11:36	Adobe Acrobat ...	751 KB
SIM7000硬件设计手册_V1.03	2017-11-29 11:35	Adobe Acrobat ...	3,145 KB



SSCOM3.2 (Author: NieXiaoWeng, http://www.mc51.com, Email: mc52@163.com) 2003.6.24

```

AT
OK
AT+CGMR
Revision: 1351B01SIM7000
OK
AT+CSQ
+CSQ: 31,99
OK
AT+CGSPWR=1
OK
AT+CGRSINP
+CGRSINP: 1, 1, 20171123031733.000, 22.637647, 114.033076, 63.600, 0.00, 0.0, 1,, 1.0, 1.3, 0.6,, 14, 5,, 48,,
OK
  
```

INDEX	DATA	SEND
<input type="checkbox"/>	AT	1
<input type="checkbox"/>	AT+CGMR	2
<input type="checkbox"/>	AT+CSQ	3
<input type="checkbox"/>	AT+CGSPWR=1	4
<input type="checkbox"/>	AT+CGRSINP	5
<input type="checkbox"/>		6
<input type="checkbox"/>		7
<input type="checkbox"/>		8
<input type="checkbox"/>		9
<input type="checkbox"/>		10
<input type="checkbox"/>		11
<input type="checkbox"/>		12

Round send interval: 1000 ms

OpenFile | FileName | SendFile | SaveData | Clear | HexData

ConNum COM5 | CloseCom | Help | WWW.MC51.COM | Hide

BaudRa 115200 | DTR | RTS | Send eve 1000 ms/Time | SendNew

DataBi 8 | StopBi 1 | Verify None | Data input: SEND | FlowCoq None | AT+CGRSINP

www.mc51.com S:47 | R:215 | COM5 opened 115200bps 8 CTS=0 DSR=0 RLSD=0

SSCOM3.2 (Author: NieXiaoWeng . http://www.mcu51.com, Email: mcu52@163.com) 2003.6.24

```

RDY
+CFUN: 1
+CPIN: READY
SMS Ready
AT
OK
AT+CGMR
Revision:1351801SIM7000
OK
AT+CSQ
+CSQ: 31,99
OK
AT+CGNSPWR=1
OK
AT+CGNSINF
+CGNSINF: 1, 1, 20171123031733.000, 22.637647, 114.033076, 63.600, 0.00, 0.0, 1,, 1, 0, 1, 3, 0, 8,, 14, 5,, 46,,
OK
  
```

KEY	DATA	SEND
<input type="checkbox"/>	AT	1
<input type="checkbox"/>	AT+CGMR	2
<input type="checkbox"/>	AT+CSQ	3
<input type="checkbox"/>	AT+CGNSPWR=1	4
<input type="checkbox"/>	AT+CGNSINF	5
<input type="checkbox"/>		6
<input type="checkbox"/>		7
<input type="checkbox"/>		8
<input type="checkbox"/>		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

Round send interval: 1000 ms

OpenFile | FileNm | SendFile | SaveData | Clear | HexData

ConNum: COM45 | CloseCom | Help | WWW.MCU51.COM | Hide

BaudRa: 115200 | DTR: | RTS:
 DataBi: 8 | Send eve: 1000 ms/Time
 StopBi: 1 | Send HEX: | SendNew:
 Verify: None | Data input: SEND
 FlowCo: None | AT+CGMR

www.mcu51.com S:13 R:98 COM45 opened 115200bps 8 CTS=1 DSR=1 RLSD=1

- 端口 (COM 和 LPT)
- SimTech HS-USB AT Port 9001 (COM45)
 - SimTech HS-USB Audio 9001 (COM47)
 - SimTech HS-USB Diagnostics 9001 (COM43)
 - SimTech HS-USB NMEA 9001 (COM44)