SIM7000 Series
SIMCom LPWA Module

- Global-Band
- FOTA
- LCC
- LWM2M/MQTT
- Compact Size
- VoLTE
- TCP/UDP
- PSM/eDRX
- HTTP/SSL
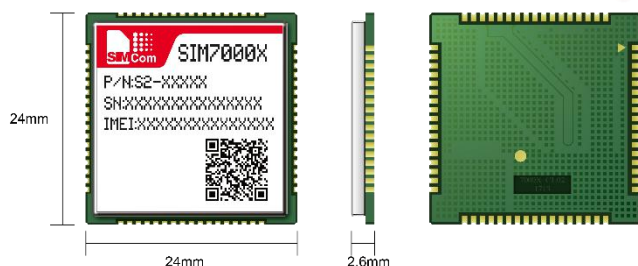
Product Description

The SIM7000 series is the LPWA module which supports wireless communication modes of Cat-M/Cat-NB/GPRS/EDGE.

The SIM7000 series adopts LCC form factor and has a compact size of 24mm*24mm which makes it ideal for compact products design.

The SIM7000 series has powerful expansibility with abundant interfaces including UART, GPIO, PCM, I2C etc. The SIM7000 series is designed for applications that need low latency, low 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, asset tracking, remote monitoring, E-health etc.

Key Benefits

◆ With Power Saving Mode(PSM) and Extended Discontinuous Reception(eDRX), the SIM7000 series can extend battery life to 10 years

◆ SIM7000 series provides deeper coverage enhancement compared to GSM

◆ The form factor and AT commands of the SIM7000 series are compatible with SIM900 and SIM800F

Product	SIM7000G	SIM7000E	SIM7000A
Form factor	LCC, 68PIN	LCC, 68PIN	LCC, 68PIN
Dimensions(mm)	24*24*2.6	24*24*2.6	24*24*2.6

Frequency Bands		SIM7000G	SIM7000E	SIM7000A
	Cat-M	B1/B2/B3/B4/B5/B8/B12/B13/ B18/B19/B20/B26/B28/B39	B3/B5/B8/B20/B28	B2/B4/B12/B13
	Cat-NB	B1/B2/B3/B5/B8/B12/B13/B17/ B18/B19/B20/B26/B28	B3/B5/B8/B20/B28	B2/B4/B12/B13
	GSM	850/900/1800/1900MHz	900/1800MHz	
GNSS		o	o	o
Temperature		-40℃ ~ +85℃	-40℃ ~ +85℃	-40℃ ~ +85℃

Electrical Features

Supply Voltage Range(V)		3.0~ 4.3	3.0~ 4.3	3.0~ 4.3
Power Consumption	Power Off(uA)	7	7	7
	PSM(uA)	9	9	9
	Sleep(mA)	1	1	1
	Idle(mA)	11	11	11

Data Transfer

Cat-M(Kbps)	300(DL)/375(UL)	300(DL)/375(UL)	300(DL)/375(UL)
Cat-NB(Kbps)	34(DL)/66(UL)	34(DL)/66(UL)	34(DL)/66(UL)
EGPRS(Kbps)	85.6(DL)/85.6(UL)	85.6(DL)/85.6(UL)	

Software Features

Protocol	TCP/UDP/LWM2M/COAP/MQTT/ FTP/HTTP/TLS/DTLS/NTP	TCP/UDP/LWM2M/COAP/MQTT/ FTP/HTTP/TLS/DTLS/NTP	TCP/UDP/LWM2M/COAP/MQTT/ FTP/HTTP/TLS/DTLS/NTP
FOTA	●	●	●
Embedded AT	●	●	●
Firmware Upgrade	USB/FOTA	USB/FOTA	USB/FOTA

Interfaces

SIM Card	1.8V/3.0V	1.8V/3.0V	1.8V/3.0V
UART	●	●	●
USB	●	●	●
PCM	●	●	●
ADC	●	●	●
I2C	●	●	●

Certification

Regulatory	RoHS/REACH/CCC/RCM/CE(RED)/ GCF/FCC/IC /OCD(Anatel)	RoHS/REACH/KC*/RCM/CE(RED)/ GCF	RoHS/REACH/GCF/FCC/PTCRB/IC
Carrier	Deutsche Telekom	KT*/LGU*/IMDA/TELSTRA/SPARK/ Deutsche Telekom/Vodafone*	AT&T/Verizon

●: support   o: optional   * : on going

Product		SIM7000JC	SIM7000C
Form factor		LCC, 68PIN	LCC, 68PIN
Dimensions(mm)		24*24*2.6	24*24*2.6
Frequency Bands	Cat-M	B1/B3/B5/B8/B18/B19/B26	B1/B3/B5/B8
	Cat-NB	B1/B3/B5/B8/B18/B19/B26	B1/B3/B5/B8
	GSM		900/1800MHz
GNSS		o	o
Temperature		-40℃ ~ +85℃	-40℃ ~ +85℃

Electrical Features

Supply Voltage Range(V)		3.0~ 4.3	3.0~ 4.3
Power Consumption	Power Off(uA)	7	7
	PSM(uA)	9	9
	Sleep(mA)	1	1
	Idle(mA)	11	11

Data Transfer

Cat-M(Kbps)	300(DL)/375(UL)	300(DL)/375(UL)
Cat-NB(Kbps)	34(DL)/66(UL)	34(DL)/66(UL)
EGPRS(Kbps)		85.6(DL)/85.6(UL)

Software Features

Protocol	TCP/UDP/LWM2M/COAP/MQTT/FTP/HTTP/TLS/ DTLS/NTP	TCP/UDP/LWM2M/COAP/MQTT/FTP/HTTP/TLS/ DTLS/NTP
FOTA	●	●
Embedded AT	●	●
Firmware Upgrade	USB/FOTA	USB/FOTA

Interfaces

SIM Card	1.8V/3.0V	1.8V/3.0V
UART	●	●
USB	●	●
PCM	●	●
ADC	●	●
I2C	●	●

Certification

Regulatory	RoHS/REACH/JATE/Telec	RoHS/REACH/CCC/NAL/SRRC
Carrier	Docomo/KDDI	Mobile/Unicom/Telecom

●: support   o: optional   * : on going