SIM7070 Series
SIMCom LPWA Module

Global-Band

Cat-M/NB

MQTT

LWM2M

Compact Size

FOTA

TCP/UDP

PSM/eDRX

HTTP/SSL
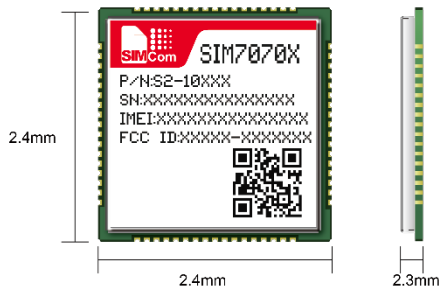
Product Description

The SIM7070 series is the LPWA module which supports wireless communication modes of Cat-M/Cat-NB/GPRS/EDGE.

The SIM7070 series adopts LCC form factor and has a compact size of 24mm*24mm which makes it ideal for compact products design.

The SIM7070 series has powerful expansibility with abundant interfaces including UART, GPIO, PCM, SPI, I2C etc. The SIM7070 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.
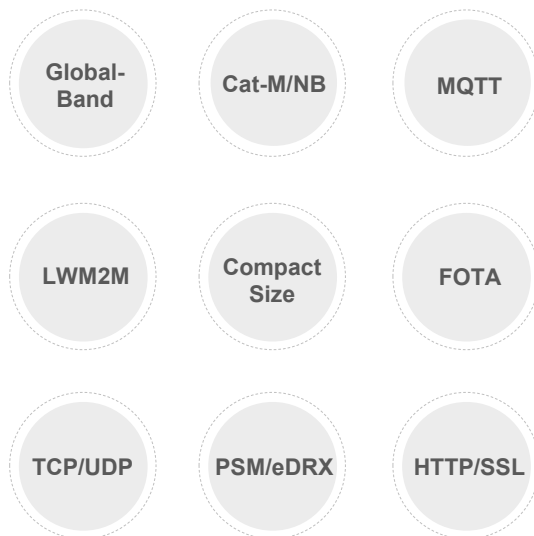
Key Benefits

◆ With Power Saving Mode(PSM) and Extended Discontinuous Reception(eDRX), the SIM7070 series can extend battery life up to 10 years

◆ The SIM7070 series provides deeper coverage enhancement compared to GSM

◆ The form factor and AT commands of the SIM7070 series are compatible with SIM7000X/SIM800F/SIM900

Product	SIM7070G	SIM7070G-MN	SIM7070G-M	SIM7070E
Form Factor	LCC, 68PIN	LCC, 68PIN	LCC, 68PIN	LCC, 68PIN
Dimensions(mm)	24*24*2.3	24*24*2.3	24*24*2.3	24*24*2.3
Frequency Bands — Cat-M	B1/B2/B3/B4/B5/B8/B12/B13/ B14/B18/B19/B20/B25/B26/ B27/B28/B66/B85	B1/B2/B3/B4/B5/B8/B12/B13/ B14/B18/B19/B20/B25/B26/ B27/B28/B66/B85	B1/B2/B3/B4/B5/B8/B12/B13/ B14/B18/B19/B20/B25/B26/ B27/B28/B66/B85	B1/B2/B3/B4/B5/B8/B12/B13/ B14/B18/B19/B20/B25/B26/ B27/B28/B31/B66/B72/B85
Frequency Bands — Cat-NB	B1/B2/B3/B4/B5/B8/B12/B13/ B18/B19/B20/B25/B26/B28/ B66/B71/B85	B1/B2/B3/B4/B5/B8/B12/B13/ B18/B19/B20/B25/B26/B28/ B66/B71/B85		B1/B2/B3/B4/B5/B8/B12/B13/ B18/B19/B20/B25/B26/B28/ B31/B66/B85
Frequency Bands — GSM	850/900/1800/1900MHz			850/900/1800/1900MHz
LTE RF Power Class	Class 5 (Typ. 21dbm)	Class 5 (Typ. 21dbm)	Class 5 (Typ. 21dbm)	Class 5 (Typ. 21dbm) Class 2@B31&72
GNSS	o	o	o	o
Temperature	-40℃ ~ +85℃	-40℃ ~ +85℃	-40℃ ~ +85℃	-40℃ ~ +85℃

Electrical Features

	SIM7070G	SIM7070G-MN	SIM7070G-M	SIM7070E
Supply Voltage Range(V)	3.0~ 4.6	3.0~ 4.6	3.0~ 4.6	3.2~ 4.2
Power Consumption @PSM(uA)	3.2	3.2	3.2	3.2
Power Consumption @Sleep(mA)	0.8	0.8	0.8	0.8
Power Consumption @Idle(mA)	10	10	10	10

Data Transfer

	SIM7070G	SIM7070G-MN	SIM7070G-M	SIM7070E
Cat-M(Kbps)	589(DL)/1119(UL)	589(DL)/1119(UL)	589(DL)/1119(UL)	589(DL)/1119(UL)
Cat-NB(Kbps)	127(DL)/158.5(UL)	127(DL)/158.5(UL)		127(DL)/158.5(UL)
EGPRS(Kbps)	296(DL)/236.8(UL)			296(DL)/236.8(UL)

Software Features

	SIM7070G	SIM7070G-MN	SIM7070G-M	SIM7070E
Protocol	TCP/UDP/HTTP/HTTPS/FTP/ TLS/DTLS/PING/LWM2M/ COAP/MQTT	TCP/UDP/HTTP/HTTPS/FTP/ TLS/DTLS/PING/LWM2M/ COAP/MQTT	TCP/UDP/HTTP/HTTPS/FTP/ TLS/DTLS/PING/LWM2M/ COAP/MQTT	TCP/UDP/HTTP/HTTPS/FTP/ TLS/DTLS/PING/LWM2M/ COAP/MQTT
FOTA	●	●	●	●
Embedded AT	●	●	●	●
Firmware Upgrade	USB/FOTA	USB/FOTA	USB/FOTA	USB/FOTA

Interfaces

	SIM7070G	SIM7070G-MN	SIM7070G-M	SIM7070E
SIM Card	1.8V	1.8V	1.8V	1.8V
UART	●	●	●	●
USB	●	●	●	●
PCM/I2S	●	●	●	●
ADC	●	●	●	●
SPI	●	●	●	●
I2C	●	●	●	●
Embedded SIM	o	o	o	o

Certification

	SIM7070G	SIM7070G-MN	SIM7070G-M	SIM7070E
Regulatory	FCC/IC/CE/RCM/JATE*/ TELEC*/NCC*/ANATEL*/ GCF*/PTCRB*/RoHS/REACH	FCC/IC/CE/RCM/JATE*/ TELEC*/NCC*/ANATEL*/ GCF*/PTCRB*/RoHS/REACH	FCC/IC/CE/RCM/JATE*/ TELEC*/NCC*/ANATEL*/ GCF*/PTCRB*/RoHS/REACH	CE/RCM/RoHS/REACH
Carrier	AT&T*/VERIZON*/ TMOBILE-US*/SPRINT*/ ROGERS*/TELSTRA*/VDF*/ SoftBank*/DoCoMo*/KDDI*/	AT&T*/VERIZON*/ TMOBILE-US*/SPRINT*/ ROGERS*/TELSTRA*/VDF*/ SoftBank*/DoCoMo*/KDDI*/	AT&T*/VERIZON*/ TMOBILE-US*/SPRINT*/ ROGERS*/TELSTRA*/VDF*/ SoftBank*/DoCoMo*/KDDI*/	

●: support   o: optional   * : on going