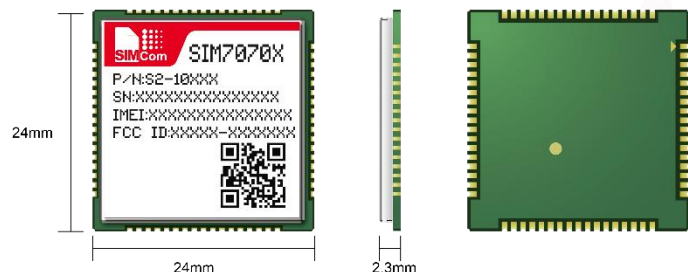


V: 2024.H2

SIM7070 Series

SIMCom LPWA Module

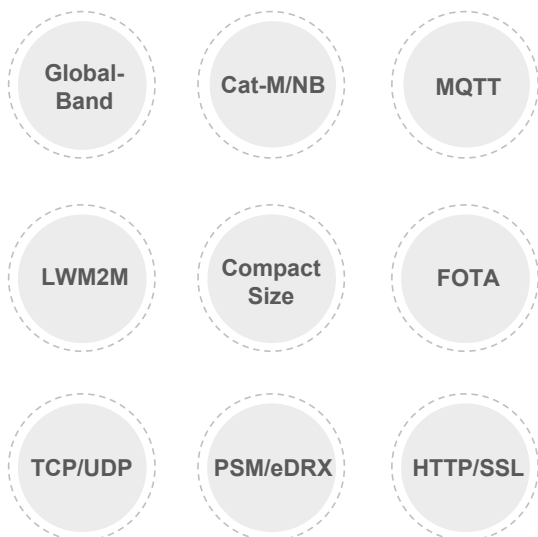


Product Description

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 power consumption, 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-NG	SIM7070G-M
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/B66/B85
	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/B66/B71/B85	
	GSM	850/900/1800/1900MHz			
LTE RF Power Class		Class 5 (Typ. 21dbm)	Class 5 (Typ. 21dbm)	Class 5 (Typ. 21dbm)	Class 5 (Typ. 21dbm)
GNSS		○	○	N/A	○
Temperature		-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C
Electrical Features					
Supply Voltage Range(V)		3.0~ 4.6	3.0~ 4.6	3.0~ 4.6	3.0~ 4.6
Power Consumption	@PSM(uA)	3.2	3.2	3.2	3.2
	@Sleep(mA)	0.8	0.8	0.8	0.8
	@Idle(mA)	10	10	10	10
Data Transfer					
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)			
Software Features					
Protocol		TCP/UDP/HTTP/HTTPS/FTP/TLS/DTLS/PING/LWM2M/COAP/MQTT/Ayla Cloud	TCP/UDP/HTTP/HTTPS/FTP/TLS/DTLS/PING/LWM2M/COAP/MQTT/Ayla Cloud	TCP/UDP/HTTP/HTTPS/FTP/TLS/DTLS/PING/LWM2M/COAP/MQTT/Ayla Cloud	TCP/UDP/HTTP/HTTPS/FTP/TLS/DTLS/PING/LWM2M/COAP/MQTT/Ayla Cloud
FOTA		●	●	●	●
Embedded AT		●	●	●	●
Firmware Upgrade		USB/FOTA	USB/FOTA	USB/FOTA	USB/FOTA
Interfaces					
SIM Card		1.8V	1.8V	1.8V	1.8V
UART		●	●	●	●
USB		●	●	●	●
PCM/I2S		●	●	●	●
ADC		●	●	●	●
SPI		●	●	●	●
I2C		●	●	●	●
Embedded SIM		○	○	○	○
Certification					
Regulatory		RoHS/REACH/CCC/NAL/STRC/NCC/JATE/Telec/KC*/RCM/CE (RED)/GCF/UKCA/FCC/PTCRB/IC	RoHS/REACH/CCC/NAL/STRC/NCC/JATE/Telec/KC*/RCM/CE (RED)/GCF/UKCA/FCC/PTCRB/IC	RoHS/REACH/CCC/NAL/STRC/NCC/JATE/Telec/KC*/RCM/CE (RED)/GCF/UKCA/FCC/PTCRB/IC	RoHS/REACH/CCC/NAL/STRC/NCC/JATE/Telec/KC*/RCM/CE (RED)/GCF/UKCA/FCC/PTCRB/IC
Carrier		Telstra*/Orange*/TIM*/Deutsche Telekom/Telefonica*/Vodafone*/AT&T/Verizon/T-Mobile/US Cellular/OCD(Anatel)	Telstra*/Orange*/TIM*/Deutsche Telekom/Telefonica*/Vodafone*/AT&T/Verizon/T-Mobile/US Cellular/OCD(Anatel)	Telstra*/Orange*/TIM*/Deutsche Telekom/Telefonica*/Vodafone*/AT&T/Verizon/T-Mobile/US Cellular/OCD(Anatel)	Telstra*/Orange*/TIM*/Deutsche Telekom/Telefonica*/Vodafone*/AT&T/Verizon/T-Mobile/US Cellular/OCD(Anatel)

●: support ○: optional *: means under developing/on-going/planning

Product		SIM7070G-HP-M	SIM7070G-HP
Form Factor		LCC, 68PIN	LCC, 68PIN
Dimensions(mm)		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*
	Cat-NB	/	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B28/B66/B71*/85*
	GSM	/	/
LTE RF Power Class		Class 3 (Typ. 23dbm)	Class 3 (Typ. 23dbm)
GNSS		○	○
Temperature		-40°C ~ +85°C	-40°C ~ +85°C
Electrical Features			
Supply Voltage Range(V)		3.0~ 4.5	3.0~ 4.5
Power Consumption	@PSM(uA)	4	4
	@Sleep(mA)	0.8	0.8
	@Idle(mA)	10	10
Data Transfer			
Cat-M(Kbps)		589(DL)/1119(UL)	589(DL)/1119(UL)
Cat-NB(Kbps)		127(DL)/158.5(UL)	127(DL)/158.5(UL)
EGPRS(Kbps)			
Software Features			
Protocol		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
Interfaces			
SIM Card		1.8V	1.8V
UART		●	●
USB		●	●
PCM/I2S		●	●
ADC		●	●
SPI		●	●
I2C		●	●
Embedded SIM		○	○
Certification			
Regulatory		RoHS/REACH/KC/GCF/CE/RCM	RoHS/REACH/KC/GCF/CE/RCM
Carrier		Telstra*/LGU+*/KT*	Telstra*/LGU+*/KT*

●: support ○: optional *: means under developing/on-going/planning

Product		SIM7070E	SIM7070E-MN	SIM7070E-NG
Form Factor		LCC, 68PIN	LCC, 68PIN	LCC, 68PIN
Dimensions(mm)		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/B31/B66/B72/B73/B85/B87/B88	B1/B2/B3/B4/B5/B8/B12/B13/B14/B18/B19/B20/B25/B26/B27/B28/B31/B66/B72/B73/B85/B87/B88	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B28/B31/B66/B73/B85/B87/B88
	Cat-NB	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B28/B31/B66/B73/B85/B87/B88	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B28/B31/B66/B73/B85/B87/B88	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B28/B31/B66/B73/B85/B87/B88
	GSM	850/900/1800/1900MHz		850/900/1800/1900MHz
LTE RF Power Class		Class 5 (Typ. 21dbm) Class 2@B31/B72/B87/B88	Class 5 (Typ. 21dbm) Class 2@B31/B72/B87/B88	Class 5 (Typ. 21dbm) Class 2@B31/B72/B87/B88
GNSS		○	○	○
Temperature		-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C
Electrical Features				
Supply Voltage Range(V)		3.2~ 4.2	3.2~ 4.2	3.2~ 4.2
Power Consumption	@PSM(μA)	3.2	3.2	3.2
	@Sleep(mA)	0.8	0.8	0.8
	@Idle(mA)	10	10	10
Data Transfer				
Cat-M(Kbps)		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				
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
FOTA		●	●	●
Embedded AT		●	●	●
Firmware Upgrade		USB/FOTA	USB/FOTA	USB/FOTA
Interfaces				
SIM Card		1.8V	1.8V	1.8V
UART		●	●	●
USB		●	●	●
PCM/I2S		●	●	●
ADC		●	●	●
SPI		●	●	●
I2C		●	●	●
Embedded SIM		○	○	○
Certification				
Regulatory		RoHS/REACH/CE/FCC*/GCF	RoHS/REACH/CE/FCC*/GCF	RoHS/REACH/CE/FCC*/GCF
Carrier		Anatel	Anatel	Anatel

●: support ○: optional *: means under developing/on-going/planning