

# **MODULES FOR A CONNECTED WORLD**



# SIMCom Wireless Solutions Limited

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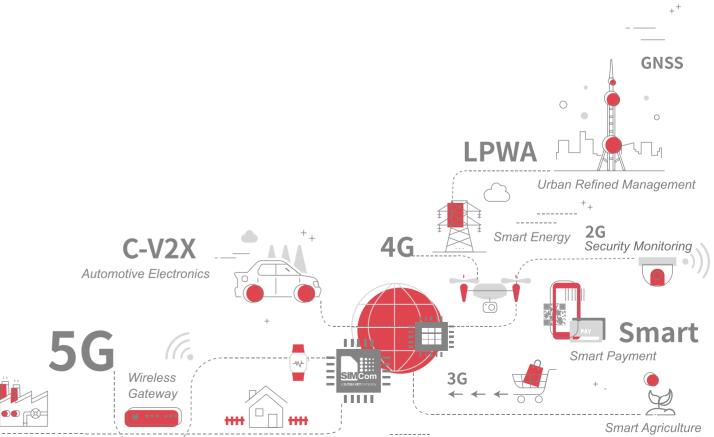
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LTE-A



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Smart Industry



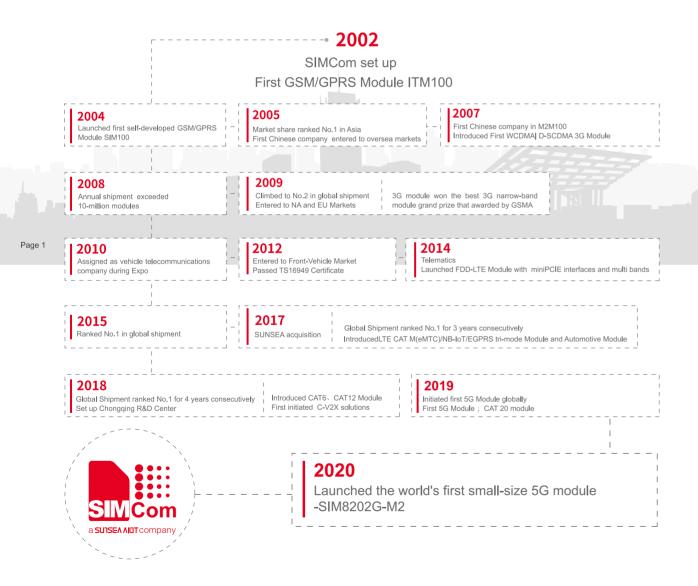
SIM-B-PC-202007-EN



### **About SIMCom**

SIMCom Wireless Solutions Limited, holding subsidiary of SUNSEA AIOT (002313.SZ), is a global leading Machine-to-Machine (M2M) wireless modules and solutions supplier. Since established in 2002, SIMCom has been fully committed to providing a variety of wireless modules and terminal level solutions worldwide, such as 5G, 4G, LTE-M(CAT-M1), NB-IoT, 3G, 2G, and GPS/GLON-ASS/BEIDOU satellite positioning technology.

SIMCom insists on providing high-quality modules and industry solutions. With 18 years of professional technical innovation and service experiences, it continuously meets the needs of customers in all industries of the Internet of Things. While deepening the vertical industry, we continue to define advantageous products and build core competitiveness. With the Group's continuous investment in research and development, technology and production, we will continue to innovate and enrich our technology roadmap, and promote the development of the industry in the next few years.



## 5G Module

Technolog	<u>,</u>	5G (Sub 6G)	SIMP200EA M2	SIMP200C	5G (Sub 6G & mmWay
Product		SIM8202G-M2	SIM8200EA-M2	SIM8200G	SIM8300G-M2
Picture		THE DECISION AND ADDRESS OF ADDRE	Second Se	SIME2000	
Form Factor		M.2	M.2	LGA	M.2
Dimensions(m	m)	30.0*42.0*2.3	30.0*52.0*2.3	41.0*43.6*2.8	30.0*52.0*3.65
Weight(g)		6.8g±0.2	8.3g±0.2	11.17g±0.2	11.76g±0.2
Mode		NSA/SA	NSA/SA	NSA/SA	NSA/SA
	5G NR (Sub6G) 5G NR	n1,n2,n3,n5,n7,n8,n12,n20,n28,n38, n40,n41,n66,n71,n77,n78,n79	n1,n2,n3,n5,n7,n8,n12,n20,n25,n28, n40,n41,n66,n71,n77,n78,n79*	n1,n2,n3,n5,n7,n8,n12,n20,n25,n28, n40,n41,n66,n71,n77,n78,n79	n1,n2,n3,n5,n7,n8,n12,n20,n2 n40,n41,n66,n71,n77,n78,n79 n257/n258/n260/261
	(mmWave)	B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/	R1/R2/R3/R4/R5/R7/R8/R12/R13/	B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/	B1/B2/B3/B4/B5/B7/B8/B12/B
Frequency Bands	LTE-FDD	B17/B18/B19/ B20/B25/B26/B28/B29/ B30/B32/B66/B71		B17/B18/B19/B20/B25/B26/B28/B29/ B30/B66/B71	B14/B17/B18/B19/B20/B25/B2 B28/B29/B30/B66/B71
	LTE-TDD	B34/B38/B39/B40/B41/B42/B43/B48	B34/B38/B39/B40/B41/B42/B43/B48	B34/B38/B39/B40/B41/B42/B43/B48	B34/B38/B39/B40/B41/B42/B4 B46/B48
	WCDMA	B1/B2/B3/B4/B5/B8	B1/B2/B3/B4/B5/B8	B1/B2/B3/B4/B5/B8	B1/B2/B3/B4/B5/B8
GNSS		GPS/GLONASS/BeiDou (Dedicated GNSS L1 and L5)	GPS/GLONASS/BeiDou (Dedicated GNSS_L1 and L5)	GPS/GLONASS/BeiDou (Dedicated GNSS L1 and L5)	GPS/GLONASS/BeiDou (Dedicated GNSS L1 and L5)
Temperature		-30°C ~ +70°C	-30°C ~ +70°C	-30°C ~ +70°C	-30°C ~ +70°C
Electrical Fea Supply Voltge		3.135∼4.4V	3.135∼4.4V	3.3V~ 4.4V	3.135∼4.4V
Power Consun		<5mA	<5mA	<5mA	TBD
(sleep)(mA) Data Transfer					
					7Gbps(DL)/3Gbps (UL)
mmWave			2.4Gbps(DL)/500Mbps (UL)	2.4Gbps(DL)/1Gbps (UL)	
Sub-6G		2.4Gbps(DL)/1Gbps (UL)	(optional up to 4Gbps DL) 1Gbps(DL)/200Mbps (UL)	(optional up to 4Gbps DL) 1Gbps(DL)/200Mbps (UL)	4Gbps(DL)/1Gbps (UL)
LTE CAT 20+		1Gbps(DL)/200Mbps (UL)	(optional up to 2Gbps DL)	(optional up to 2Gbps DL)	2Gbps(DL)/200Mbps (UL)
Software Feat	ures				
Protocol		TCP/IP/IPV4/IPV6/Multi-PDP/FTPS/ HTTPS/MQTTS/DNS	TCP/IP/IPV4/IPV6/Multi-PDP/FTPS/ HTTPS/MQTTS/DNS	TCP/IP/IPV4/IPV6/Mult-PDP/FTPS/ HTTPS/MQTTS/DNS	TCP/IP/IPV4/IPV6/Multi-PDP/ HTTPS/MQTTS/DNS
TLS		SSL3.0/TLS1.0/TLS1.2	SSL3.0/TLS1.0/TLS1.2	SSL3.0/TLS1.0/TLS1.2	SSL3.0/TLS1.0/TLS1.2
DTMF		<ul> <li>(Sending and Receiving)</li> </ul>	<ul> <li>(Sending and Receiving)</li> </ul>	<ul> <li>(Sending and Receiving)</li> </ul>	<ul> <li>(Sending and Receiving)</li> </ul>
FOTA		•	•	•	•
VoLTE/CSFB/V	/oNR*	•	•	•	•
Android RIL		Android 6.0/7.0/8.0/9.0	Android 6.0/7.0/8.0/9.0	Android 6.0/7.0/8.0/9.0	Android 6.0/7.0/8.0/9.0
USB Driver		Microsoft Windows Win7/Win8/	Microsoft Windows Win7/Win8/	Microsoft Windows Win7/Win8/	Microsoft Windows Win7/Win8
		Win10/Linux/Android Linux/Win7/Win8/Win10	Win10/Linux/Android Linux/Win7/Win8/Win10	Win10/Linux/Android Linux/Win7/Win8/Win10	Win10/Linux/Android Linux/Win7/Win8/Win10
RNDIS					
NDIS		Linux/Win7/Win8/Win10	Linux/Win7/Win8/Win10	Linux/Win7/Win8/Win10	Linux/Win7/Win8/Win10
PPP		Linux/Win7/Win8/Win10	Linux/Win7/Win8/Win10	Linux/Win7/Win8/Win10	Linux/Win7/Win8/Win10
MBIM		Win8/Win10	Win8/Win10	Win8/Win10	Win8/Win10
Firmware Upgr	ade	USB/FOTA	USB/FOTA	USB/FOTA	USB/FOTA
Interface		0.4 (0.0)	0.4.(0.0)		0.4 (0.0)
USB		3.1 (2.0)	3.1 (2.0)	3.1 (2.0)	3.1 (2.0)
		• 1 8\//2 05\/		1 81//2 051/	1 8)//2 05)/
(U)SIM Card		1.8V/2.95V	1.8V/2.95V	1.8V/2.95V	1.8V/2.95V
PCM		-	•	-	•
GPIO		•	•	-	•
I2C		•	•	•	•
PCIe		•	•	•	•
SPI				•	
RGMII SDIO3.0				•	
PMI				•	
ADC				•	
		*4	*6	*8	*14
Antenna			-		•
Antenna Certification					

\*: Under Development





# LPWA Module

Technolog	У	CAT-M&NB-IoT&GSM		CAT-M & NB-IoT	
Product		SIM7000X	SIM7070X	SIM7080G	SIM7090G
Picture					
Form Factor		LCC, 68PIN	LCC ,68PIN	LCC+LGA,77PIN	LGA, 77PIN
Dimensions(m	m)	24.0*24.0*2.6	24*24*2.3	17.6*15.7*2.4	14.8*12.8*2.0
Weight(g)		3.0	2.9	1.2	1.4
	- A (North America)	CAT-M1&CAT-NB1: B2/B4/B12/B13	CAT-M1:B1/B2/B3/B4/B5/B8/B12/B13/		
Frequency	- E(Europe/ Africa/Austral- ia/Southeast Asia	CAT-M1&CAT-NB1:B3/B8/B20/B28 GPRS/EDGE: 900/1800Mhz	B14/B18/B19/B20/B25/B26 /B27/ B28/B31/B66/B72/B85 CAT-NB2:B1/B2/B3/B4/B5/B8/B12/B13/ B18/B19/B20/B25/B26/B28/B31/B66/B85 GSM/GPRS:850/900/1800/1900MHz		
Bands(MHz)	- JC(Japan)	CAT-M1:B1/B3/B5/B8/B18/B19/B26 CAT-NB1:B1/B3/B5/B8/B18/B19/B26 ( no GPRS)			
	- G(Global)	CAT-M1: B1/B2/B3/B4/B5/B8/B12/B13/ B18/B19/B20/B26/B28/B39 CAT-NB1: B1/B2/B3/B5/B8/B12/B13/B17/ B18/B19/B20/B26/B28 GSM: 850/900/1800/1900MHz	CAT-M1:B1/B2/B3/B4/B5/B8/B12/B13/B14 B18/B19/B20/B25/B26/B27/B28/B66/B85 CAT-NB2:B1/B2/B3/B4/B5/B8/B12/B13/ B18/B19/B20/B25/B26/B28/B66/B71/B85 GSM/GPRS:850/900/1800/1900MHz	<sup>//</sup> CAT.NB2/CAT.M1: B1/B2/B3/B4/ B5/B8/B12/B13/B14/B17/B18/ B19/B20/B25/B26/B27/B28/B39/ B66/B71/B85	CAT-M: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
GNSS		0	0	0	0
Temperature		-40°C~+85°C	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C
Electrical Fea					
Supply Voltge		3.0V~ 4.3V	3.0V-4.6V	2.7V-4.8V	2.7V-4.8V
Power	PSM	9uA@PSM	3.2uA@PSM	3.2uA@PSM	3.2uA@PSM
Consumption	Sleep	1.2mA@ LTE	0.8mA	0.8mA	0.8mA
	Max Power	138mA@ B5	114mA@ B5	114mA@ B5	114mA@ B5
letwork Regis	tration Time(s)	12(Prefered band)	12(Prefered band)	12(Prefered band)	12(Prefered band)
eceive Sensit	ivity	-108dB@eMTC; -126dB@NB-IoT 15KHz	-108dB@eMTC -126dB@NB-IoT15KHz	-108dB@eMTC-126dB@NB-IoT15KHz	-108dB@eMTC-126dB@NB-loT15K
Data Transfer					
TE CAT.NB	(Kbps)	34(DL)/66(UL)	136(DL)/150(UL)	136(DL)/150(UL)	127(DL)/158.5(UL)
TE CAT.M1(K	bps)	300(DL)/375(UL)	589(DL)/1119(UL)	589(DL)/1119(UL)	589(DL)/1119(UL)
DGE(Kbps)		236.8(DL)/236.8(UL)	236.8(DL)/236.8(UL)		
GPRS(Kbps)		85.6(DL)/85.6(UL)	85.6(DL)/85.6(UL)		
SMS		•	•	•	•
Software Fea	tures				
Protocols		TCP/UDP/LWM2M/COAP /MQTT/FTP/HTTP/TLS/DTLS/NTP	TCP/UDP/HTTP/HTTPS/TLS/DTLS/ PING/LWM2M/COAP/MQTT		TCP/UDP/HTTP/HTTPS/TLS/DTLS/ PING/LWM2M/COAP/MQTT
/oLTE		•	-		
GSM Voice		•		•	•
Embedded AT					
TOTA		•	•	•	•
rls		•	•	•	•
JSB Driver		• Microsoft Windows 2000/XP/Vista/Win7/Win8/Win10/Linux	Microsoft Windows 2000/XP/Vista/ Win7/Win8/Win10/Linux		
Firmware Upg	ade	USB/FOTA	USB/FOTA	USB/FOTA	USB/FOTA
nterfaces					
JART _	ull Function Uart	•	•	•	•
F	ow Control Uart	•	•	•	•
JSB		•	•	•	•
PCM		•	•	•	0
Status Indicato	r	•	•	•	•
GPIO		•	•	•	•
SPI		0	•	•	•
2C		•	•	•	•
Certification		A: RoHS/REACH/GCF/FCC/PTCRB/ AT&T/Verizon/GCF/IC/Rogers* E: RoHS/REACH/IMDA/RCM/Telstra/ CE(RED)/GCF/ Deutsche Telekom/ Vodafone* JC: RoHS/REACH/Telec/JATE/DoCoMo/ KDDI G: RoHS/REACH/CCC/RCM/CE(RED)/	E: RoHS/REACH/CE(RED)/FCC*/ Anatel* G: RoHS/REACH/JATE/Telec/RCM/ CE(RED)/GCF/Orange*/TIM*/ Deutsche Telekom/Telefonica*/ Vodafone*/FCC/PTCRB/AT&T/ Vodafone*/FCC/PTCRB/AT&T/	RoHS/REACH/JATE/Telec/DoCoMo*/ KDDI*/Softbank/RCM/CE(RED)/GCF/ Deutsche Telekom/FCC/PTCRB/AT&T Verizon/T-mobile/US Cellular*/IC	RoHS/REACH/JATE/Telec/RCI CE(RED)/GCF/FCC/PTCRB/ / AT&T/Verizon*/T-mobile*/ US Cellular*/IC
Typical Applic	ations	G: RoHS/REACH/CCC/RCM/CE(RED)/ GCF/Deutsche Telekom/FCC/IC/Anatel Home Security and Automation,Tele	Verizon*/T-mobile/US Cellular*/IC	Management,Asset Tracking	

# LPWA Module

Tashnala	<b>a</b> 14				
Technolog	gу	NB-loT&GNSS	NB-loT		
Product		SIM7060G	SIM7060R	SIM7020E	SIM7020G
Picture				(€ ∰	
Form Factor		LCC, 68PIN	LCC ,68PIN	LCC, 42PIN	LCC+LGA, 77PIN
Dimensions(m	nm)	24.0*24.0*2.6	24*24*2.6	17.6*15.7*2.3	17.6*15.7*2.3
Weight(g)		3.0	3.0	1.3	1.3
	- A (North America)				
Frequency Bands(MHz)	- E(Europe/ Africa/Austral- ia/Southeast Asia			CAT.NB1: B1/B3/B5/B8/ B20/B28	
	- JC(Japan)				
	- G(Global)	CAT.NB2: B1/B2/B3/B4/B5/ B8/B12/B13/B17/B18/B19/ B20/B25/B26/B28/B66/B70/ B85*	CAT.NB1: B1/B2/B3/B4/B5/B8/B12/ B13/B17/B18/B19/B20/B25/B26/ B28/B31/B66/B70		CAT.NB2: B1/B2/B3/B4/B5/ B8/B12/B13/B17/B18/B19/ B20/B25/B26/B28/B66/B70/ B85*
GNSS		•			
Temperature		-40°C~+85°C	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C
Electrical Fea					
Supply Voltge		2.1V-3.6V	2.1V-3.6V	2.1V-3.6V	2.1V-3.6V
Power	PSM	3.4uA@PSM	3.4uA@PSM	3.4uA@PSM	3.4uA@PSM
Consumption	Sleep Max Power	0.4mA	0.4mA	0.4mA	0.4mA
Network Regi	stration Time(s)	114mA@ B5	114mA@ B5	114mA@ B5	114mA@ B5
termont regi	stration nine(3)	12(Prefered band)	12(Prefered band)	12(Prefered band)	12(Prefered band)
Receive Sensi Data Transfe		-126dB@NB-IoT 15KHz	-126dB@NB-loT 15KHz	-126dB@NB-loT 15KHz	-126dB@NB-IoT 15KHz
LTE CAT.NB		26.15(DL)/62.5(UL)	26.15(DL)/62.5(UL)	26.15(DL)/62.5(UL)	136(DL)/150(UL)
		20.10(02)02.0(02)	20.10(02)/02.0(02)	20.10(22)/02.0(02)	100(02) 100(02)
.TE CAT.M1(F	Kbps)				
EDGE(Kbps)					
GPRS(Kbps)					
SMS		•	•	•	•
Software Fea	turoo.		-		
Protocols	atures	TCP/UDP/LWM2M/COAP/MQTT/ HTTP/HTTPS/TLS/DTLS/DNS/NTP/ PING	TCP/UDP/LWM2M/COAP/MQTT/ HTTP/HTTPS/TLS/DTLS/DNS/NTP/ PING	TCP/UDP/LWM2M/COAP/MQTT /HTTP/HTTPS/TLS/DTLS/DNS/NTP/ PING	TCP/UDP/LWM2M/COAP/MQTT/ HTTP/HTTPS/TLS/DTLS/DNS/NTP/ PING
VoLTE					
GSM Voice					
Embedded AT	Г	•	•	•	•
FOTA		•	•	•	•
TLS		•	•	•	•
USB Driver					
Firmware Upg	grade	UART/FOTA	UART/FOTA	UART/FOTA	UART/FOTA
Interfaces					
	Full Function Uart	•	•	•	•
JART F	Flow Control Uart	•	•	•	•
JSB		•	•	•	•
РСМ					
Status Indicato	or	•	•	•	•
GPIO				•	•
SPI					
I2C					
Certification					
Certification		CE(RED)*	CE(RED)*	RoHS/REACH/IMDA/CE(RED)/ ATEX/TIM/Deutsche Telekom/Vodafone	RoHS/REACH/RCM/Telstra/ CE(RED)/GCF/ATEX/TIM*/ Deutsche Telekom/Vodafone/FCC/ PTCRM/T-mobile/IC

o : Optional \* : Under Development

Typical Applications o : Optional \* : Under Development

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# | LTE-A Module

Technology		LTE CAT12	LTE CAT6	
Product		SIM7912G-M2	A7906E-M2	
Picture		Normania (Construction)		
Form Factor		M.2	M.2	
Dimensions(mm)		42.0*30.0*2.3	42.0*30.0*2.3	
Veight(g)		6.1	6.1	
	LTE - FDD	B1/B2/B3/B4/B5/B7/B8/B12/B13/B17/B18/B19/ B20/B25/B26/B28/B29/B30/B32/B66	B1/B3/B5/B7/B8/B20/B28/B32	
	LTE - TDD	B38/B39/B40/B41	B38/B40/B41	
	DL 2XCA	B1+B3/B5/B18/B19/B20/B26;B2+B2/B4/B5/B12/ B13/B17/B29/B30/B66;B3+B3/B5/B7/B8/B19/ B20/B28;B4+B4/B5/B12/B13/B17/B29/B30; B5+B7/B30/B66;B7+B7/B20/B28;B12+B30; B13+B66;B20+BB32;B29+B30;B38+B38; B40+B40;B41+B41;B66+B66	B1+B1/B5/B8/B20; B3+B3/B5/B7/B8/B20/B28; B7+B5/B7/B8/B20/B28; B20+B32;B38+B38;B40+B40; B41+B41;(Note:B32 is only for secondary component carrier)	
- requency LTE	DL 3XCA	DL inter-band 3CA: B1+B3+B7;B1+B3+B19;B1+B3+B20;B2+B4+B5; B2+B4+B13;B2+B5+B30;B2+B12+B30;B2+B29+ B30;B3+B7+B20;B3+B7+B28;B4+B5+B30;B4+B12+ B30;B4+B29+B30;B5+B66+B2;B13+B66+B2	N/A	
		DL 2 contiguous plus inter-band 3CA: B2+B2+B5;B2+B2+B13;B3+B3+B7;B3+B7+B7; B3+b3+B20;B4+B4+B5;B4+B4+B13; B5+B66+B66;B13+B66+B66; B66+B66+B2;B66+B66+B66		
	UL 2XCA	B1+B1;B2+B2;B3+B3;B4+B4;B7+B7;B38+B38; B40+B40;B41+B41;B66+B66	N/A	
WCDN	1A	B1/B2/B3/B4/B5/B8/B19	B1/B3/B5/B8	
GNSS		Beidou/GPS/GLONASS		
emperature		-30°C ~ +70°C	-30°C ~ +70°C	
Electrical Features				
Supply Voltge Range		3.135V~ 4.4V, 3.3V(typ)	3.1V~ 4.4V, Typ: 3.3V	
Power Consumption (	sleep)(mA)	3.0	TBD	
Data Transfer			300Mbps(DL)/50Mbps (UL)	
LTE CAT 6				
TE CAT 12		600Mbps(DL)/75Mbps (UL)		
oftware Features		TCP/IP/IPV4/IPV6/Multi-PDP/FTP/FTPS /		
Protocol		HTTP/HTTPS/DNS	TCP/IP/IPV4/IPV6/Multi-PDP/DNS*	
LS		SSL3.0/TLS1.0/TLS1.2	SSL3.0/TLS1.0/TLS1.2*	
OTA		•	•	
ndroid RIL		Android 2.3/4.0/5.0/6.0/7.0	Android 6/7/8/9*	
SB Driver		Microsoft Windows2000/XP/Vista/Win7/Win8/ Win10/Linux /Android	Microsoft Windows2000/XP/Vista/Win7/Win8/ Win10/Linux /Android	
irmware Upgrade		USB/FOTA		
nterface				
JSB3.0		*1	*1	
PCIE		*1	*1	
PCM		*1	*1	
<b>SPIO</b>		*1	*1	
2C		*1	*1	
Antenna		*3	*3	
Certification				
		RoHS/REACH/JATE/Telec/RCM/CE(RED)	CCC/CTA/SRRC/CE(RED)*	
Certification			· · · ·	

# LTE-A Module

Technolo	ogy		LTE CAT6		
Product			SIM7906SA-M2	SIM7906E-M2	SIM7906E-PCIE
Picture				NE serves Value	
Form Factor			M.2	M.2	miniPCle
Dimensions(	mm)		42.0*30.0*2.3	42.0*30.0*2.3	30.0*51.0*4.3
Weight(g)			6.1	6.1	6.0
		LTE - FDD	B1/B2/B3/B4/B5/B7/B12/B17/B26/B27/ B28/B66	B1/B3/B5/B7/B8/B20/B28/B32	B1/B3/B5/B7/B8/B20/B28/B32
		LTE - TDD	B38/B41	B38/B40/B41	B38/B39/B40/B41
		DL 2XCA	B1+B1/B5/B28;B2+B2/B5/B28; B3+B3/B5/B28;B4+B4/B5/B7/B27/B28; B5+B7/B38/B41/B66;B7+B7/B28; B12+B66;B26+B38/B41; B28+B28/B66;B38+B38; B41+B41;B66+B66;	B1+B1/B5/B8/B20/B28; B3+B3/B5/B7/B8/B20/B28; B7+B5/B7/B8/B20/B28; B20+B32;B38+B38;B40+B40; B41+B41;(Note:B32 is only for secondary component carrier)	B1+B1/B5/B8/B20/B28; B3+B3/B5/B7/B8/B20/B28; B7+B5/B7/B8/B20/B28; B20+B32;B38+B38;B39+B39;B40+B40; B41+B41;(Note:B32 is only for secondary component carrier)
Frequency	LTE	DL 3XCA	N/A	N/A N/A	N/A
		UL 2XCA	N/A	N/A	N/A
	WCDMA		B1/B2/B4/B5	B1/B3/B5/B8	B1/B3/B5/B8
GNSS			Beidou/GPS/GLONASS/Galileo/QZSS	Beidou/GPS/GLONASS	Beidou/GPS/GLONASS/Galileo/QZSS
Temperature			-30°C ~ +70°C	-30°C ~ +70°C	-30°C ~ +70°C
Electrical Fe					
Supply Voltg Power Cons		ep)(mA)	3.135V~ 4.4V, 3.7V(typ) 2.4	3.135V~ 4.4V, 3.3V(typ) 2.4	3.1V~ 4.4V, Typ: 3.3V 2.4
Data Transf		op)(()			
LTE CAT 6			300Mbps(DL)/75Mbps (UL)	300Mbps(DL)/75Mbps (UL)	300Mbps(DL)/75Mbps (UL)
LTE CAT 12					
Software Fe	atures				
Protocol			TCP/IP/IPV4/IPV6/Multi-PDP/DNS	TCP/IP/IPV4/IPV6/Multi-PDP/FTP/FTPS / HTTP/HTTPS/DNS	TCP/IP/IPV4/IPV6/Multi-PDP/FTP/FTPS/ HTTP/HTTPS/DNS*
TLS			SSL3.0/TLS1.0/TLS1.2	SSL3.0/TLS1.0/TLS1.2	SSL3.0/TLS1.0/TLS1.2
FOTA					
Android RIL			Android 6/7/8/9 Microsoft Windows 2000/XP/Vista/Win7/Win8/	Android 2.3/4.0/5.0/6.0/7.0 Microsoft Windows2000/XP/Vista/Win7/Win8/	Android 6/7/8/9 Microsoft Windows 2000/XP/Vista/Win7/Win8/
USB Driver			Win10/Linux /Android	Win10/Linux /Android	Win10/Linux /Android
Firmware Up	ograde		USB/FOTA	USB/FOTA	USB/FOTA
Interface					
USB3.0			*1	*1	*1
PCIE			*1	*1	*1
PCM			*1	*1	*1
GPIO			*1	*1	*1
I2C			*1	*1	*1
Antenna			*3	*3	*3
Certification	ı				
Certification			RoHS/REACH/RCM*	RoHS/REACH/RCM/CE(RED)	RoHS/REACH/RCM*/CE(RED)*
Typical App	lications		Video Surveillance, Gateway, Industrail PDA, Ro	uter	

\* : Under Development

\* : Under Development

## LTE Module

Technolo	ду	LTE CAT4	LTE CAT3	LTE CAT1
Product		SIM7600X-H	SIM7100X	A7600E
⊃icture			SDC-SARE P role areas P constrained P constraine	And Contractions of the second
Form Factor		LCC, 87PIN	LCC, 87PIN	LCC+LGA, 119PIN
Dimensions(m	nm)	30.0*30.0*2.9	30.0*30.0*2.9	30.0*30.0*2.5
Weight(g)		5.7	5.7	4.6
	-A(North America(AT&T)	LTE-FDD: B2/B4/B12 WCDMA: B2/B5	LTE-FDD: B2/B4/B5/B17 WCDMA: B2/B5	
	-V(North America (Verizon))	V: LTE-FDD: B2/B4/B5/B13		
	-E(Europe/Middle East/Africa/Korea /Thailand)	LTE-FDD: B1/B3/B5/B7/B8/B20 LTE-TDD: B38/B40/B41 WCDMA: B1/B5/B8 GSM: 900/1800MHz	LTE-FDD: B1/B3/B7/B8/B20 LTE-TDD: B38/B40 WCDMA: B1/B8 GSM: 900/1800 MHz	LTE-FDD: B1/B3/B5/B7/B8/B20 LTE-TDD: B38/B40/B41 GSM: 900/1800 MHz
Frequency Bands	-SA(New Zealand /Australia/South America)	LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B28 LTE-TDD: B40 WCDMA: B1/B2/B5/B8 GSM: 850/900/1800/1900MHz		
	-JC/JE(Japan)	JC: LTE-FDD: B1/B3/B8/B18/B19/B26	JC: LTE-FDD: B1/B3/B8/B18/B19 LTE-TDD: B41 WCDMA: B1/B6/B8 GSM: 900/1800 MHz JE: LTE-FDD: B1/B8 WCDMA: B1/B8 GSM: 900/1800 MHz	
	-G(Global)	LTE-FDD:B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/ B19/B20/B25/B26/B28/B66 LTE-TDD: B34/B38/B39/B40/B41 WCDMA: B1/B2/B4/B5/B6/B8/B19 GSM: 850/900/1800/1900MHz		
	-NA(North America)	LTE-FDD: B2/B4/B5/B12/B13/B14/B25/B26/ B66/B71 LTE-TDD: B41		
GNSS		0	0	0
Temperature		-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C
<b>Electrical Fe</b>				
Supply Voltge	Range	3.4V~ 4.2V	3.4V~ 4.2V	3.4V~ 4.2V
Power Consu	mption(mA)	2.8@GSM,BS_PA_MFRMS=2 3.3@WCDMA, DRX=9 2.3@LTE	4.3@GSM,BS_PA_MFRMS=2 2.1@WCDMA, DRX=9 1.9@LTE	3.5@GSM,BS_PA_MFRMS=2 3.8@LTE
Data Transfe	r			
LTE(Mbps)		150(DL)/50(UL)	100(DL)/50(UL)	10(DL)/5(UL)
WCDMA/HSP		42(DL)/5.76(UL)	42(DL)/5.76(UL)	
GPRS/EDGE SMS		236.8(DL)/236.8(UL)	236.8(DL)/236.8(UL)	236.8(DL)/236.8(UL)
Software Fea	atures	TCP/IP/IPV4/IPV6/Multi-PDP/FTP/FTPS/ HTTP/	TCP/IP/IPV4/IPV6/Multi-PDP/FTP/FTPS/ HTTP/	TCP/IP/IPV4/IPV6/Multi-PDP/FTP/FTPS /HTTP/
Protocol		HTTPS/DNS	HTTPS/SMTP/SMTPS/DNS	HTTPS/DNS
TLS File System		•	•	•
Audio Record	/Play	0	0	0
TTS		0	0	0
DTMF		0	0	0
LBS		•	•	•
FOTA		•	•	•
Jamming Dete	ection	•	0	
Android RIL		Android 5.0/6.0/7.0/8.0/9.0	Android 5.0/6.0/7.0/8.0/9.0	Android 5.0/6.0/7.0/8.0/9.0
USB Driver		Microsoft Windows 7/8/10 Linux/Android	Microsoft Windows 7/8/10 Linux/Android	Microsoft Windows 7/8/10 Linux/Android
WWAN		•		•
ECM		•	•	•
MBIM		Win8/Win10	Win8/Win10	
NDIS		Linux/Windows 7/8/10	Linux/Windows 7/8/10	
Embedded AT Firmware Upg Interfaces		• USB/FOTA	USB/FOTA	o USB/FOTA
SIM Card		1.8V/3.0V	1.8V/3.0V	1.8V/3.0V
UART USB		•	•	•
PCM		0	0	0
ADC GPIO		•	•	•
GPIO SD Card				
SPI		0	•	
2C		•	•	•
Diversity Rece	eiver	•	•	
Certification		A: RoHS/REACH/FCC/PTCRB/AT&T/IC/Rogers* E: RoHS/REACH/IMDA/CE(RED)/GCF/ Deutsche Telekom/Vodafone JC: RoHS/REACH/CH/Telec/JATE/DoCoMo/KDDI/Softbank SA: RoHS/REACH/GCK/WCE(RED)/Anatel V: RoHS/REACH/GCF/FCC/PTCRB/AT&T/Verizon/ T-mobile/US Cellular*/IC G: RoHS/REACH/CCC/JATE/Telec/KC*/RCM/Telstra*/	A: RoHS/REACH/FCC/PTCRB/AT&T/IC/Rogers E: RoHS/REACH/CE(RED)/GCF*/ICASA JC: RoHS/REACH/Telec/JATE/DoCoMo/KDDI JE: RoHS/REACH/Telec/JATE/Softbank	RoHS*/REACH*/CE(RED)
Certification		T-mobile/US Cellular*/IC		and the state of the

LTE Module

Product		CIMZCOOV	OBSTREET
		SIM7600X	SIM7500
Picture		C C C C C C C C C C C C C C C C C C C	
Form Factor		LCC, 87PIN	LGA, 56P
Dimensions(m	im)	30.0*30.0*2.9	24.0*27.0
Weight(g)		5.7	4
	-A(North America(AT&T)	LTE-FDD: B2/B4/B12 WCDMA: B2/B5	LTE-FDD: WCDMA:
	-V(North America (Verizon)		LTE-FDD
Frequency Bands		LTE-FDD: B1/B3/B5/B7/B8/B20 LTE-TDD: B38/B40/B41 WCDMA: B1/B5/B8 GSM: 900/1800 MHz	LTE-FDD: WCDMA: GSM: 900
	-SA(New Zealand /Australia/South America)	LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B28 LTE-TDD: B40 WCDMA: B1/B2/B5/B8 GSM: 850/900/1800/1900 MHz	LTE-FDD: WCDMA:
	-JC/JE(Japan)		JC: LTE-F JE: LTE-F
	-G(Global)	LTE-FDD:B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/ B19/B20/B25/B26/B28/B66 LTE-TDD: B34/B38/B39/B40/B41 WCDMA: B1/B2/B4/B5/B6/B8/B19 GSM: 850/900/1800/1900MHz	
	-NA(North America)	LTE-FDD: B2/B4/B5/B12/B13/B14/B25/ B26/B66/B71 LTE-TDD: B41	
	-C(China)		
GNSS		0	0
Temperature		-40°C ~ +85°C	-40°C ~ +8
Electrical Fea	atures		
Supply Voltge	Range	3.4V~ 4.2V	3.4V~ 4.2V
Power Consu	mption(mA)	2.8@GSM,BS_PA_MFRMS=2 3.3@WCDMA, DRX=9 2.3@LTE	2.8@GSM 3.3@WCD
Data Transfe			J.J@VVCD
LTE(Mbps)		10(DL)/5(UL)	10(DL)/5(L
VCDMA/HSP	A+(Mbps)	42(DL)/5.76(UL)	42(DL)/5.7
GPRS/EDGE	(Kbps)	236.8(DL)/236.8(UL)	236.8(DL)/
SMS		•	•
Software Fea	tures	TCP/IP/IPV4/IPV6/Multi-PDP/FTP/FTPS/	TCP/IP/IP
Protocol		HTTP/HTTPS/DNS	HTTP/HTT
LS The Suptom		•	•
ile System udio Record/	Play	•	•
TS		0	0
DTMF		0	0
BS		•	•
OTA	ection	•	•
amming Dete	CLION	<ul> <li>Android 5.0/6.0/7.0/8.0/9.0</li> </ul>	Android 5
android RIL		Microsoft Windows 7/8/10	Microsoft
JSB Driver		Linux/Android	Linux/And
WWAN		•	•
ECM //BIM		• Win8/Win10	<ul> <li>Win8/Win</li> </ul>
IDIS		Linux/Windows 7/8/10	Linux/Win
Embedded AT Firmware Upg		USB/FOTA	USB/FOT/
nterfaces			
IM Card		1.8V/3.0V	1.8V/3.0V
JART		•	•
JSB PCM		•	•
ADC		•	•
GPIO		•	•
SD Card		•	
SPI 2C		•	
20 Diversity Rece	iver	•	•
Certification			
Certification		A: RoHS/REACH/FCC/PTCRB/AT&T/IC/Rogers/Anatel E: RoHS/REACH/KC/IMDA/CE(RED)/GCF/ Deutsche Telekom/Vodafone/ SA: RoHS/REACH/RCM/Telstra/CE(RED)/GCF/Anatel NA: RoHS/REACH/GCF/FCC/PTCRB/AT&T/Verizon/ T-mobile/US Cellular*/IC G: RoHS/REACH/CE(RED)/JATE/Telec/FCC/RCM/	A: RoHS/R E: RoHS/R JC: RoHS/I JE: RoHS/I SA: RoHS/ V: RoHS/R

o:Optional \*: Under Development

Fleet Management, Telematics, Security, Tracking, Agriculture, Smart Meters, Router, Gateway

Typical Applications Page 7

Typical Applications

#### 0X



PIN 0\*2.75

): B2/B4/B12 : B2/B5

) B4/B13

): B1/B3/B7/B8/B20 : B1/B8 00/1800MHz

D: B1/B3/B5/B7/B8/B28 x: B1/B5

-FDD: B1/B18/B19/B26 FDD: B1/B3/B8

#### A7670X



LGA, 68PIN 24.0\*24.0\*2.3 3.08

-40°C ~ +85°C

3.5@GSM,BS\_PA\_MFRMS=2 3.8@LTE

Android 5.0/6.0/7.0/8.0/9.0

Microsoft Windows 7/8/10 Linux/Android

TCP/IP/IPV4/IPV6/Multi-PDP/FTP/FTPS/ HTTP/HTTPS/DNS

3.4V~ 4.2V

10(DL)/5(UL)

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236.8(DL)/236.8(UL)

LTE-FDD: B1/B3/B5/B7/B8/B20 GSM: 900/1800 MHz

LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66 GSM: 850/900/1800/1900 MHz

LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/B38/ B39/B40/B41 GSM: 900/1800 MHz

85°C

SM,BS\_PA\_MFRMS=2 CDMA, DRX=9 1.6@LTE

(UL) .76(UL) .)/236.8(UL)

PV4/IPV6/Multi-PDP/FTP/FTPS/ FTPS/DNS

5.0/6.0/7.0/8.0/9.0 t Windows 7/8/10 droid

n10 indows 7/8/10

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USB/FOTA

1.8V/3.0V

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 /REACH/FCC/PTCRB/AT&T/IC/Rogers

 /REACH/SRRC/CE(RED)/Deutsche Telekom

 S/REACH/Telec/JATE/DoCoMo/KDDI

 C: RoHS\*/REACH\*/CCC/CTA/SRRC/CMCC\*/

 China Unicom\*/China Telecom\*
 S/REACH/Telec/JATE/Softbank S/REACH/RCM/Telstra\*/CE(RED) REACH/GCF/FCC/Verizon

China Unicom\*/China Telecom\* E: RoHS\*/REACH\*/CE(RED) SA: RoHS\*/REACH\*/CE(RED)\*/RCM\*/FCC\*/Anatel\*

Fleet Management, Telematics, Security, Tracking, Agriculture, Smart Meters, Router, Gat

## Smart Module

Technology		Smart Module	
Product		SIM8905X	SIM8950X
Picture		SINSBOCE Hoto-Artive Meteo-Morale Meteo-Morale C C C	SINGSSAE
Form Factor		LCC+LGA 210PIN	LCC+LGA 210PIN
Dimensions(m	nm)	40.5*40.5*2.8	44.1*45.6*2.8
Weight(g)		10.6	12.5
	-A(North America)	LTE-FDD: B2/B4/B5/B7/B12/B13/B17/B25/B26 LTE-TDD: B41 WCDMA: B1/B2/B4/B5/B8 EDGE/GPRS/GSM: 850/900/1900 MHz	LTE-FDD: B2/B4/B5/B12/B13/B14/B25/B26 LTE-TDD: B41 WCDMA: B2/B4/B5 EDGE/GPRS/GSM: 850/1900 MHz
Frequency Bands	-E(Europe)	LTE-FDD: B1/B3/B5/B7/B8/B20 LTE-TDD: B38/B40/B41 WCDMA: B1/B2/B5/B8 GSM: 850/900/1800/1900 MHz	LTE-FDD: B1/B3/B5/B7/B8/B20 LTE-TDD: B38/B40/B41 WCDMA: B1/B5/B8 GSM: 900/1800 MHz
GNSS		BeiDou/GPS/GLONASS	BeiDou/GPS/GLONASS
WLAN		2.4G/5G, 802.11 b/g/n/a	2.4G/5G, 802.11a/b/g/n/ac
Application Pr	ocessor	Quad ARM Cortex-A7 cores up to 1.1 GHz	Octa ARM Cortex-A53 cores up to 1.8GHz
Memory		1GB LPDDR3 RAM +8GB eMMC Flash	2GB LPDDR3 RAM +16GB eMMC Flash
Supply Voltge	Range	3.4V~ 4.4V	3.4V~ 4.4V
Temperature		-35°C ~ +75°C	-25°C ~ +75°C
Data Transfe	r		
LTE(Mbps)		LTE CAT 4 - 150(DL)/50(UL)	LTE CAT 4 - 150(DL)/50(UL)
WCDMA/HSPA	VHSPA+(Mbps)	42.2(DL)/5.76(UL)	42.2(DL)/5.76(UL)
TD-SCDMA(N	lbps)	2.8(DL)/2.2(UL)	2.8(DL)/2.2(UL)
CDMA EV-DO	(Mbps)	3.1(DL)/1.8(UL)	3.1(DL)/1.8(UL)
CDMA 1xRTT	(Kbps)	153.6(DL)/153.6(UL)	153.6(DL)/153.6(UL)
GPRS(Kbps)		Max 107(DL)/85.6(UL)	Max 107(DL)/85.6(UL)
EDGE(Kbps)		Max 296(DL)/236.8(UL)	Max 296(DL)/236.8(UL)
Media			
Display		4-lane MIPI_DSI HD(720P), 60fps	4-lane MIPI_DSI * 2 FHD 1920*1200 60fps
Camera		MIPI_CSI * 2 Primary camera: 2-lane MIPI_CSI, up to 8MP Secondary camera: 1-lane MIPI_CSI, up to 5MP	MIPI_CSI * 2 Primary camera: 4-lane MIPI_CSI, up to 21MP Secondary camera: 2-lane MIPI_CSI, up to 8MP
Video Perform		Encode: H.264 BP/MP - 720p, 30 fps; MPEG-4 SP/H.263 P0 - WVGA, 30 fps; VP8 - WVGA, 30 fps; Decode: H.264 BP/MP/HP - 1080p, 30 fps; MPEG-4 SP/ASP - 1080p, 30 fps; DivX 4x/5x/6x - 1080p, 30 fps; H.263 P0 - WVGA, 30 fps; VP8 - 1080p, 30 fps; (HEVC) H.265 MP 8 bit - 1080p, 30 fps;	Encode: 1080p60, H.264, H.265, VP8 Decode: 1080p60, H.264, H.265, VP8, VP9 Wireless Display (Decode+Encode) : 1080p60 Dec + 1080p30 Enc
Analog Audio		2 Inputs&3 Outputs	2 Inputs &4 Outputs
Audio Codec		G711; Raw PCM; QCELP; EVRC、EVRC-B、 EVRC-WB; AMR-NB、AMR-WB; GSM-EFR、 GSM-FR、GSM-HR MP3; AAC、AAC+、eAAC; AMR-NB、ARM-WB; G.711、WMA 9/10 Pro	G711;QCELP;EVRC;EVRC-B、EVRC-WB; AMR-NB、AMR-WB;GSM-EFT、GSM-FT、 GSM-HR
Interfaces			
UART		*2	*4
USB		USB2.0	USB3.0/2.0/Type-C/OTG
JIM		*2	*2
GPIO		At Least 21*GPIO	At Least 22*GPIO
SD Card		•	•
SPI		*2	
ADC		*3 *1	*3 *1
ADC Motor Drive		*1	0
WLED Sink			0
Flash Drive			0
Antenna		Main&Diversity&GNSS&Wi-Fi/BT ANT	Main&Diversity&GNSS&Wi-Fi/BT
Software Fea	tures	-	·
Operating Sys		Android 5.1/7.1/8.1/Linux 4.9	Android 7.1/8.1
JSB Driver		Microsoft Windows 2000/XP/Vista/Win7/Win8/Win10/Linux	Microsoft Windows 2000/XP/Vista/Win7/Win8/Win10/Linux
Bluetooth		BT 2.1+EDR/3.0/4.1 LE	BT 2.1+EDR/3.0/4.1 LE/4.2 BLE
Dual LCD			•
DSDS		•	•
Charge Funct	ion	•	0
Charge Function		USB/OTA/TF card	USB/OTA/TF card
Firmware Upg			
Firmware Upg Certification Certification		A: RoHS/REACH/FCC/PTCRB/IC/AT&T E: RoHS/REACH/CE(RED)	RoHS/REACH/CE(RED)

# Automotive Module

Technology	LTE CAT4	C-V2X
Product	SIM7800E	SIM8100
ricture	EL SIM7800E	SIMB100 Historian Marketarr Internet State
orm Factor	LGA, 282 PIN	LGA、189 PIN
Dimensions(mm)	34.0*40.0*3.1	30.0*32.0*2.75
Veight(g)	7.8g±0.2	5.8
requency Bands	LTE-FDD: B1/B3/B5/B7/B8/B20 LTE-TDD: B38/B40/B41 WCDMA: B1/B5/B8 GSM: 900/1800 MHz	B47, B46D
BNSS	BeiDou/GPS/GLONASS/Galileo/QZSS	BeiDou/GPS/GLONASS/Galileo
luetooth	BLE4.2(with W59)	N/A
emperature	-40 °C ~ +85 °C	-40°C ~ +85°C
lectrical Features		
upply Voltge Range	3.3V~ 4.3V	4.75V~ 5.25V
ower Consumption (sleep)(mA)	1.8mA@GSM,BS_PA_MFRMS=2 3.3mA@WCDMA, DRX=9 1.84mA@LTE-FDD	TBD
ata Transfer	DIO(-3 1.0+III/@ETE4 DD	
SPRS Slot	class 12	
TE(Mbps)	LTE CAT 4: 150 (DL)/50(UL)	
VCDMA/HSPA/HSPA+(Mbps)	42.2(DL)/11.5(UL)	3GPP Release 14 C-V2X PC-5 mode
D-SCDMA(Mbps)	2.8(DL)/2.2(UL)	
DMA EV-DO(Mbps)	3.1(DL)/1.8(UL)	
DGE(Kbps)	236.8(DL)/236.8(UL)	
oftware Features	TCP/IP/IPV4/IPV6/MultiPDP/FTP/FTPS/HTTP/ HTTPS/DNS/SMTP/	
rotocol	SMTPS/NTP/PING/SSL	PC5
Call	•	N/A
pen Linux	•	N/A
lulti-APN	•	N/A
DIO	•	N/A
ART2	•	N/A
ΟΤΑ	•	N/A
emperature Control	•	N/A
LS	•	N/A
ile System	•	N/A
udio Record/Play	•	N/A
TS	•	N/A
TMF BS	•	N/A N/A
CM		N/A N/A
MI_WWAN Driver	•	N/A
IL Driver	Android 2.3/4.0/5.0/6.0/7.0	N/A
ecurity	SELinux/Trustzone/Secure boot	N/A
outing policy	4G,WIFI and Ehternet port	N/A
ndroid RIL	Android 2.4/4.0/5.0/6.0/7.0	N/A
SB Driver	Microsoft Windows 2000/XP/Vista/Win7/Win8/Win10/ Linux /Android	N/A
DIS/RNDIS	•	N/A
mbedded AT	•	N/A
rmware Upgrade	USB /FOTA	N/A
/i-Fi	2.4G/5G(with W59)	N/A
terfaces		
GMII	10M/100M/1000M Ehternet	N/A
ART	3*UART	2*UART
SB	1*2.0	1*3.0, 1*2.0
DC	3*ADC	N/A
TG	•	N/A
SIC	•	N/A
CIE		PCIe Gen 2 (PCIe GEN1 compatible)
	1*100	
CM	1*12S	N/A
nalog Audio	0	N/A
PIO	5*GPIO	•
DIO	SDIO3.0 (200MHz Max)	N/A
D Card	SD3.0 (128G Max)	8-bit EMMC 4.51 at up to 100MHz SDR(1.8V) or 4-bit dual voltage SD 3.0
PI	1*SPI	up to 50MHz DDR(1.8/2.85V).1-bit or 4-bit SD card up to 200MHz SDR mod 1*SPI
IC	1*12C	
ntenna		
	1*Main&1*Diversity&1*GNSS	2*V2X&1*GNSS
ertification		
ertification	RoHS/REACH/CE(RED)*	

∘:Optional \*: Under Development

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Technolo	gy	WCDMA/HSDPA			
Product		SIM5320X			
Picture					
Form Factor		LCC, 80PIN			
Dimensions(r	nm)	30.0*30.0*2.9			
Weight(g)		5.6			
	-A(North America)	WCDMA: B2/B5 GSM: 850/900/1800/1900MHz			
	-E(China/ Europe)	WCDMA: B1/B8 GSM: 850/900/1800/1900MHz			
Frequency Bands	-JE (Japan)	WCDMA: B1/B8 GSM: 850/900/1800/1900MHz			
	-J(South Asia /Australia)	WCDMA: B1/B5(B6) GSM: 850/900/1800/1900MHz			
GNSS		GPS			
Temperature		-40°C ~ +85°C			
Electrical Fe	atures				
Supply Voltge	Range	3.4V~4.2V			
Power Consu	imption(mA)	2.3@GSM, DRX=9 2.7@WCDMA, DRX=8			
Data Transfe	r				
WCDMA/HSF	PA/HSPA+	3.6Mbps(DL) 384Kbps(UL)			
GPRS (Kbps	;)	85.6(DL)/85.6(UL)			
EDGE (Kbps	;)	236.8(DL)/236.8(UL)			
SMS		•			
CSD		•			
Software Fea	atures				
Protocol		TCP/IP/FTP/FTPS/HTTP/HTTPS/SMTP/DNS			
eCall					
MMS		•			
TLS		•			
File System		•			
Audio Record	/Play				
TTS					
DTMF		0			
LBS FOTA					
		•			
Jamming Det		•			
Network Scar	nning	•			
Android RIL USB Driver		Android 2.4/4.0/5.0/6.0/7.0 Microsoft Windows 2000/XP/Vista/Win7/Win8/ Win10/ Linux /Android			
Embedded A	r				
Firmware Up		USB			
Interfaces	,				
UART		•			
USB		•			
SIM		1.8V/3.0V			
PCM		0			
ADC		•			
GPIO		At Least 7*GPIO			
SD卡					
SPI		•			
2C		•			

Certification

Certification

A: RoHS/REACH/RCM/FCC/PTCRB/AT&T/IC/Rogers E: RoHS/REACH/CCC/IMDA\*/RCM/CE(RED)/GCF/Orange/TIM/Deutsche Telekom/Vodafone/ICASA J: RoHS/REACH/Telec/JATE/Docomo/RCM JE: RoHS/REACH/Telec/JATE/Softbank

Typical Applications

Telematics,Fleet Management,Tracking,Smart Meters,Security,RMAC

o: Optional \*: Under Development

#### Page 11

GSM/GPRS Module

ology	GSM/GPRS		
t	SIM800C	SIM800F	SIM800H
		C C C C C C C C C C C C C C C C C	Crowork A crowork C
ctor	LCC, 42PIN	LCC, 68PIN	LGA,88PIN
ns(mm)	17.6*15.7*2.3	24.0*24.0*3.0	17.8*15.8*2.4
) cy Bands	1.3 GSM: 850/900/1800/1900MHz	3.1 GSM: 850/900/1800/1900MHz	1.35 GSM: 850/900/1800/1900MHz
1	BT 3.0	BT 3.0	BT 3.0
ture	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C
I Features			
oltge Range	3.4V~4.4V	3.4V~4.4V	3.4V~4.4V
onsumption(mA)	1.50@GSM, DRX=2	1.30@GSM, DRX=2	1.50@GSM, DRX=2
nsfer	0.90@GSM, DRX=9	0.85@GSM, DRX=9	0.90@GSM, DRX=9
	Close 10/12	Class 10/12	Class 10/12
ot	Class 10/12 85.6 (DL&UL)	Class 10/12	Class 10/12
e(kbps)	03.0 (DL&UL)	85.6 (DL&UL)	85.6 (DL&UL)
reatures	TCP/UDP/HTTP/FTP/ POP3/SMTP/PPP	TCP/UDP/HTTP/FTP/ POP3/SMTP/PPP	TCP/UDP/HTTP/FTP/ POP3/SMTP/PPP
	•	•	•
	0	0	0
cord/Play	•	•	•
	0	0	0
	•	•	•
	0	0	0
Detection	•	•	•
Scanning	•	•	•
	•	•	•
ed AT	0	0	0
Upgrade	USB/UART	USB/UART	USB/UART
tions for Voice			
Codec Modes	AMR/HR/FR/EFR	AMR/HR/FR/EFR	AMR/HR/FR/EFR
hmetic	AEC/EES	ABC/EES	AEC/EES
S			
	•	•	•
	•	•	•
	1.8V/3.0V	1.8V/3.0V o	1.8V/3.0V o
udio	1 Input&1 Output	1 Input&1 Output	1 Input&1 Output
	•	•	•
	At Least 2*GPIO	At Least 3*GPIO	At Least 3*GPIO
	•	•	•
		0	0
		•	
tion			

Note         Note         Note         Note           State         CO.499N         CO.499N         AAA99N           Immediated         SAA99         SAA99         AAA99N           State         Saa9001/03011000012         Saa9001/03011000012         Saa9001/03011000012           Saa9001/03011000012         Saa90001/03011000012         Saa90001/03011000012         Saa90001/03011000012           Saa9001/03011000012         Saa90001/03011000012         Saa90001/03011000012         Saa90001/03011000012           Saa90001/03011000012         Saa90001/03011000012         Saa90001/03011000012         Saa90001/03011000012           Saa90001/03011000011         Saa90001/03011000011         Saa90001/0301100001         Saa90001/0301100001           Saa90001/0301100001         Saa90001/0301100001         Saa90001/0301100001         Saa90001/0301100001 <td< th=""><th>Technology</th><th>GSM/GPRS</th><th></th><th></th></td<>	Technology	GSM/GPRS		
LINELINELINELINEom PaterLOC, 42PNLOC, 42PNLOC, 42PNLOC, 42PNindensing with a start of the start of	Product	SIM800C	SIM800F	SIM800H
Manageoregim1/2*15/72.324.072.01/2*15.8*2.4Weinkig5.35.35.3Weinkig5.35.35.3Basilian5.35.35.3Weinkig1.3.35.35.3Weinkig1.3.35.35.3StatuJacaba4.04.0Weinkig3.44.04.0Basilian1.04.04.0Basilian3.44.43.0Weinkig3.43.44.4Weinkig5.05.05.0Basilian5.0 <td>Picture</td> <td></td> <td>SPORT - are man - ar</td> <td>Creation Constant Consta</td>	Picture		SPORT - are man - ar	Creation Constant Consta
Neufail insparsm1.33.11.36insparsmGM <td>Form Factor</td> <td>LCC, 42PIN</td> <td>LCC, 68PIN</td> <td>LGA,88PIN</td>	Form Factor	LCC, 42PIN	LCC, 68PIN	LGA,88PIN
meuony band Boston 1990M2 Boston 1990M2 Boston 1990M2SSMSSMSSMHaladok Boston 1990M2BT 3.0BT 3.0BT 3.0NBS	Dimensions(mm)	17.6*15.7*2.3	24.0*24.0*3.0	17.8*15.8*2.4
Network BEDOROTEON ISON ISON ISON ISON ISON ISON ISON IS	Weight(g)	1.3	3.1	1.35
NSS         -utocode Construction         -utocode Construction         -utocode Construction           upper during starters         Autocode Construction         Autocode Construction         Autocode Construction           upper during starters         Autocode Construction         Starters         Starters           upper documentation         Starters         Starters         Topulopertrepreper           upper documentation         Starters         Topulopertrepreper         Topulopertrepreper           upper documentation         Starters         Starters         Topulopertrepreper           upper documentation         Starters         Starters         Topulopertrepreper           upper documentation         Starters         Starters         Starters           upper documentation         Starters         Starters         Starters           upper documentation         Starters         Starters         Starters           upper documentatio	Frequency Bands			
ampendum         40°C - 48°C         40°C - 48°C           iketrical factors         Image (Sector)         Image (Sector)           ispage (Sector)         Sage (Sector)         Sage (Sector)	Bluetooth	BT 3.0	BT 3.0	BT 3.0
Interfactor         Image of the second	GNSS			
kapply Wather Range tower Consumption(mA)3.4V-4.4V3.4V-4.4V3.4V-4.4V1.30gCSM, DRX-2 0.30gCSM, DRX	emperature	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C
www.consumption(w)\$3000SM, DRX-9\$3000SM, DRX-9\$3000SM, DRX-9bala TransferPPRS MIGass 10/12Gass 10/12Gass 10/12bala Rade(htpp)Bass (DLAUL)Bass 10/12Bass (DLAUL)bala Rade(htpp)Bass (DLAUL)Bass (DLAUL)Bass (DLAUL)bala Rade(htpp)EDepute Pharma Pharmabala Rade(htpp)FOPUDPhATTPiFTPPPOPUSMITPiFTPPPOPUSMITPiFTPPPOPUSMITPiFTPPOPUSMITPiFTPPPOPUSMITPiFTPPPOPUSMITPiFTPPPOPUSMITPiFTPPOPUSMITPiFTPPPOPUSMITPiFTPPPOPUSMITPiFTPPPOPUSMITPiFTPPOPUSMITPiFTPPOPUSMITPiFTPPPOPUSMITPiFTPPPOPUSMITPiFTPPOPUSMITPiFTPPOPUSMITPiFTPPOPUSMITPiFTPPOPUSMITPiFTPPOPUSMITPiFTPPOPUSMITPiFTPPOPUSMITPiFTPPOPUSMITPIFTPPOPUSMITPiFTPPOPUSMITPiFTPPOPUSMITPiFTPPOPUSMITPIFTPPOPUSMITPiFTPPOPUSMITPiFTPPOPUSMITPiFTPPOPUSMITPIFTP	lectrical Features			
code defaultation text marker0.85@SM, DRX=90.85@SM, DRX=9pBPS Skr.Class 1012Class 1012Class 1012pBPS Skr.Class 1012Class 1012Class 1012pBPS Skr.Sis [DLAU]Sis [DLAU]Sis [DLAU]pBPS Skr.Sis [DLAU]Sis [DLAU]Sis [DLAU]pBPS Skr.CPPUDPHTTPFTP/ PDPSSktTPPPPTCPPUDPHTTPFTP/ PDPSSktTPPPProboodsCPPUDPHTTPFTP/ PDPSSktTPPPPTCPADPHTTPFTP/ PDPSSktTPPPPstart startCPPUDPHTTPFTP/ PDPSSktTPPPPCPPUDPHTTPFTP/ PDPSSktTPPPPstart startsssudo Record/Playsssstart startsssstart start startsssstart start startsssstart start start startsssstart start start start start start startss<	Supply Voltge Range	3.4V~4.4V	3.4V~4.4V	3.4V~4.4V
Nate Transfer         Image Set Set Set Set Set Set Set Set Set Se	ower Consumption(mA)	1.50@GSM, DRX=2 0.90@GSM, DRX=9		
state Rete(hop)         SS.6 (DLAUL)         SS.6 (DLAUL)           crivers Features         IPONDPMITTPIETY         FORDPMITTPIETY           trotecods         TOPNDPMITTPIETY         FORDPMITTPIETY           POPS/SMTRIPPP         OPONDPMITTPIETY         FORDPMITTPIETY           SS.6         0         0           udio Record/Play         0         0         0           udio Record/Play         0         0         0           state         0         0         0         0           trote         0         0         0         0         0           state         0         0         0         0         0         0           trote         0 <t< td=""><td>ata Transfer</td><td></td><td></td><td>-</td></t<>	ata Transfer			-
Inducation         Induced         Induced         Induced           Produced         CPUNDPINTIPIETPY POPSISHTP/PPPP         TOPUNDPINTIPIETPY POPSISHTP/PPPP         TOPUNDPINTIPIETPY POPSISHTP/PPPP           MMS         -         -         -           MMS         -         -         -           US         0         -         -           Us         -         -         -           MMS         -         -         -           Us         -         -         -           Us         -         -         -           Us         -         -         -           Site         -         -         -         -           BS         0         -         -         -           BS         -         -         -         -           BS         -         -         -         -           Interded I         -         -         -         -	SPRS Slot	Class 10/12	Class 10/12	Class 10/12
TopulopHTTP/FTP/ porssimtPreprintTopulopHTTP/FTP/ porssimtPreprintTopulopHTTP/FTP/ porssimtPreprintMASLSudio Record/PlayTS0SBS0amming DetectionAUXAUXAUXAUXBeendCode ModesAUXBeendCode ModesAUXBeendCode ModesAUXBeendCode ModesAUX-HR/FR/FREFRAMR/HR/FR/FRFRAMR/HR/FR/FRAUXBeendCode ModesAUX-HR/FR/FREFRAMR/HR/FR/FRFR-AUXAUXAUXBeendCode ModesAUX-HR/FR/FRFRAUX-HR/FR/FRFR-AUXAUXAUXAUXAUXAUXAUXAUX <t< td=""><td>ata Rate(kbps)</td><td>85.6 (DL&amp;UL)</td><td>85.6 (DL&amp;UL)</td><td>85.6 (DL&amp;UL)</td></t<>	ata Rate(kbps)	85.6 (DL&UL)	85.6 (DL&UL)	85.6 (DL&UL)
Noncose POPA/SMTP/PPPPOPA/SMTP/PPPPOPA/SMTP/PPPMAS•••MAS•••MAS•••US0••MAS•••MAS•••MAS•••MAS•••Main Record/Play•••TS••••SS••••BS••••BS••••Bandrad Record/Play•••Bandrad Record/Play•••BS••••BS••••BS••••Bandrad Record/Play••••MUX•••••MUX•••••Immoded AT•••••Specifications for VereVereVereVere•Immoded AdmineAccressAccressAccressAccressImmodeAccress••••ImmodeAccress••••ImmodeAccressAccressAccress••ImmodeAccress••••ImmodeAccress••••ImmodeAccress<	oftware Features			
MSLS000LS000Md Reord/Play000TS000TS000SB000aming Detection000aming Detection000Iterative Scanning000UKX0000USURT0000Upsch Code ModeMR/HR/FR/EFR00Iterative ScanningAMR/HR/FR/EFR00USURT0000USURT0000Iterative ScanningAMR/HR/FR/EFR00USURT0000Iterative ScanningAMR/HR/FR/EFR00USURT0000Iterative Scanning000Iterative Scanning000I	Protocols			
audio Record/PlayTS000TMF000BS000amming Detection000amming Detection000tetwork Scanning000tetwork Scanning000ubeded AT000indedded AT000indedde AT000indedde AT000indedde AT000indeg Audio1hpuls1 Output1hpuls1 Outputindig Audio1hpuls1 Output00indig Audio1hpuls1 Output00indig Audio1hpuls1 Output00indig Audio1hpuls1 Output00indig Audio1hpuls1 Output00indig Audio1hpuls1 Output00 <t< td=""><td>IMS</td><td></td><td></td><td></td></t<>	IMS			
TSoooTMF000BS000anming Detection000letwork Scanning000letwork Scanning000utxt000utxt000medded AT000peedfootsVUEUSBUARTUSBUARTpeedfoots for VoiceVVVpeedfoots for VoiceAMR/HR/FR/EFRAMR/HR/FR/EFRpeedfoots ModesAMR/HR/FR/EFRAMR/HR/FR/EFRART0AMR/HR/FR/EFRAMR/HR/FR/EFRART000NGrdu1.8/V3.0V1.8/V3.0V1.8/V3.0VCM11.9/V3.0V00Inalog Audio1.1putk1 Output1.1putk1 Output1.1putk1 OutputDC0000IPOALest 2'GPIOALest 3'GPIOALest 3'GPIOIPO0000IPI000IPI000IPI000IPI000IPI000IPI000IPI000IPI000IPI000IPI000IPI000IPI000IPI000 </td <td>LS</td> <td>0</td> <td>0</td> <td>0</td>	LS	0	0	0
TMF• O• OBS000amming Detection• O• Oamming Detection• O• Oetwork Scanning• O• Obedded AT0• O• Ombedded AT0• O• Opecifications for VoiceVVSB/UARTVSB/UARTpecifications for VoiceVVVpecifications for VoiceARR/HR/FR/EFRAMR/HR/FR/EFRAMR/HR/FR/EFRpecifications for VoiceACC/EESAEC/EESAEC/EESpecifications for VoiceACC/EESAEC/EESAEC/EESARTACC/EESAEC/EES• O• OART• O• O• O• OSB• O1.8V/3.0V1.8V/3.0V1.8V/3.0VCM Gard1.9V/3.0V1.8V/3.0V• O• OInalog Audio1.putal Output• O• OInalog Audio1.putal Output• O• OInalog Audio1.putal Output• O• OInalog Audio1.eust 2'GPIO• O• OInalog Audio• O• O• OInplation• O• O• OInpl	udio Record/Play	•	•	•
BS     •     •       BS     •     •       amming Detection     •     •       etwork Scanning     •     •       mbedded AT     •     •       o     o     •       mbedded AT     •     •       gediffcations for Voice     V     V       peech Codec Modes     AMR/HR/FR/EFR     AMR/HR/FR/EFR       ART     AC/EES     AEC/EES       ART     •     •       SB     •     •       MIC and     1.8V/3.0V     4.8//3.0V       CM     1.8//3.0V     1.8//3.0V       CM     •     •       ART     •     •       SB     •     •       IM Card     1.8//3.0V     1.8//3.0V       IM Card     1.8//3.0V     1.8//3.0V       CM     •     •       InalgA Adio     1.1.0.1.0.1.0.1.0.1.0.0.0.0.0.0.0.0.0.0	TS	0	0	0
amming Detection•••etwork Scanning•••<	TMF	•	•	•
Network Scanning••• <td>BS</td> <td>0</td> <td>0</td> <td>0</td>	BS	0	0	0
NIX• • • • • • • • • • • • • • • • • • •	amming Detection	•	•	•
mbedded ATooimmware UpgradeUSB/UARTUSB/UARTUSB/UARTpeedfications for ViceIIIpeedfications for ViceAMR/HR/FR/EFRAMR/HR/FR/EFRAMR/HR/FR/EFRpeedfocdec ModesAMR/HR/FR/EFRAMR/HR/FR/EFRAMR/HR/FR/EFRALC/EESABC/EESAEC/EESAEC/EEStotad ArithmeticACC/ESAEC/ESAEC/ESARTARTART18/J3.0V1.8/J3.0V1.8/J3.0VAIR/HR/FR/EFRIM Card1.8/J3.0V1.8/J3.0VCM11.9ut&1.0utput1.9ut&1.0utput1.9ut&1.0utputDC4.1east 3'GPIOAt Least 3'GPIOAt Least 3'GPIOAt Least 3'GPIODLPIPIPIPIPIPIPIPIPIPIPIPIPI	letwork Scanning	•	•	•
Immware Upgrade         USB/UART         USB/UART         USB/UART           pecifications for Voice         Immove Upgrade         Impove Upgrade	IUX	•	•	•
peedfications for Voice         Image: AMR/HR/FR/EFR         AMR/HR/FR/EFR         AMR/HR/FR/EFR           peech Codec Modes         AMR/HR/FR/EFR         AMR/HR/FR/EFR         AMR/HR/FR/EFR           AEC/EES         AEC/EES         AEC/EES         AEC/EES           terfaces         -         -         -           ART         -         -         -         -           INSB         -         -         -         -           INCard         1.8V/3.0V         1.8V/3.0V         1.8V/3.0V         -           CM         -         -         -         -           INCard         1.1put&1 Output         1.1put&1 Output         1.1put&1 Output           CM         -         -         -         -           Incleast 2*GPIO         At Least 3*GPIO         At Least 3*GPIO         -           IPI         -         -         -         -           IPI         -	mbedded AT	0	0	0
peech Codec Modes         AMR/HR/FR/EFR         AMR/HR/FR/EFR         AMR/HR/FR/EFR           Abc/EES         AEC/EES         AEC/EES         AEC/EES           Attraces         I         I         I           ART         -         -         -           ART         -         -         -           INSB         -         -         -           INCard         1.8V/3.0V         1.8V/3.0V         1.8V/3.0V           CM         -         -         -           Indeg Audio         1.Input&1 Output         1.Input&1 Output         -           Input         -         -         -         -           IPIO         -         -         -	irmware Upgrade	USB/UART	USB/UART	USB/UART
peech Codec Modes         AMR/HR/FR/EFR         AMR/HR/FR/EFR         AMR/HR/FR/EFR           AEC/EES         AEC/EES         AEC/EES         AEC/EES           terfaces         -         -         -           ART         -         -         -         -           SB         -         -         -         -           IM Card         1.8V/3.0V         1.8V/3.0V         1.8V/3.0V         -           CM         -         -         -         -           nalog Audio         1.1put&1 Output         1.1put&1 Output         -         -           DC         -         -         -         -         -           PIO         At Least 2*GPIO         At Least 3*GPIO         At Least 3*GPIO         -           IPI         -         -         -         -         -           IC         -	pecifications for Voice			
IterfacesIterfacesIterfacesIterfacesART•••SB•••SB•••IM Card1.8V/3.0V1.8V/3.0V1.8V/3.0VCM1.8V/3.0V••CM1.1put&1 Output0•DC•••PIOAt Least 2*GPIOAt Least 3*GPIOAt Least 3*GPIODC••••PI·•••PI·•••Ct••••Ct·•••ertification····	peech Codec Modes	AMR/HR/FR/EFR	AMR/HR/FR/EFR	AMR/HR/FR/EFR
ARTARTSBSBINCard.8V/3.0VCMCMInlogAudioDCPIOAtLeast 2*GPIODL<	cho Arithmetic	AEC/EES	AEC/EES	AEC/EES
SB• • • • • • • • • • • • • • • • • • •	iterfaces			
IM Card1.8V/3.0V1.8V/3.0V1.8V/3.0VCM000CM1 Input&1 Output00nalog Audio1 Input&1 Output1 Input&1 Output1 Input&1 OutputDC0000PIOAt Least 2*GPIOAt Least 3*GPIOAt Least 3*GPIOD0000PI000CC1 <td< td=""><td>ART</td><td>•</td><td>•</td><td>•</td></td<>	ART	•	•	•
CM     o       cM     o       nalog Audio     1 Input&1 Output       1 Input&1 Output     1 Input&1 Output       DC     •       At Least 2*GPIO     At Least 3*GPIO       PI     •       PI     •       At Least 2*GPIO     •       •     • <td>SB</td> <td>•</td> <td>•</td> <td>•</td>	SB	•	•	•
CMInputs1 OutputInputs1 OutputInputs1 OutputInputs1 Output1 Inputs1 Output1 Inputs1 OutputInputs1 OutputInputs1 OutputInputs1 OutputInputs1 OutputInputs1 OutputInputs1 OutputInputs1 OutputAt Least 3*GPIOAt Least 3*GPIOInputs1 OutputInputs1 Output <td>IM Card</td> <td>1.8V/3.0V</td> <td>1.8V/3.0V</td> <td>1.8V/3.0V</td>	IM Card	1.8V/3.0V	1.8V/3.0V	1.8V/3.0V
DC•••PIOAt Least 2*GPIOAt Least 3*GPIOAt Least 3*GPIOD•••PI·ooPC·••PC···<	СМ			0
DC•••PIOAt Least 2*GPIOAt Least 3*GPIOAt Least 3*GPIOD•••PI·ooPC·••PC···<	nalog Audio	1 Input&1 Output	1 Input&1 Output	1 Input&1 Output
D     •     •       PI     •     •       CC     •     •       ertification     •     •	DC	•	•	•
D     •     •       PI     •     •       CC     •     •       Retification     •     •	PIO	At Least 2*GPIO	At Least 3*GPIO	At Least 3*GPIO
2C     •     •       Certification     •     •	D	•		•
Certification	SPI		0	0
	2C		•	•
RoHS/REACH/CCC/CTA/SRRC/CMCC/ RoHS/REACH/CCC/CTA/SRRC/CMCC/CE(RED)/ RoHS/REACH/CCC/RCM/CE(RED)/GCF/Orar	Certification			
RoHS/REACH/CCC/CTA/SRRC/CMCC/ RoHS/REACH/CCC/CTA/SRRC/CMCC/CE(RED)/ RoHS/REACH/CCC/RCM/CE(RED)/GCF/Orar				
Certification China Unicom/RCM/CE(RED)/GCF/TIM/ GCF/Orange/ICASA/FCC ICASA/FCC/PTCRB/Anatel	artificatio -		RoHS/REACH/CCC/CTA/SRRC/CMCC/CE(RED)/ GCF/Orange/ICASA/FCC	

Certification

China Unicom/RCM/CE(RED)/GCF/TIM/ Deutsche Telekom/ICASA/FCC/Anatel//BQB

Typical Applications Telematics, Fleet Management, Smart Meters, Security, RMAC

o: Optional \*: Under Development

<b>GSM/GPRS Module</b>	•
------------------------	---

Technology	GSM/GPRS	GSM/GPRS&GNSS	
Product	SIM800C-DS	SIM868	SIM868E
Picture		Contraction Contr	
Form Factor	LCC& LGA, 77PIN	LCC&LGA,77PIN	LCC&LGA,77PIN

Form Factor	LCC& LGA, 77PIN	LCC&LGA,77PIN	LCC&LGA,77PIN
Dimensions(mm)	17.6*15.7*2.3	17.6*15.7*2.3	17.6*15.7*2.3
Weight(g)	1.3	1.5	1.5
Frequency Bands	GSM: 850/900/1800/1900MHz	GSM: 850/900/1800/1900MHz	GSM: 850/900/1800/1900MHz
Bluetooth	BT 3.0	BT 3.0	BT 3.0&4.0
GNSS		BeiDou/GPS/GLONASS	BeiDou/GPS/GLONASS
Temperature	-40°C~+85°C	-40°C~+85°C	-40°C ~ +85°C
Electrical Features			
Supply Voltge Range	3.4V~4.4V	3.4V~4.4V	3.4V~ 4.4V
Power Consumption(mA)	1.60@GSM, DRX=2 0.93@GSM, DRX=9		1.42@GSM, DRX=2 0.86@GSM, DRX=9
Data Transfer			
GPRS Slot	Class 10/12	Class 10/12	Class 10/12
Data Rate(kbps)	85.6 (DL&UL)	85.6 (DL&UL)	85.6 (DL&UL)
Software Features			
Protocols	TCP/UDP/HTTP/FTP/ POP3/SMTP/PPP	TCP/UDP/HTTP/FTP/ POP3/SMTP/PPP	TCP/UDP/HTTP/FTP/ POP3/SMTP/PPP
MMS	•	•	•
TLS	0	0	0
Audio Record/Play	•	•	•
TTS	0	0	0
DTMF	•	•	•
LBS	0	0	0
Jamming Detection	•	•	•
Network Scanning	•	•	•
MUX	•	•	•
Embedded AT	0	0	0
Firmware Upgrade	USB/UART	USB/UART	USB/UART
Specifications for Voice			
Speech Codec Modes	AMR/HR/FR/EFR	AMR/HR/FR/EFR	AMR/HR/FR/EFR
Echo Arithmetic	AEC/EES	AEC/EES	AEC/EES
Interfaces			
UART	•	•	•
USB	•	•	•
SIM Card	1.8V/3.0V	1.8V/3.0V	1.8V/3.0V
PCM	0	0	0
Analog Audio	1 Input&1 Output	1 Input&2 Output	1 Input&2 Output
ADC	•	•	•
GPIO	At Least 4*GPIO	At Least 4*GPIO	At Least 4*GPIO
SD卡	•	•	•
SPI	0	0	0
I2C	•	•	•
Certification			9

RoHS/REACH/CCC/CTA/SRRC/CMCC/

CE(RED)/GCF/Deutsche Telekom/ICASA/FCC

CE/RoHS/REACH/BQB/Deutsche Telekom

# GNSS Module

o: Optional \*: Under Development

Technolo	37	GNSS	0.000	01110011	0.000
Product		SIM28M	SIM28ML	SIM68M	SIM68ML
Picture					
Form Factor		LCC, 18PIN	LCC, 18PIN	LCC, 18PIN	LCC, 18PIN
Dimensions(I	mm)	9.7*10.1*2.5	9.7*10.1*2.5	10.1*9.7*2.5	9.7*10.1*2.5
Veight(g)		0.5	0.5	0.5	0.5
emperature		-40°C~+85°C	-40°C~+85°C	-40°C~+85°C	<b>-40</b> °C ~+85 °C
lectrical Fe	atures				
Supply Voltge	e Range	2.8~4.3V	2.8~4.3V	2.8~4.3V	2.8~4.3V
O Voltage		2.8V	2.8V	2.8V	2.8V
	Acquisition	17mA	17mA	25mA	25mA
ower Consump-	Tracking	16mA	16mA	21mA	18mA
onsump-	Sleep	150µA	150µA	340µA	350uA
	Backup	8μΑ	8μ8	14µA	14uA
SNSS					
INSS		GPS	GPS	GPS/GLONASS/Galileo/QZSS	GPS/GLONASS/Galileo/QZSS
-GPS		•		•	•
hannel Nun	nber	22 Track/66 Acq	22 Track/66 Acq	33 Track/99 Acq	33 Track/99 Acq
BAS		WAAS/EGNOS/GAGAN/MSAS	WAAS/EGNOS/GAGAN/MSAS	WAAS/EGNOS/GAGAN/MSAS	WAAS/EGNOS/GAGAN/MSAS
	Tracking	-165 dBm	-165 dBm	-165 dBm	-165 dBm
ensivity	Cold Start	-148 dBm	-148 dBm	-148 dBm	-148 dBm
	Reacquisition	-160 dBm	-160 dBm	-160 dBm	-160 dBm
	Cold Start	32s	32s	28s	28s
TFF Time to	Warm Start	30s	30s	26s	26s
irst Fix)	Hot Start	<1s	<1s	<1s	<1s
	Position	<2.5m CEP	<2.5m CEP	<2.5m CEP	<2.5m CEP
ccuracy	Velocity	0.1m/s	0.1m/s	0.1m/s	0.1m/s
lax Update	Rate	10Hz	5Hz	10Hz	10Hz
aud Rate(d	efault)	9600/115200	9600/115200	9600/115200	9600/115200
amming Def	tection	•		•	•
nti-jamming	I	•	•	•	•
uilt-in LNA		•	•	•	•
nterfaces					
IART		•	•	•	•
leset		•	•	•	•
ïme Pulse		•	•	•	•
igital I/O		•	•	•	•
Intenna					
ntenna Type	e	Active/passive	Active/passive	Active/passive	Active/passive
ntenna Pow	ver	External or internal	External or internal	External or internal	External or internal
ertification	1				

Typical Applications Telematics, Fleet Management, Smart Meters, Security, RMAC

CE/RoHS/REACH

o: Optional \*: Under Development

Certification

Technolo	ogy	GNSS			
Product		SIM33ELA	SIM68E	SIM68D	SIM68I
Picture					in a state
Form Factor		LCC, 31PIN	LCC, 22PIN	LCC, 24PIN	LCC, 24PIN
Dimensions(	mm)	14.0*9.6*2.15	13.0*15.0*2.3	16*12.2*2.4	16*12.2*2.4
Weight(g)		0.5	0.5	1	1
Temperature		-40°C~+85°C	-40°C~+85°C	-40°C ~ +85°C	-40°C ~ +85°C
Electrical Fe	eatures				
Supply Voltg	e Range	2.8~4.3V	2.8~4.3V	2.8~4.5V	2.8~4.5V
I/O Voltage	J.	2.8V	2.8V	2.8V	2.8V
	Acquisition			32mA	32mA
Power	Acquisition Tracking	25mA	25mA 20mA	23mA	23mA
Consump- tion		20mA			
	Sleep	320µA	340µA	353uA	353uA
	Backup	14µA	14µA	78uA	78uA
GNSS GNSS		GPS/GLONASS/Galileo/QZSS	GPS/GLONASS/Galileo/QZSS	L1: GPS/Beidou/GLONASS/ Galileo/QZSS L5: GPS/Beidou/Galileo/QZSS/	L1: GPS/Beidou/GLONASS/Ga L5: NavIC
A-GPS		•	•	•	•
Channel Nur	nber	33 Track/99 Acq	33 Track/99 Acq	L1:75+L5:60	L1:75+L5:7
SBAS		WAAS/EGNOS/GAGAN/MSAS	WAAS, EGNOS, GAGAN, MSAS	WAAS/EGNOS/GAGAN/MSAS/ SDCM	WAAS/EGNOS/GAGAN/MSA SDCM
	Tracking	-165 dBm	-165 dBm	-165 dBm	-165 dBm
Sensivity	Cold Start	-147 dBm	-148 dBm	-148 dBm	-148 dBm
	Reacquisition	-160 dBm	-160 dBm	TBD	TBD
	Cold Start	28s	28s	TBD	TBD
TTFF (Time to	Warm Start	26s	26s	24S	24S
First Fix)	Hot Start	<1s	<1s	<1S	<1S
	Position	<2.5m CEP	<2.5m CEP	<1m CEP	<1m CEP
Accuracy	Velocity	0.1m/s	0.1m/s	TBD	TBD
Max Update		10Hz	10Hz	10Hz	10Hz
Baud Rate(d		9600/115200		9600/115200	9600/115200
Jamming De		5000/115200	9600/115200	•	•
		•	•	•	•
Anti-jamming		•	•	•	•
Built-in LNA		•	•	•	•
nterfaces					
UART		•	•	•	•
Reset			•	•	•
Time Pulse		•	•	•	•
Digital I/O		•	•	•	•
Antenna					
Antenna Typ	e	Passive	Active/passive	Active/passive	Active/passive
Antenna Pov	ver	Internal	Internal	External or internal	External or internal
Certificatior	1				
Certification		RoHS/REACH/CE(RED)	RoHS/REACH/CE(RED)	RoHS*/REACH*/CE(RED)*	RoHS*/REACH*/CE(RED)*

# GNSS Module

Technolo	ogy	GNSS			
Product		SIM33EAU	SIM39EAU	SIM39EA	SIM39EAR
Picture		. MAINCRAI		• O SABORA	O JRAR
Form Factor		LCC, 16PIN	LCC, 16PIN	LCC, 13PIN	LCC, 13PIN
Dimensions(	(mm)	22.0*22.0*7.5	22.0*22.0*7.5	16.0*16.0*6.2	16.0*16.0*6.2
Weight(g)		8.5	8.5	5.8	5.8
Temperature	9	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C
Electrical Fe	eatures				
Supply Voltg	je Range	2.8~4.3V	2.8~4.3V	2.8~4.3V	2.8~4.3V
I/O Voltage		2.8V	2.8V	2.8V	2.8V
	Acquisition	38mA	27mA	32mA	32mA
Power	Tracking	32mA	24mA	27mA	27mA
Consump- tion	Sleep	520µA	24µA	400µA	400µA
	Backup	13µА		8μΑ	8µA
GNSS					
GNSS		GPS/GLONASS/Galileo/QZSS	GPS	GPS	GPS
A-GPS		•	•	•	•
Channel Nur	mber	33 Track/99 Acq	22 Track/66 Acq	22 Track/66 Acq	22 Track/66 Acq
SBAS		WAAS/EGNOS/GAGAN/MSAS	WAAS, EGNOS, GAGAN,MSAS	WAAS/EGNOS/GAGAN/MSAS	WAAS/EGNOS/GAGAN/MSAS
	Tracking	-165 dBm	-165 dBm	-165 dBm	-165 dBm
Sensivity	Cold Start	-146 dBm	-147 dBm	-147 dBm	-147 dBm
	Reacquisition	-160 dBm	-160 dBm	-160 dBm	-160 dBm
	Cold Start	31s	32s	32s	32s
TTFF (Time to	Warm Start	26s	30s	30s	30s
First Fix)	Hot Start	<1s	<1s	<1s	<1s
	Position	<2.5m CEP	2.5m CEP	<2.5m CEP	<2.5m CEP
Accuracy	Velocity	0.1m/s	0.1m/s	0.1m/s	0.1m/s
Max Update	Rate	10Hz	10Hz	10Hz	10Hz
Baud Rate(d	lefault)	9600/115200	9600/115200	9600/115200	9600/115200
Jamming De	etection	•	•	•	•
Anti-jamming	g	•	•	•	•
Built-in LNA		•	•	•	•
Interfaces					
UART		•	•	•	•
Reset					
Time Pulse		•	•	•	•
Digital I/O		•	•	•	•
Antenna					
Antenna Type		Passive	Passive	Passive	Passive
Antenna Power		Internal	Internal	Internal	Internal
Certification	n				
Certification		RoHS/REACH/CE(RED)	RoHS/REACH/CE(RED)	RoHS/REACH/CE(RED)	RoHS/REACH/CE(RED)*

o: Optional \*: Under Development

o: Optional \*: Under Development

Typical Applications

Pet Tracking, Asset Tracking

echnology	Wi-Fi		
Product	W58	W59	W80
licture		32	
orm Factor	LCC, 32PIN	LCC, 40PIN	LCC+LGA, 90PIN
Dimensions(mm)	16.6 *13.0*2.1	16.0 *18.3*2.3	17.0 *24*2.9
Weight(g)	1.0	1.2	TBD
Bluetooth	BT 3.0& BLE4.1	BT 3.0& BLE4.2	BT 5.1&BLE5.0
Temperature	-40°C to +85°C	-40°C to +85°C	-40°C ~ +85°C
General Features			
Frequency band	2.412 ~ 2.484 GHz	2.412 ~ 2.484 GHz 5.17~5.825GHz	2.412 ~ 2.484 GHz 5.17~5.825GHz
Supply Voltage	3.2V~ 3.4V	3.2V~ 3.4V	3.3V ~ 4.25V
WLAN Standard	IEEE 802.11 b/g/n	IEEE 802.11a/b/g/n/ac	IEEE 802.11a/b/g/n/ac/ax
Modulation Mode	CCK/BPSK/QPSK/16QAM/64QAM	DSSS/CCK/OFDM/BPSK/QPSK/16QAM/ 64QAM/256QAM	CCK/BPSK/QPSK/16QAM/64QAM/ 256QAM/1024QAM
Encryption Mode	WEP/TKIP/AES/WPA-PSK/WPA2-PSK	WEP/TKIP/AES/WPA-PSK/WPA2-PSK	WPA3
AP (Max Access Point)	30	30	30
Operator Mode	AP/STA	AP/STA	AP/STA
BT Protocol	SPP(BT 3.0)/GATT(BLE 4.1)	SPP(BT 3.0)/GATT(BLE 4.1)	SPP(BT 3.0)/GATT(BLE 4.1)
Data Rate			
802.11b (Mbps)	Max. 11	Max. 11	
802.11g (Mbps)	Max. 54	Max. 54	
802.11n_HT20 (Mbps)	Max. 65	Max. 65	
802.11n_HT40 (Mbps)	Max. 135	Max. 135	
802.11ac_HT40 (Mbps)		Max. 200	
802.11ac_HT80 (Mbps)		Max. 433.3Mbps	
802.11ax_HT80 (Mbps) BT 4.1 (Mbps)	Max. 24	Max. 24	Max.1.775Gbps
Transmitting Power			
802.11b/11Mbps	18dBm	TBD	TBD
802.11g/54Mbps	15dBm	TBD	
			IBD
802.11n_HT20/65Mbps	15dBm	TBD	TBD
802.11n_HT40/135Mbps	14dBm	TBD	TBD
Rx Sensitivity			
802.11b/1Mbps	-95dBm	TBD	ТВО
802.11b/11Mbps	-94dBm	TBD	TBD
802.11g/6Mbps	-91dBm	TBD	TBD
802.11g/54Mbps	-78dBm	ТВО	ТВО
802.11n_HT20 MCS0	-90dBm	TBD	TBD
802.11n_HT40 MCS7	-75dBm	TBD	TBD
Interfaces			
SDIO 3.0	*1	*1	
UART	*1	*1	*1
LTE coexistence	*2	*2	*2
BT_EN	*1	*1	*1
WLAN_EN	*1	*1	*1
Antenna	WiFi & BT Antenna	WiFi & BT Antenna *2	WiFi & BT Antenna *2
Certification			

# Headquarters

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o: Optional \*: Under Development W58: Must be worked together with SIM7600X-H.

Typical Applications

W59: Must be worked together with SIM7800E.

Fleet Ma

W80: Must be worked together with SIM8200G.



Add

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