

# MeiG-Module Products

A Global Leading Supplier of Cellular Modules and Solutions

5G 敢为英雄  
to be a Hero

# Product Introduction (M2M Module & Smart Module)

## ✓ NB-IoT Module

Low speed, low cost and low power consumption;  
Water meter, gas meter, smoke sensor networking



## ✓ 5G Module

High speed, low latency and wide access  
CPE, 5G Intelligent Connected Vehicle



## ✓ Cat.1 Module

Low-speed LTE, High cost performance  
Shared product networking



## ✓ 4G/5G Smart Module

Android, 4G/5G, Artificial Intelligence;  
Commercial display screen,  
intelligent cockpit domain controller



## ✓ 4G Module

Medium and high speed;  
automobile networking



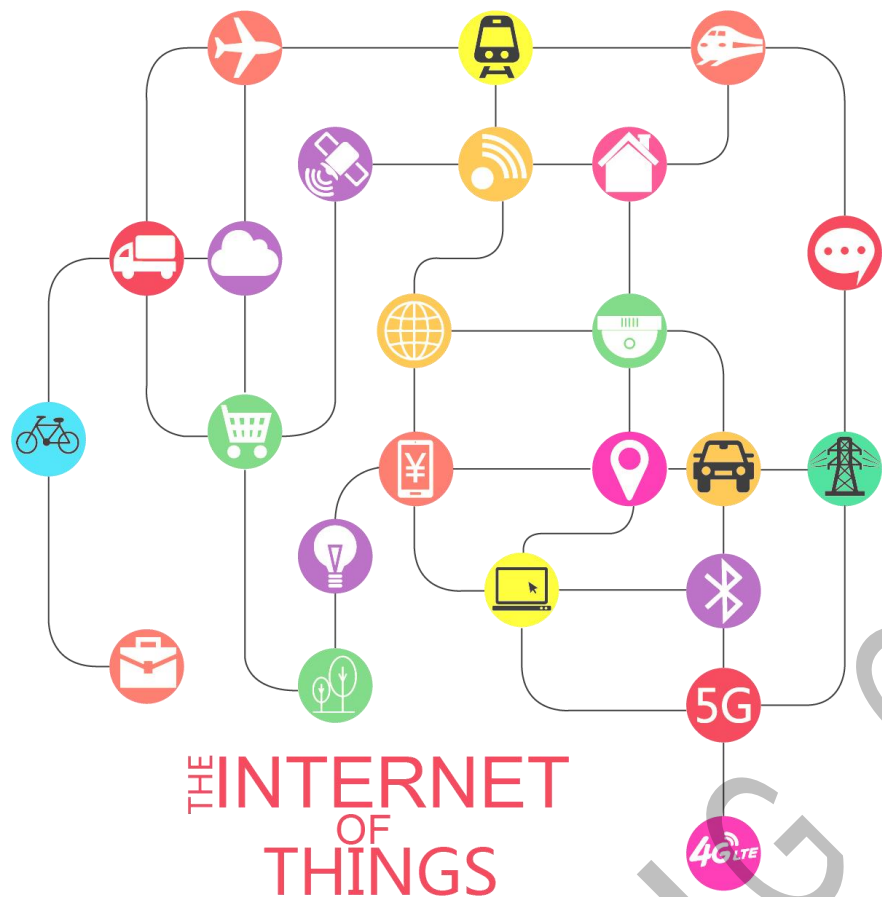
Qualcomm

UNISOC®

EIGENCOMM

HISILICON

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**Part 04 CAT.1 Module**

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**Part 01**

# Smart Module

# Smart Module Roadmap



5G

High

Mid

Entry

**2021** **SLM900**

- SDM660
- 8-Cores 2.2Ghz
- 45.5mm\*41mm
- WIFI 2.4G/5G

**2021** **SLM920**

- QCM6125
- 8-Cores 2.0Ghz
- 45.5mm\*41mm
- WIFI 2.4G/5G

**2021** **SRM900**

- SM6350
- SUB6G+SA/NSA
- 8-Cores 2.0Ghz
- L1+L5 GPS
- WIFI6 ready

**2022** **SNM951**

- QCS8250
- 8-Cores 2.84Ghz
- WIFI 6
- 15 Tops AI

**2022** **SRM930**

- QCM6490
- SUB6G+SA/NSA
- 8-Cores 2.7Ghz
- L1+L5 GPS
- WIFI6

**SLM758L**

- SDM450
- 8-Cores 1.8Ghz
- 45.5mm\*41mm
- WIFI 2.4G/5G

**SLM758N**

- MSM8953
- 8-Cores 2.0Ghz
- 45.5mm\*41mm
- WIFI 2.4G/5G

**SLM500L**

- SDM450
- 8-Cores 1.8Ghz
- 40.5mm\*40.5mm
- WIFI 2.4G/5G

**2022** **SLM925**

- QCM6125
- 8-Cores 2.0Ghz
- 44mm\*43mm
- WIFI 2.4G/5G

**2022** **SLM926**

- QCM4290
- 8-Cores 2.0Ghz
- 45.5mm\*41.0mm
- WIFI 2.4G/5G

**SLM757**

- MSM8917
- 4-Cores 1.4Ghz
- 41mm\*41mm
- WIFI 2.4G/5G

**SLM759**

- SDM450
- 8-Cores 1.8Ghz
- 44mm\*43mm
- WIFI 2.4G/5G

**SLM500Q**

- QCM2150
- 4-Cores 1.3Ghz
- 40.5mm\*40.5mm
- WIFI 2.4G/5G

**2021** **SLM550**

- QCM2290
- 4-Cores 2.0Ghz
- 40.5mm\*40.5mm
- WIFI 2.4G/5G

**2022** **SLM550S**

- UNISOC 8581
- 8-Cores 1.6Ghz
- 40.5mm\*40.5mm
- WIFI 2.4G

**SLM755L**

- MSM8909
- 4-Cores 1.1Ghz
- 40.5mm\*40.5mm
- WIFI 2.4G

**SLM756**

- MSM8909
- 4-Cores 1.1Ghz
- 39mm\*44mm
- WIFI 2.4G/5G

**SLM500S**

- UNISOC 8541E
- 4-Cores 1.4Ghz
- 40.5mm\*40.5mm
- WIFI 2.4G

Before 2020 | 2021 | 2022

# 4G Smart Module-SLM550 Features



High cost performance

Strong GPU

USB 3.0

Same package

## Extention

Packaging	LCC 146 pin + LGA 64 pin	pin SLM500Q/S
Size(mm)	40.5 x 40.5 x 2.85mm	
OS	Android 11.0 (can be updated to Android 12/13, 14-TBD)	
CPU	4 x A53@2.0GHz (Antutu: 90691)	11nm
GPU	Adreno 702@900MHz;	72 GFLOPS@FP16
Memory	(1+8) / 2+16 / 2+32 / 3+64	LPDDR4, eMMC
Frequency Band	SLM550-C/SLM550-E/SLM550-A/SLM550-J/...	LTE CAT4
WLAN / BT	802.11 a/b/g/n/ac,2.4&5G WiFi; BT5.0	
GNSS	GPS / Beidou / Glonass	WTR3925(L1+L5)
Video	Decode : 1080P@30fps, Encode : 1080P@30fps; H.265/VP9	

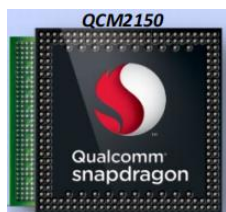
## Interface Information

Display Interface	1xMIPI DSI; HD+ (1680x720) @ 60 fps
Camera Interface	2xMIPI CSI; 2xISP; 13MP+13MP or 25MP@30fps
USB Interface	1xUSB3.0; OTG
Extension Interface	2xUART; 4xI2C; 1xSPI; 2xADC; 2xSIM; 1xSDIO; 17xGPIO; 2xI2S
Antenna Interface	Main Antenna ; Diversity Antenna ; GNSS Antenna ; WIFI/BT Antenna

# 4G Smart Module-SLM550 Parameters

Model		SLM550-C	SLM550-E	SLM550-A	SLM550-J*	SLM550-AU*
LTE	LTE-FDD	B1/B3/B5/B8	B1/B3/B5/B7/B8/B20/ B28A	B2/B4/B5/B7/B1 2/B13/B17/B25/B 26/B66	B1/B3/B8/B18/ B19/B26	B1/B3/B5/B7/B8/ B28
	LTE-TDD	B34/B38/B39/B40/B41	B38/B40/B41	-	B41	B40
UMTS	WCDMA	B1/B8	B1/B5/B8	B2/B4/B5/B8	B1/B6/B8/B19	B1/B5/B8
	TD-SCDMA	B34/B39	-	-	-	-
EVDO-CDMA		BC0	-	-	-	-
GSM		900/1800	850/900/1800/1900	850/1900MHz	-	850/900/1800MHz
Region		China/India	EU/Middle East/Africa/South Korea/Thailand	North America	Japan	Australia/Taiwan/B razil
Certification		CCC	CE	FCC*/IC*		

# 4G Smart Module-SLM500Q Features



High cost performance

Strong GPU

USB 2.0

Same package

## Basic Information

Packaging	LCC 146 pin + LGA 128 pin	pin SLM755L/500S
Size(mm)	40.5 x 40.5 x 2.8mm	
OS	Android 10.0	
CPU	4x A53@1.3GHz	28nm
GPU	Adreno 308@465MHz	
Memory	1+8 / 2+16	LPDDR3,eMMC
Frequency Band	SLM500Q-C/SLM500Q-E/SLM500Q-A/SLM500Q-J/SLM500Q-AU/SLM500Q-LA/SNM500Q	LTE CAT4
WLAN / BT	802.11 a/b/g/n/ac*,2.4&5G WiFi; BT4.1, BLE	
GNSS	GPS / Beidou / Glonass	
Video	Decode : 1080P@30fps, Encode : 1080P@30fps; H.264/HEVC/VP8	

## Interface Information

Display Interface	1xMIPI DSI; 1440*720 @60fps
Camera Interface	2xMIPI CSI; 2xISP; 8MP+8MP or 13MP@30fps
USB Interface	1xUSB2.0; OTG
Extension Interface	3xUART; 5xI2C; 5xSPI; 2xADC; 2xSIM; 1xSDIO; 24xGPIO
Antenna Interface	Main Antenna ; Diversity Antenna ; GNSS Antenna ; WIFI/BT Antenna



# 4G Smart Module-SLM500Q Parameters

Model		SLM500Q-C	SLM500Q-E	SLM500Q-A	SLM500Q-J	SLM500Q-AU	SLM500Q-LA*
LTE	LTE-FDD	B1/B3/B5/B8	B1/B3/B5/B7/B8/B20/B28A	B2/B4/B5/B7/B12/B13/B17/B25/B26/B66	B1/B3/B8/B18/B19/B26	B1/B3/B5/B7/B8/B28	B2/B4/B5/B7/B8/B25/B28/B66
	LTE-TDD	B34/B38/B39/B40/B41	B38/B40/B41	-	B41	B40	B40
UMTS	WCDMA	B1/B8	B1/B5/B8	B2/B4/B5/B8	B1/B6/B8/B19	B1/B5/B8	B2/B5/B8
	TD-SCDMA	B34/B39	-	-	-	-	-
EVDO-CDMA		BC0	-	-	-	-	-
GSM		900/1800MHZ	850/900/1800/1900 MHz	850/1900 MHz	-	850/900/1800MHz	850/900/1900MHz
Region		China/India	EU/Middle East/Africa/South Korea/Thailand	North America	Japan	Australia/Taiwan/Brazil	Latin America
Certification		CCC/Rohs	CE/GCF	FCC/IC/PTCRB/AT&T*/Verizon*	MIC/JATE/Do como	RCM	

# 4G Smart Module-SLM920 Parameters



- Dual screen display
- Multi Camera
- Fast Reversing
- AI Computing

## Basic Information

Packaging	LCC 160 pin + LGA 112 pin	pin SLM758
Size(mm)	41.0 x 45.5 x 2.85mm	
OS	Android 10	
CPU	4 x A73@2.0GHz + 4 x A53@1.8GHz (AnTuTu: 165626)	11nm
GPU	Adreno 610@950MHz	
Memory	3+32 / 4+64 / 6+128 / 2+32 / ...	DDR4x eMCP
Frequency Band	SLM920-C/SLM920-E/SLM920-A/SLM920-J/SLM920-NA/SNM920/...	LTE CAT6
WLAN / BT	2.4G & 5G, 802.11 a/b/g/n/ac ; BT2.1+EDR3.0/4.2LE	
GNSS	GPS / Beidou / Glonass / Galileo / QZSS	
cDSP	2 x HVX@1.0 GHz	
Video	Decode : 4K@30fps, Encode : 4K@30fps; H.264, H.265	

## Interface Information

Display Interface	MIPI DSI + Display Port ; 1920*1200@60fps + 1680x720@60fps
Camera Interface	3xMIPI CSI; 2xISP; 16MP+16MP or 25MP@30fps
USB Interface	1xUSB3.0; OTG
Extension Interface	2xUART; 4xI2C; 1xSPI; 2xADC; 2xSIM; 1xSDIO; 17xGPIO; 2xI2S
Antenna Interface	Main Antenna; Diversity Antenna; GNSS Antenna; WIFI/BT Antenna

# 4G Smart Module-SLM920 Parameters

Model		SLM920-C	SLM920-E	SLM920-A*	SLM920-J*	SLM920-AU*	SLM920-LA*
LTE	LTE-FDD	B1/B3/B5/B8	B1/B3/B5/B7/B8/B20/B28A	B2/4/5/7/12/13/14/25/26	B1/3/8/18/19/26	B1/B3/B5/B7/B8/B28	B2/B4/B5/B7/B8/B28
	LTE-TDD	B34/B38/B39/B40/B41	B38/B40/B41	B41	B41	B40	B40
UMTS	WCDMA	B1/B8	B1/B5/B8	B1/B2/B5/B8	B1/B6/B8/B19	B1/B2/B5/B8	B2/B5/B8
	TD-SCDMA	B34/B39	-	-	-	-	-
EVDO-CDMA		BC0	-	-	-	-	-
GSM		900/1800	850/900/1800/1900	850/900/1800/1900 MHz	-	850/900/1800/1900MHz	850/900/1900MHz
Region		China/India	EU/Middle East/Africa/South Korea/Thailand	North America	Japan	Australia/Taiwan/Brazil	Latin America
Certification		CCC	CE*	FCC*			

# 4G Smart Module-SLM925 Features



- Dual screen display
- Multi Camera
- Discrete storage
- Same package

## Basic Information

Packaging	LCC 152 pin + LGA 171 pin	
Size(mm)	43.0 x 44.0 x 2.85mm	
OS	Android 10.0	
CPU	4 x A73@2.0GHz + 4 x A53@1.8GHz ; (AnTuTu: 165626 )	11nm
GPU	Adreno610@950MHz	
Memory	4+32 / 4+64 / 6+128 / ...	Discrete storage
Frequency Band	SLM925-C/SLM925-E/SLM925-A/SLM925-J/...	LTE CAT6
WLAN / BT	2.4G & 5G, 802.11a/b/g/n/ac; BT5.X	
GNSS	GPS / Beidou / Glonass / Galileo	
cDSP	2 x HVX@1.0 GHz	
Video	Decode : 4K@30fps, Encode : 4K@30fps; H.264, H.265	

## Interface Information

Display Interface	2xMIPI DSI; 1920*1200@60fps + 1680x720@60fps
Camera Interface	2xMIPI CSI; 2xISP; 16MP+16MP or 25MP@30fps
USB Interface	1xUSB3.0; OTG
Extension Interface	2xUART; 5xI2C; 2xSPI; 1xADC; 2xSIM; 1xSDIO; 19xGPIO; 1xI2S
Antenna Interface	Main Antenna ; Diversity Antenna ; GNSS Antenna ; WIFI/BT Antenna

# 4G Smart Module-SLM925 Parameters

Model		SLM925-C	SLM925-E	SLM925-A*	SLM925-J*	SLM925-AU*
LTE	LTE-FDD	B1/B3/B5/B8	B1/B3/B5/B7/B8/B20/B28A	B2/B4/B5/B7/B12/B13/B17/B25/B26/B66	B1/B3/B8/B18/B19/B26	B1/B3/B5/B7/B8/B28
	LTE-TDD	B34/B38/B39/B40/B41	B38/B40/B41	-	B41	B40
UMTS	WCDMA	B1/B8	B1/B5/B8	B2/B4/B5/B8	B1/B6/B8/B19	B1/B5/B8
	TD-SCDMA	B34/B39	-	-	-	-
EVDO-CDMA		BC0	-	-	-	-
GSM		900/1800	850/900/1800/1900	850/1900MHz	-	850/900/1800MHz
Region		China/India	EU/Middle East/Africa/South Korea/Thailand	North America	Japan	Australia/Taiwan/Brazil
Certification		CCC*	CE*	FCC*		

# 4G Smart Module-SLM926 Parameters



**FDH+  
display**

**Multi  
Camera**

**Fast  
Reversing**

**AI  
Computing**

## Basic Information

Packaging	LCC 160 pin + LGA 112 pin	pin SLM758
Size(mm)	41.0 x 45.5 x 2.85mm	
OS	Android 12	
CPU	4 x A73@2.0GHz + 4 x A53@1.8GHz	11nm
GPU	Adreno 610@950MHz	
Memory	3+32 / 4+64 / 6+128 / ...	DDR4x eMCP
Frequency Band	SLM920-C/SLM920-E/SLM920-A/SLM920-J/SLM920-NA/SNM920/...	LTE CAT6
WLAN / BT	2.4G & 5G, 802.11 a/b/g/n/ac ; BT2.1+EDR3.0/4.2LE	
GNSS	GPS / Beidou / Glonass / Galileo / QZSS	
cDSP	Hexagon™ 683 2x HVX @1.0GHz	
Video	Decode : 1080P@60fps, Encode : 1080P@60fps; H.264, H.265	

## Interface Information

Display Interface	MIPI DSI ; FHD+ 2520*1080@60fps
Camera Interface	3xMIPI CSI; 3xISP; 16MP+16MP or 25MP+5MP@30fps
USB Interface	1xUSB3.1; OTG
Extension Interface	2xUART; 4xI2C; 1xSPI; 2xADC; 2xSIM; 1xSDIO; 17xGPIO; 2xI2S
Antenna Interface	Main Antenna; Diversity Antenna; GNSS Antenna; WIFI/BT Antenna

# 4G Smart Module-SLM926 Parameters

Model		SLM926-C	SLM926-E	SLM926-A*	SLM926-J*	SLM926-AU*	SLM926-LA*
LTE	LTE-FDD	B1/B3/B5/B8	B1/B3/B5/B7/B8/B20/B28	B2/4/5/7/12/13/14/25/26	B1/3/8/18/19/26	B1/B3/B5/B7/B8/B28	B2/B4/B5/B7/B8/B28
	LTE-TDD	B34/B38/B39/B40/B41	B38/B40/B41	B41	B41	B40	B40
UMTS	WCDMA	B1/B8	B1/B5/B8	B1/B2/B5/B8	B1/B6/B8/B19	B1/B2/B5/B8	B2/B5/B8
	TD-SCDMA	B34/B39	-	-	-	-	-
EVDO-CDMA		BC0	-	-	-	-	-
GSM		900/1800	850/900/1800/1900	850/900/1800/1900 MHz	-	850/900/1800/1900MHz	850/900/1900MHz
Region		China/India	EU/Middle East/Africa/South Korea/Thailand	North America	Japan	Australia/Taiwan/Brazil	Latin America
Certification		CCC	CE*	FCC*			

# 5G Smart Module-SRM930 Parameters



- Dual screen display
- Multi Camera
- Dual USB
- PCIe
- 5G NR
- > 10 Tops
- WIFI 6E
- L1+L5

## Basic Information

Packaging	LGA 458 pin	
Size(mm)	47.0 x 48.0 x 3.0 mm	pin SRM900
OS	Android 11.0 ~ Android 15 (2028)	
CPU	1xA78@2.7GHz+3xA78@2.4GHz+4xA55@1.9GHz (Antutu: 383385)	6nm
GPU	Adreno 635	
Memory	4+64 / 8+128 / ...	DDR4 eMCP
Frequency Band	SRM900-C / SRM900-E / SRM900-J	
WLAN / BT	2.4G & 5G, 802.11 a/b/g/n/ac/ax; BT5.2	WIFI 6E
GNSS	GPS / Beidou / Glonass / Galileo; L1+L5	
cDSP	2 x HVX, 4K HMX	> 10 Tops
Video	Decode : 4K@60fps, Encode : 4K@30fps; H.264, H.265	

## Interface Information

Display Interface	MIPI DSI+Display Port ; FHD+(1080*2520)@144Hz + 4K60 over DP	
Camera Interface	5xMIPI CSI; 3xISP; (22MP+22MP+22MP or 64MP ZSL) @30fps	
USB Interface	1xUSB3.0 + 1xUSB 2.0; support OTG	
Extension Interface	UART; I2C; SPI; ADC; 2xSIM; SDIO; GPIO; I2S; 1xPCIe Gen 3 2L	
Antenna Interface	4 x 5G/4G Antenna; 1 x GNSS Antenna ; 2 x WIFI/BT Antenna	



# 5G Smart Module-SRM930 Parameters

Model		SRM930-C	SRM930-E	SRM930-J
<b>5G-NR</b>		N1/N28/N41/N78/N79	N1/N3/N20/N28/N78	N1/N3/N77/N78/N79
<b>LTE</b>	<b>LTE-FDD</b>	B1/B3/B5/B8	B1/B3/B5/B7/B8/B20	B1/B3/B8/B9/B19/B26/B28
	<b>LTE-TDD</b>	B34/B38/B39/B40/B41	B38/B40/B41	B41
<b>UMTS</b>	<b>WCDMA</b>	-	-	-
	<b>TD-SCDMA</b>	-	-	-
<b>EVDO-CDMA</b>		-	-	-
<b>GSM</b>		-	-	-
<b>Region</b>		China	EU	Japan
<b>Certification</b>		CCC*	CE*	

# Smart Module-SNM951

## Parameters



Dual screen display

Multi Camera

Dual USB

PCIe

WIFI 6

~15 Tops

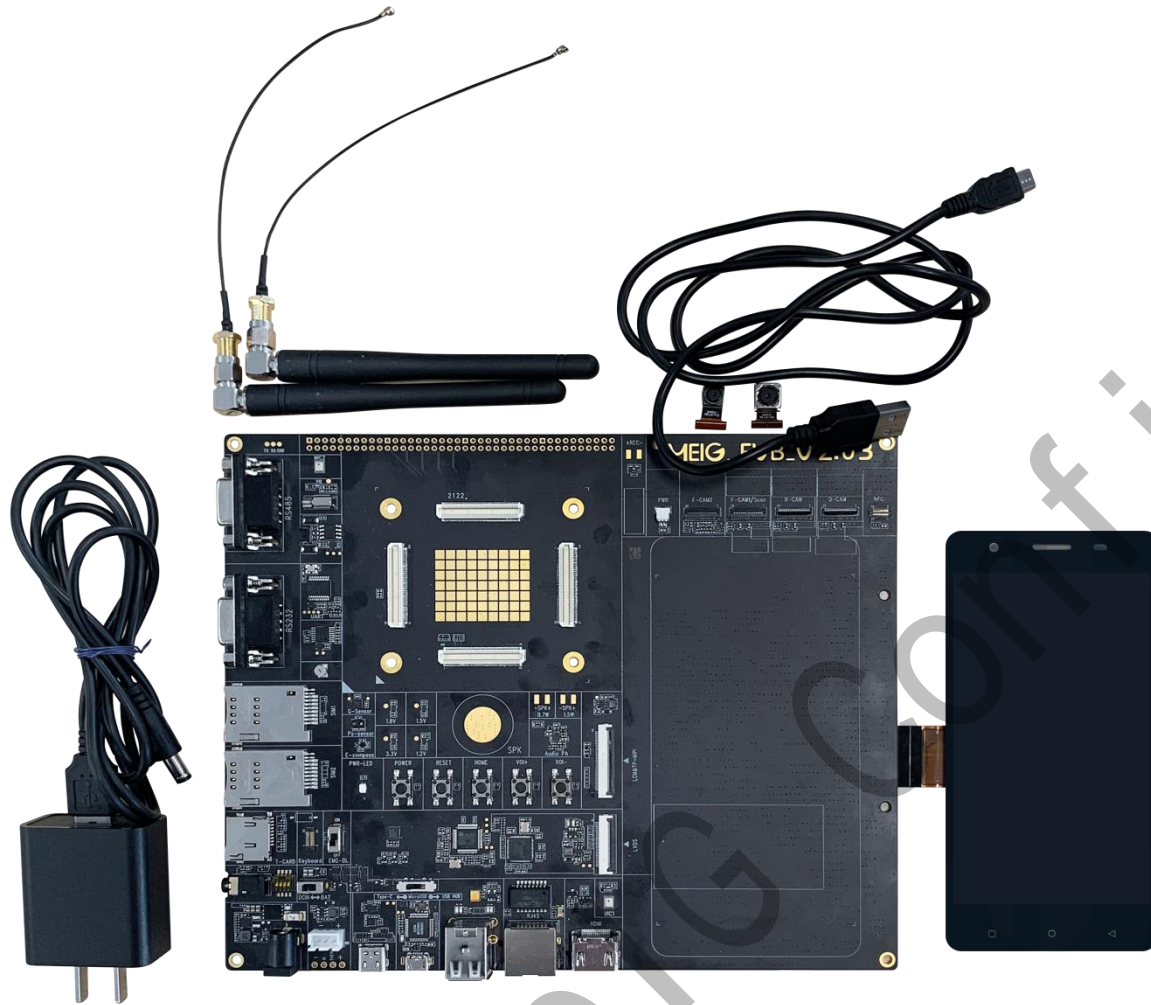
### Basic Information

Size & Packaging	67.6 x 40 x 2.3mm; DIMM	
ANTUTU	581462	SRM900 : 325426
OS	Android 10	
CPU	1x KyroGP@2.85GHz + 3 x KyroG@2.4GHz + 4 x KyroS@1.8GHz	7nm
GPU	Adreno 650	
Memory	12+256 / 8+128	Discrete storage
Frequency Band	WIFI-only	
WLAN / BT	2.4G&5G, 802.11 a/b/g/n/ac/ax; BT5.1	WIFI 6E
GNSS	NA	
AI Computing Power	~15 Tops	NPU230
Video	Encode : 4K@120fps ; Decode : 4K@240fps; H.264, H.265	

### Interface Information

Display Interface	MIPI DSI (1920*1200@60Hz) + Display Port (4K@120Hz or 2x4K@60Hz)
Camera Interface	2 x MIPI CSI; (25MP+25MP or 64MP ZSL) @30fps
USB Interface	2 x USB3.1 Gen 2; support OTG
Extension Interface	UART; I2C; SPI; ADC; SDIO; GPIO; I2S; 1xPCIe Gen 3 2L
Antenna Interface	2 x WIFI/BT Antenna

# Smart Module-EVB



## Interface

- 2 x serial port
- USB( 2xUSB + TypeC + Mirco-USB)
- Antenna Interface
- LCM( MIPI + LVDS + HDMI)/TP
- RJ45
- 2 x SIM Slot
- SD Slot
- Audio
- 2-4 x Cameras, NFC

## Accessory parts

- Power adapter
- Antenna
- Display screen
- Front/rear camera
- Mirco-USB data wire

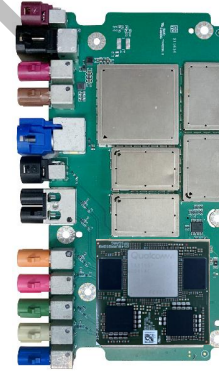
# Smart Module- Automotive Roadmap



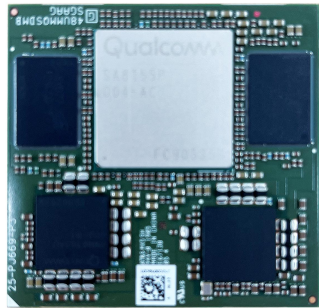
# Smart Module-Cockpit Platforms



- **SA8295(In Planning)**
- 220K Dmips
- 20~30 Tops
- 3.1 TFLOPS
- 6 x DP, 2 x DSI, 2 x eDP
- **Sub PCBA**



- **SA8255(In Planning)**
- TBD
- **Sub PCBA**



- **SA8155**
- 100K Dmips
- 8 Tops
- 1.0 TFLOPS
- 2x DSI (4-lanes), 1x DP1.4
- **SIP module**

**SA8295**

**SA8255**

**SA8155P**



8953

**Part 02**

# 5G M2M Module

# 5G M2M Module Roadmap

Qualcomm Platform

**Qualcomm Platform - X55**

- SRM815**
  - X55
  - 5G NR Sub6
  - LGA
  - 44x41x2.8mm
- SRM815 M.2**
  - X55
  - 5G NR Sub6
  - M.2
  - 56x43x3.65mm
- SRM815 MiniPCle**
  - X55
  - 5G NR Sub6
  - MiniPCle
  - 51x49x5.4mm
- SRM825(W)**
  - X55
  - 5G NR Sub6 & mmWave
  - M.2
  - 30x52x3.6mm
- SRM815-GL**
  - X55
  - 5G NR SA
  - LGA
  - 44x43x2.8mm

**SRM815L**

- Qualcomm 315
- 5G NR SA
- LGA
- 44.0x41.0x2.8mm

**SRM825L**

- Qualcomm 315
- 5G NR SA
- M.2
- 30x52x3.6mm

**2022Q2 SRM825WN**

- X62
- 5G NR Sub6 & mmWave
- M.2
- 30x52x2.3mm

**2022Q2 SRM815N**

- X62
- 5G NR SA&NSA
- LGA
- 44x41x2.8mm

April: ES Sample  
June: CS Sample  
July: MP

May: ES Sample  
June: CS Sample

**SRT830**  
Plug&play 5G Box  
+QCA6391  
AR8035



**2022Q4 SRM827W**

- X65
- 5G NR Sub6 & mmWave
- M.2
- 30\*52\*2.3mm

Planning

UNISOC Platform

**2022Q1 SRM811**

- Unisoc V510
- 5G NR SA&NSA
- LGA
- 44\*41\*2.85mm

**2022Q2 SRM821**

- Unisoc V510
- 5G NR SA&NSA
- M.2
- 30x52x2.3mm

CS Status

April: ES Sample  
June: CS Sample  
July: MP



# 5G M2M Module-Qualcomm X62 Platform

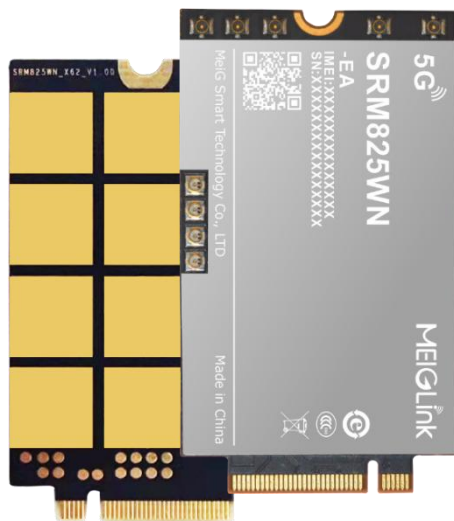
Model		SRM815N-EA	SRM825WN-EA support mmWave	SRM825N-EA
Packaging		LGA: 392-Pin	M.2: 75-Pin	M.2: 75-Pin
Size (mm)		44.0×43.0×2.75	30.0×52.0×2.3	30.0×52.0×2.3
Region		China/Europe & Asia/Japan/South Korea/Australia	China/Europe & Asia/Japan/South Korea/Australia	China/Europe & Asia/Japan/South Korea/Australia
5G NR	Technical Standard	3GPP Release 16 Sub-6GHz, NSA/SA mode	3GPP Release 16 Sub-6GHz & mmWave, NSA/SA mode	3GPP Release 16 Sub-6GHz, NSA/SA mode
	SA band	N1/3/5/7/8/20/28/38/40/41/71/77/78/79	N1/3/5/7/8/20/28/38/40/41/71/77/78/79	N1/3/5/7/8/20/28/38/40/41/71/77/78/79
	NSA band	N1/3/5/7/8/20/28/38/40/41/71/77/78/79	N1/3/5/7/8/20/28/38/40/41/71/77/78/79	N1/3/5/7/8/20/28/38/40/41/71/77/78/79
	DL 4x4 MIMO	N1/3/7/38/40/41/77/78/79	N1/3/7/38/40/41/77/78/79	N1/3/7/38/40/41/77/78/79
	UL 2x2 MIMO	N38/41/77/78/79	N38/41/77/78/79	N38/41/77/78/79
	Sub6G CA	2CC, max 120MHz	2CC, max 120MHz	2CC, max 120MHz
LTE	LTE Category	DL Cat.19/ UL Cat.18	DL Cat.19/ UL Cat.18	DL Cat.19/ UL Cat.18
	LTE Bands	FDD: B1/B3/B5/B7/B8/B18/B19/B20/B26/B28/B32/B71 TDD: B38/B39/B40/B41/B42/B43	FDD: B1/B3/B5/B7/B8/B18/B19/B20/B26/B28/B32/B71 TDD: B38/B39/B40/B41/B42	FDD: B1/B3/B5/B7/B8/B18/B19/B20/B26/B28/B32/B71 TDD: B38/B39/B40/B41/B42
	DL 4x4 MIMO	B1/3/7/38/39/40/41/42/43	B1/3/7/38/39/40/41/42	B1/3/7/38/39/40/41/42
WCDMA		B1/5/8	B1/5/8	B1/5/8
Interface		USB3.1/PCIe3.0/SDIO/PCM/UART/SIM/I2C/ADC/Reset/Power/LED_MODE/LED_STATUS/GPIOs/eSIM	USB3.1/PCIe3.0/PCM/UART/LED/GPIOs/eSIM	USB3.1/PCIe3.0/PCM/UART/LED/GPIOs/eSIM
Certification		CCC*/SRRC*/CTA*/CE*	CCC*/SRRC*/CTA*/CE*	CCC*/SRRC*/CTA*/CE*/FCC*/JATE*/TELEC*



# 5G M2M Module-UNISOC V510 Platform

Model		SRM811	SRM821
Packaging		LGA: 392-Pin	M.2: 75-Pin
Size (mm)		44.0×41.0×2.8	30.0×52.0×2.3
Region		China	China
5G NR	Technical Standard	3GPP Release 15 , Sub-6GHz, NSA/SA mode	3GPP Release 15 , Sub-6GHz, NSA/SA mode
	SA band	N1/28/41/78/79	N1/28/41/78/79
	NSA band	N41/78/79	N41/78/79
	DL 4x4 MIMO	N1/41/78	N1/41/78
	UL 2x2 MIMO	N41/78/79	N41/78/79
LTE	LTE Category	Cat.13	Cat.13
	LTE Bands	FDD: B1/3/5/8 TDD: B34/38/39/40/41	FDD: B1/3/5/8 TDD: B34/38/39/40/41
	DL 4x4 MIMO	不support	不support
WCDMA		B1/8	B1/8
Interface		USB3.0/PCIe2.0/SDIO/PCM/UART/SIM/I2C/ADC/Reset/Power/LED_MODE/LED_STATUS/GPIOs/eSIM	USB3.0/PCIe2.0/PCM/UART/LED/GPIOs/eSIM
Certification		CCC*/SRRC*/CTA*	CCC*/SRRC*/CTA*

# 5G M2M Module-SRM825(W)N Features



**R16 standard SA/NSA**

**M.2 package standard Interface**

**Global major bands**

**Fewer antennas**

## Basic Information

<b>Packaging</b>	M.2 75-Pin	
<b>Size(mm)</b>	30.0x52.0x2.3	
<b>Platform</b>	Qualcomm X62	
<b>Electric spec</b>	3.3V~4.35V, Typ. 3.8V	
<b>Network</b>	5G NR Sub6G & mmWave , LTE-TDD, LTE-FDD, WCDMA	
<b>Frequency Band</b>	-EA/-CN/-NA*	* Planning
<b>Memory</b>	4Gb NAND + 4Gb LPDDR4x	
<b>Rate</b>	5G SA: Max 2.4Gbps(DL)/900Mbps(UL) LTE(Cat.19): Max 1.6Gbps(DL)/200Mbps(UL) DC-HSPA+:Max 42Mbps(DL)/5.76Mbps(UL)	
<b>GNSS</b>	GPS / Beidou / Glonass / Galileo, L1	optional
<b>Working temperature</b>	Normal temperature: -30°C~75°C; Extension Working temperature: -40°C~85°C	
<b>SW Functions</b>	TTS, Voice, SMS, TCP/IP, SSL, Http(s) , FTP, Sleep, MQTT, UAC	OPENCPU Planning

## Interface Information

<b>HW Interface</b>	USB3.1/PCIe3.0/PCM/UART/SIM/Reset/Led/GPIOs/eSIM
<b>Antenna Interface</b>	x5 : ANT_PRI/ANT_DIV/ANT_MIMO: x4 GPS x1 Antenna

## Certification

<b>Certification</b>	CCC*/SRRC*/CTA*/CE*/FCC*/JATE*/TELEC*
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# 5G M2M Module-SRM815N Features



- R16standard SA/NSA
- Global major bands
- High reliability
- Separate antennas

## Basic Information

<b>Packaging</b>	LGA 392-Pin	
<b>Size(mm)</b>	44.0×43.0×2.75	
<b>Platform</b>	Qualcomm X62	
<b>Electric spec</b>	3.3V~4.35V, Typ. 3.8V	
<b>Network</b>	5G NR Sub6G , LTE-TDD, LTE-FDD, WCDMA	
<b>Frequency Band</b>	-EA/-CN/	
<b>Memory</b>	4Gb NAND + 4Gb LPDDR4x	
<b>Rate</b>	5G SA: Max 2.4Gbps(DL)/900Mbps(UL) LTE(Cat.19): Max 1.6Gbps(DL)/200Mbps(UL) DC-HSPA+:Max 42Mbps(DL)/5.76Mbps(UL)	
<b>GNSS</b>	GPS / Beidou / Glonass / Galileo, L1	optional
<b>Working temperature</b>	Normal temperature: -30°C~75°C; Extension Working temperature: -40°C~85°C	
<b>SW Functions</b>	TTS, Voice, SMS, TCP/IP, SSL, Http(s) , FTP, Sleep, MQTT, UAC	OPENCPU Planning

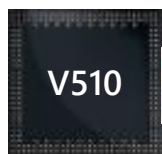
## Interface Information

<b>HW Interface</b>	USB3.1/PCIe3.0/SDIO/PCM/UART/SIM/I2C/ADC/Reset/Power/LED_MODE/LED_STATUS/GPI Os/eSIM
<b>Antenna Interface</b>	x11 : ANT_PRI/ANT_DIV/ANT_MIMO: x10 GPS x1 Antenna

## Certification

<b>Certification</b>	CCC*/SRRC*/CTA*/CE*
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# 5G M2M Module-SRM821 Features



Key features of the module:

- Domestic Platform
- 4 Antennas
- M.2 package standard interface
- Cost-effective

## Basic Information

<b>Packaging</b>	M.2 75-Pin
<b>Size(mm)</b>	30.0x52.0x2.3
<b>Platform</b>	Unisoc V510
<b>Electric spec</b>	3.3V~4.35V, Typ. 3.8V
<b>Network</b>	5G NR Sub6G , LTE-TDD, LTE-FDD, WCDMA
<b>Frequency Band</b>	-CN
<b>Memory</b>	4Gb NAND + 2Gb DDR (built-in)
<b>Rate</b>	5G SA: Max 2.0Gbps(DL)/900Mbps(UL) LTE(CAT.13) :Max 400Mbps(DL)/150Mbps(UL) DC-HSPA+:Max 42Mbps(DL)/5.76Mbps(UL)
<b>Working temperature</b>	Normal temperature: -30°C~75°C; Extension Working temperature: -40°C~85°C
<b>SW Functions</b>	TTS, Voice, SMS, TCP/IP, SSL, Http(s) , FTP, Sleep, MQTT, UAC

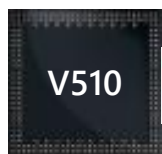
## Interface Information

<b>HW Interface</b>	USB3.0/PCIe2.0/PCM/UART/LED/GPIOs/eSIM
<b>Antenna Interface</b>	x4 : ANT_PRI/ANT_DIV/ANT_MIMO: x4

## Certification

<b>Certification</b>	CCC*/SRRC*/CTA*
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# 5G M2M Module-SRM811 Features



- Domestic Platform
- LGA package
- 4 Antennas
- Cost-effective

## Basic Information

<b>Packaging</b>	LGA 392-Pin
<b>Size(mm)</b>	44.0×41.0×2.8
<b>Platform</b>	Unisoc V510
<b>Electric spec</b>	3.3V~4.35V, Typ. 3.8V
<b>Network</b>	5G NR Sub6G , LTE-TDD, LTE-FDD, WCDMA
<b>Frequency Band</b>	-CN
<b>Memory</b>	4Gb NAND + 2Gb DDR (built-in)
<b>Rate</b>	5G SA: Max 2.0Gbps(DL)/900Mbps(UL) LTE(CAT.13) :Max 400Mbps(DL)/150Mbps(UL) DC-HSPA+:Max 42Mbps(DL)/5.76Mbps(UL)
<b>Working temperature</b>	Normal temperature: -30°C~75°C; Extension Working temperature: -40°C~85°C
<b>SW Functions</b>	TTS, Voice, SMS, TCP/IP, SSL, Http(s) , FTP, Sleep, MQTT, UAC

## Interface Information

<b>HW Interface</b>	USB3.0/PCIe2.0/SDIO/PCM/UART/SIM/I2C/ADC/Reset/Power/LED_MODE/LED_STATUS/GP IOs/eSIM
<b>Antenna Interface</b>	x4 : ANT_PRI/ANT_DIV/ANT_MIMO: x4

## Certification

<b>Certification</b>	CCC*/SRRC*/CTA*
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**Part 03**

# 4G M2M Module

# 4G M2M Module Roadmap

LTE-A

**SLM820**

- MDM9x50
- LTE Cat6/12/16
- M.2
- 30\*42\*2.3mm

**SLM828**

- SDX12
- LTE Cat6
- Mini PCIE
- 51\*30\*4.5mm

**SLM828G**

- SDX12
- LTE Cat6/12
- LGA
- 39.5\*37\*3mm

2022Q4

**SLM828-M**

- SDX12
- LTE Cat6/12
- M.2
- 30\*42\*2.3mm

Planning

LTE

**SLM750-VX**

- MDM9X07
- LTE Cat4
- LCC
- 32\*29\*2.8mm

**MA800**

- MDM9628
- LTE Cat4
- LGA
- 37.5\*33\*3.0mm

**SLM790**

- Hisi V711
- LTE Cat4
- LCC
- 29\*32\*2.8mm

2022Q3

**SLM750-GL**

- MDM9X07
- LTE Cat4
- LCC
- 32\*29\*2.8mm

Planning

Cat1

**SLM730**

- MDM9X07
- LTE Cat4
- Mini-PCIE
- 51\*30\*4.5mm

**SLM750-VX Mini PCIE**

- MDM9X07
- LTE Cat4
- PCIE
- 51.0\*30.0\*4.8mm

**SLM790 Mini PCIE**

- Hisi V711
- LTE Cat4
- PCIE
- 51.0\*30.0\*4.8mm

2022Q2

**SLM770U**

- Unisoc 8310
- LTE Cat4
- LCC+LGA
- 32\*29mm

2022Q2

**SLM770A**

- ASR1803
- LTE Cat4
- LCC+LGA
- 32\*29mm

Planning

NB/CatM

**SLM750-ZX**

- MDM9X07-1
- LTE Cat1
- LCC
- 32\*29\*2.8mm

**SLM750-ZX Mini PCIE**

- MDM9X07-1
- LTE Cat1
- PCIE
- 51.0\*30.0\*4.8mm

**SLM156**

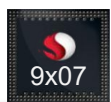
- MDM9205
- NB-IoT/CatM/GPRS
- LCC
- 17.6\*15.9\*2.3mm

**SLM156-H**

- MDM9205
- NB-IoT/CatM/
- LCC
- 17.6\*15.9\*2.3mm



# CAT4 M2M Module-SLM750 Features



Global major bands

Multi interfaces

Automotive

Certification ready

## Basic Information

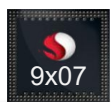
Packaging	144 Pin LGA+LCC	
Size(mm)	29 x 32 x 2.9	
Platform	Qualcomm MDM9x07	
Electric spec	3.3V~4.2V, Typ. 3.8V	
Network	FDD-LTE/TD-LTE/WCDMA/TD-SCDMA/CDMA/EVDO/GSM	
Frequency Band	SLM750-VC/-VE/-VA/-VSA/-VAU/-VJ	LTE CAT4
	SLM750-ZE/-ZA/-ZSA/-ZAU/-ZJ	LTE CAT1
Memory	1+1 / 2+2 / 4+2	MCP
Rate	LTE-FDD (Cat.4):Max 150Mbps(DL)/50Mbps(UL) LTE-TDD (Cat.4):Max 130Mbps(DL)/35Mbps(UL) DC-HSPA+:Max 42Mbps(DL)/5.76Mbps(UL) WCDMA:Max 384kbps(DL)/384kbps(UL) EDGE:Max 236.8kbps(DL)/236.8kbps(UL) GPRS:Max 85.6kbps(DL)/85.6kbps(UL)	
GNSS	GPS / Beidou / Glonass / Galileo	
Working temperature	Normal temperature: -30°C~75°C; Extension Working temperature: -40°C~85°C	
Functions	TTS, Voice, SMS, TCP/IP, SSL, Http(s) , FTP, Sleep,MQTT	

## Interface Information

HW Interface	1xPCM/1xUSB2.0/3xUART/1xSIM/1xI2C/2xSDIO/2xADC/1xSPI/1xSGMII/Reset/Power/LED_MO DE/ W_Disable/GPIO18
Antenna Interface	Main Antenna, AUX Antenna, GPS Antenna



# CAT4 M2M Module-SLM750 MiniPCle Features



- Global major bands
- Multi interfaces
- Plug and play
- Certification ready

## Basic Information

Packaging	144 Pin LGA+LCC	
Size(mm)	29 x 32 x 2.9	
Platform	Qualcomm MDM9x07	
Electric spec	3.3V~4.2V, Typ. 3.8V	
Network	FDD-LTE/TD-LTE/WCDMA/TD-SCDMA/CDMA/EVDO/GSM	
Frequency Band	SLM750-VC/-VE/-VA/-VSA/-VAU/-VJ	LTE CAT4
Memory	1+1 / 2+2 / 4+2	MCP
Rate	LTE-FDD (Cat.4):Max 150Mbps(DL)/50Mbps(UL) LTE-TDD (Cat.4):Max 130Mbps(DL)/35Mbps(UL) DC-HSPA+:Max 42Mbps(DL)/5.76Mbps(UL) WCDMA:Max 384kbps(DL)/384kbps(UL) EDGE:Max 236.8kbps(DL)/236.8kbps(UL) GPRS:Max 85.6kbps(DL)/85.6kbps(UL)	
GNSS	GPS / Beidou / Glonass / Galileo	
Working temperature	Normal temperature: -30°C~75°C; Extension Working temperature: -40°C~85°C	
Functions	TTS, Voice, SMS, TCP/IP, SSL, Http(s) , FTP, Sleep,MQTT	

## Interface Information

HW Interface	1xPCM/1xUSB2.0/3xUART/1xSIM/1xI2C/2xSDIO/2xADC/1xSPI/1xSGMII/Reset/Power/LED_MO DE/ W_Disable/GPIO18
Antenna Interface	Main Antenna, AUX Antenna, GPS Antenna

# CAT4 M2M Module-SLM750(-V) Parameters

Model		SLM750-VC	SLM750-VE	SLM750-VA	SLM750-VJ	SLM750-VAU	SLM750-VSA
LTE	LTE-FDD	B1/B3/B5/B8	B1/B3/B5/B7/B8/B20	B2/4/5/12/13/17/ 18/25/26	B1/3/8/18/19/26/ 28	B1/3/5/7/8/28	B2/4/5/7/8/28
	LTE-TDD	B38/B39/B40/B41	B40	B41	B39/41	B40	B40
UMTS	WCDMA	B1/B8	B1/B5/B8	B2/4/5	B1/6/8/19	B1/B5/B8	B2/5/8
	TD-SCDMA	B34/B39	-	-	-	-	-
EVDO-CDMA		BC0	-	-	-	-	-
GSM		900/1800	900/1800	850/1900	-	850/900/1800	850/900/1900
Region		China/India	EU/Middle East/Africa/South Korea/Thailand	North America	Japan	Australia/Taiwan	Latin America
Certification		CCC/SRRC/CTA China Mobile	CE/KC/GCF*	FCC/PTCRB*	Jate/Telec KDDI Softbank NTT Docomo	RCM/NCC	Anatel/NOM*

# CAT4 M2M Module-SLM750(-Z) Parameters

Model		SLM750-ZE	SLM750-ZA	SLM750-ZJ	SLM750-ZAU	SLM750-ZSA
LTE	LTE-FDD	B1/B3/B5/B7/B8/B20	B2/4/5/12/13/17/ 18/25/26	B1/3/8/18/19/26/ 28	B1/3/5/7/8/28	B2/4/5/7/8/28
	LTE-TDD	B40	B41	B39/41	B40	B40
UMTS	WCDMA	B1/B5/B8	B2/4/5	B1/6/8/19	B1/B5/B8	B2/5/8
	TD-SCDMA	-	-	-	-	-
EVDO-CDMA		-	-	-	-	-
GSM		900/1800	850/1900	-	850/900/1800	850/900/1900
Region		EU/Middle East/Africa/South Korea/Thailand	North America	Japan	Australia/Taiwa n	Latin America
Certification		CE/KC/GCF*	FCC/PTCRB*	Jate/Telec KDDI Softbank NTT Docomo	RCM/NCC	Anatel/NOM*

# 4G M2M Module-SLM750 Certification

No.	Certification	Status	Region
1	CCC/SRRC/CTA	Completed	China
2	CMCC	Completed	China
3	RoHS	Completed	Global
4	CE	Completed	EU/Middle East/CIS/Africa/Southeast Asia
5	FCC	Completed	North America/Latin America
6	KC	Completed	South Korea
7	RCM	Completed	Australia/New Zealand
8	NCC	Completed	Taiwan
9	JATE/TELEC	Completed	Japan
10	ANATEL	Completed	Brazil
11	NOM	To be done in June 2022	Mexico
12	GCF	To be done in May 2022	EU/Middle East/CIS/Africa/Southeast Asia
13	PTCRB	To be done in May 2022	America
14	KDDI	Completed	Japan
15	Docomo/NTT	To be done in April 2022	Japan
16	SoftBank	To be done in April 2022	Japan
17	AT&T/Verizon	Planning	North America

## Features



High cost performance

Domestic Platform

Compatible with eSim

Same package

### Basic Information

Packaging	144 Pin LGA+LCC	
Size(mm)	29 x 32 x 2.4	
Platform	ASR1803S	
Electric spec	3.3V ~ 4.2V, Typ. 3.8V	
Network	FDD-LTE/TD-LTE/WCDMA/GSM	
Frequency Band	SLM770A-C/-E/-AU/SA	LTE CAT4
Memory	32MB Dram,可Extension Flash	
Rate	LTE-FDD (Cat.4):Max 150Mbps(DL)/50Mbps(UL) LTE-TDD (Cat.4):Max 130Mbps(DL)/35Mbps(UL) DC-HSPA+:Max 42Mbps(DL)/5.76Mbps(UL) WCDMA:Max 384kbps(DL)/384kbps(UL) EDGE:Max 236.8kbps(DL)/236.8kbps(UL) GPRS:Max 85.6kbps(DL)/85.6kbps(UL)	
GNSS	GPS / Beidou / Glonass / Galileo	optional
Working temperature	Normal temperature: -30°C~75°C; Extension Working temperature: -40°C~85°C	
Functions	TTS, Voice, SMS, TCP/IP, SSL, Http(s) , FTP, Sleep,MQTT	

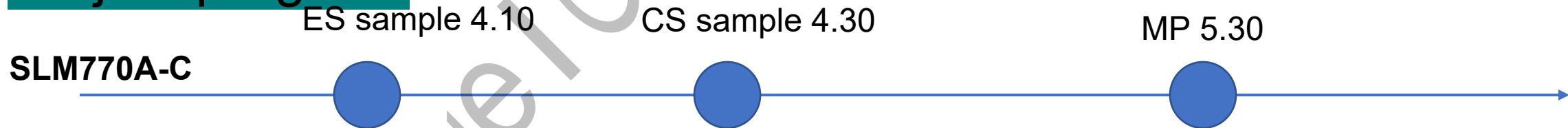
### Interface Information

HW Interface	1xPCM/1xUSB2.0/3xUART/1xSIM/1xI2C/1xSDIO/2xADC/1xSPI/Reset/Power/LED_MODE/W_Disable/
Antenna Interface	Main Antenna, AUX Antenna, GPS Antenna

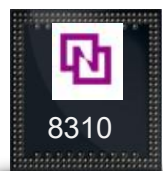
# 4G M2M Module-SLM770A Parameters

Model		SLM770A-C	SLM770A-E	SLM770A-AU	SLM770A-SA
LTE	LTE-FDD	B1/B3/B5/B8	B1/B3/B7/B8/B20/B28	B1/B3/B5/B7/B8/B28	B2/4/5/7/8/28
	LTE-TDD	B34/B38/B39/B40/B41	B38/B40/B41	B38/B40/B41	B40
WCDMA		B1/B8	B1/B5/B8	B1/B5/B8	B2/5/8
GSM		900/1800	900/1800	900/1800	850/1900
Region		China/India	EU/Middle East/Africa/South Korea/Thailand	Australia/Taiwan	Latin America
Certification		TBD	TBD	TBD	TBD

## Project progress



# 4G M2M Module-SLM770U Features



High cost performance

Domestic Platform

Mature application

Same package

## Basic Information

Packaging	144 Pin LGA+LCC	
Size(mm)	29 x 32 x 2.4	
Platform	UIS8310	
Electric spec	3.3V ~ 4.2V, Typ. 3.8V	
Network	FDD-LTE/TD-LTE/WCDMA/GSM	
Frequency Band	SLM770U-C/-E/-AU/SA	LTE CAT4
Memory	32MB Dram, 可Extension Flash	
Rate	LTE-FDD (Cat.4):Max 150Mbps(DL)/50Mbps(UL) LTE-TDD (Cat.4):Max 130Mbps(DL)/35Mbps(UL) DC-HSPA+:Max 42Mbps(DL)/5.76Mbps(UL) WCDMA:Max 384kbps(DL)/384kbps(UL) EDGE:Max 236.8kbps(DL)/236.8kbps(UL) GPRS:Max 85.6kbps(DL)/85.6kbps(UL)	
Working temperature	Normal temperature: -30°C~75°C; Extension Working temperature: -40°C~85°C	
Functions	Voice, SMS, TCP/IP, SSL*, Http(s), FTP, Sleep, MQTT*, TTS,	

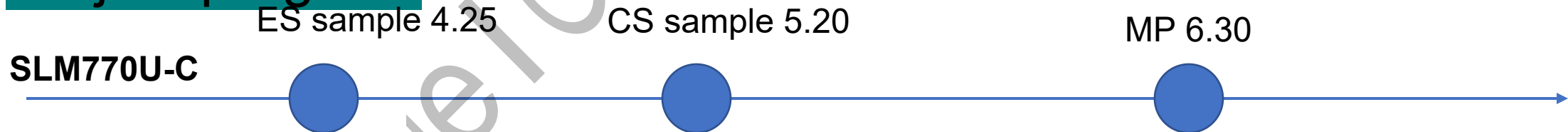
## Interface Information

HW Interface	1xPCM/1xUSB2.0/3xUART/1xSIM/1xI2C/1xSDIO/2xADC/1xSPI/Reset/Power/LED_MODE/W_Disable/
Antenna Interface	Main Antenna, AUX Antenna

# 4G M2M Module-SLM770U Parameters

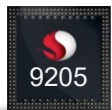
Model		SLM770U-C	SLM770U-E	SLM770U-AU	SLM770U-SA
LTE	LTE-FDD	B1/B3/B5/B8	B1/B3/B7/B8/B20/B28	B1/B3/B5/B7/B8/B28	B2/4/5/7/8/28
	LTE-TDD	B34/B38/B39/B40/B41	B38/B40/B41	B38/B40/B41	B40
WCDMA		B1/B8	B1/B5/B8	B1/B5/B8	B2/5/8
GSM		900/1800	900/1800	900/1800	850/1900
Region		China/India	EU/Middle East/Africa/South Korea/Thailand	Australia/Taiwan	Latin America
Certification		TBD	TBD	TBD	TBD

## Project progress





# LTE-M Module-SLM156 Features



Small Size

Low energy consumption

Multi modes

Wide connection

## Basic Information

Packaging	80 Pin LGA+LCC
Size(mm)	20x21x2.3
Platform	Qualcomm MDM9206
Electric spec	3.3V~4.2V, Typ. 3.8V
Network	Cat NB2 / Cat M1 /GPRS
Frequency Band	Cat NB2 B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B28/B66/B71/B85 Cat M1 B1/B2/B3/B4/B5/B8/B12/B13/B14/B18/B19/B20/B25/B26/B27/B28/B66/B85 GPRS850/900/1800/1900
Memory	built-in
Rate	Cat M1: DL: 588Kbps/UL: 1119Kbps Cat NB2: DL: 127Kbps/UL 158.5Kbps
GNSS	GPS / Beidou / Glonass / Galileo
Working temperature	-35°C~75°C
Functions	SMS, TCP/IP, SSL, Http(s) , FTP, Sleep, MQTT, File.Coap, PSM

## Interface Information

HW Interface	1xPCM/1xUSB2.0/2xUART/1xSIM/1xI2C/2xADC/Power/LED_MODE/ W_Disable/GPIO
Antenna Interface	Main Antenna, , GPS Antenna

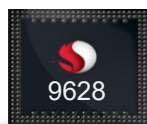
# LTE-M Module-SLM156 Parameters

Model	SLM156	SLM156-H
Network standard	Cat M1/ Cat NB2/ GSM	Cat M1/ Cat NB2
Power	class5:21dBm	class3:23dBm
Frequency Band	<b>Cat NB2:</b> B1/B2/B3/B4/B5/B8/B12/B13/B18/ B19/B20/B25/B26/B28/B66/B71/B85 <b>Cat M1 :</b> B1/B2/B3/B4/B5/B8/B12/B13/B14/ B18/B19/B20/B25/B26/B27/B28/B66/B85 <b>GSM:</b> 850/900/1800/1900	<b>Cat NB2:</b> B1/B2/B3/B4/B5/B8/B12/B13/B18/ B19/B20/B25/B26/B28/B66/B71/B85 <b>Cat M1:</b> B1/B2/B3/B4/B5/B8/B12/B13/B14/ B18/B19/B20/B25/B26/B27/B28/B66/B85
GNSS	support	support
Certification	CE/ RCM*/ FCC*/ PTCRB*	JATE/ TELEC/ NTT Docomo*/ KC*

# LTE-M Module-SLM156 Certification

NO.	Certification	Status	Region
1	CE	Completed	EU/Middle East/CIS/Africa/Southeast Asia
2	JATE	Completed	Japan
3	TELEC	Completed	Japan
4	RoHS	Completed	Global
5	Docomo/NTT	To be done in April 2022	Japan
6	FCC	To be done in May 2022	USA
7	RCM	To be done in May 2022	Australia/New Zealand
8	IC	To be done in June 2022	Canada
9	NCC	To be done in June 2022	Taiwan
10	KC	To be done in July 2022	South Korea
11	PTCRB	Planning	North America
12	AT&T	Planning	North America

# 4G Automotive Module-MA800 Features



Automotive standard

Multi interfaces

APQP/PPAP

OpenCPU

## Basic Information

Packaging	299 Pin LGA	
Size(mm)	37.5x33x3.0	
Platform	Qualcomm MDM9628	
Electric spec	3.3V~4.2V, Typ. 3.8V	
Network	FDD-LTE/TD-LTE/WCDMA/TD-SCDMA/CDMA/EVDO/GSM	
Frequency Band	MA800-C/-E/-A/-SA/-AU/-J	LTE CAT4
Memory	2+2 / 4+2	MCP
Rate	LTE-FDD (Cat.4):Max 150Mbps(DL)/50Mbps(UL) LTE-TDD (Cat.4):Max 130Mbps(DL)/35Mbps(UL) DC-HSPA+:Max 42Mbps(DL)/5.76Mbps(UL) WCDMA:Max 384kbps(DL)/384kbps(UL) EDGE:Max 236.8kbps(DL)/236.8kbps(UL) GPRS:Max 85.6kbps(DL)/85.6kbps(UL)	
GNSS	GPS / Beidou / Glonass / Galileo	WTR2965(L1+L5)
Working temperature	-40°C~85°C	
Functions	TTS, Voice, SMS, TCP/IP, SSL, Http(s) , FTP, Sleep, MQTT, eCall*	

## Interface Information

HW Interface	1xPCM/1xUSB2.0/3xUART/1xSIM/1xI2C/2xSDIO/2xADC/1xSPI/1xSGMII/Reset/Power/LED_MO DE/ W_Disable/GPIO18
Antenna Interface	Main Antenna, AUX Antenna, GPS Antenna

# 4G Automotive Module-MA800 Parameters

Model		MA800-C	MA800-E	MA800-A	MA800-J	MA800-AU	MA800-SA
LTE	LTE-FDD	B1/B3/B5/B8	B1/B3/B5/B7/B8/B20	B2/4/5/12/13/17/ 18/25/26	B1/3/8/18/19/26/ 28	B1/3/5/7/8/28	B2/4/5/7/8/28
	LTE-TDD	B38/B39/B40/B41	B40	B41	B39/41	B40	B40
UMTS	WCDMA	B1/B8	B1/B5/B8	B2/4/5	B1/6/8/19	B1/B5/B8	B2/5/8
	TD-SCDMA	B34/B39	-	-	-	-	-
EVDO-CDMA		BC0	-	-	-	-	-
GSM		900/1800	900/1800	850/1900	-	850/900/1800/1 900	850/900/1800/1 900
Region		China/India	EU/Middle East/Africa/South Korea/Thailand	North America	Japan	Australia/Taiwan	Latin America
Certification		CCC/SRRC/CTA	TBD	TBD	TBD	TBD	TBD

# 4G LTE-A Module-SLM828 Features



- Standard package
- High bandwidth
- USB 3.0
- Carrier aggregation

## Basic Information

Packaging	MiniPCle	
Size(mm)	51x30x4.5	
Platform	Qualcomm SDX12	
Electric spec	3.3V~4.2V, Typ. 3.8V	
Network	FDD-LTE/TD-LTE/WCDMA	
Frequency Band	SLM828-EU/-NA	LTE CAT4
Memory	2+2 / 4+2	MCP
Rate	LTE (Cat.6):Max 300Mbps(DL)/50Mbps(UL) DC-HSPA+:Max 42Mbps(DL)/5.76Mbps(UL) WCDMA: Max 384kbps(DL)/384kbps(UL)	
GNSS	GPS / Beidou / Glonass / Galileo	
Working temperature	Normal temperature: -30°C~75°C; Extension Working temperature: -40°C~85°C	
Functions	SMS, TCP/IP, PPP,PING,QMI,Voice	

## Interface Information

HW Interface	1xUSB2.0/1xUSB3.0/3xUART/1xSIM/1xI2C/1xPCle/2xADC/1xSPI/Reset/Power/LED_MODE
Antenna Interface	Main Antenna, AUX Antenna, GPS Antenna

# 4G LTE-A Module-SLM828

Model		SLM828-EU	SLM828-NA
Category		6	6
LTE	LTE-FDD	B1/B3/B5/B7/B8/B20/B28/B32	B2/B4/B5/B7/B12/B13/14/17/ B25/B26/B29/B30/B66/B71
	LTE-TDD	B38/B40/B41	B41
UMTS	WCDMA	B1/B5/B8	B2/B4/B5
CA		Intra ntiguous: CA_1C,3C,5B,7B,7C,8B,38C,40C,41C; Intra Non-contiguous: CA_1A-1A,3A-3A,5A-5A,A-7A,0A-40A,41A-41A; Inter band CA: CA_1A-3A,1A-5A,1A-7A,1A-8A,1A-20A,1A-28A,1A-38A,1A-40A,1A-41A, CA_3A-5A,3A-7A,3A-8A,3A-20A,3A-28A,A-38A,3A-40A,3A-41A, CA_5A-7A,5A-38A,5A-40A,5A-41A, CA_7A-8A,7A-20A,7A-28A,7A-32A, CA_8A-32A,8A-38A,8A-40A,8A-41A,20A-32A, CA_20A-38A,20A-40A, CA_28A-32A,28A-38A,28A-40A,8A-41A	Intra ntiguous:CA_2C,5B,7B,7C,12B; Intra Non-contiguous:CA_2A-2A,4A-4A,5A-5A,7A-7A,12A-12A,25A-25A,66A-66A; Inter band CA: CA_2A-4A,2A-5A,2A-7A,2A-12A,2A-13A,2A-14A,2A-29A,2A-30A,2A-66A,2A-71A, CA_4A-5A,4A-7A,4A-12A,4A-13A,4A-29A,4A-71A, CA_5A-7A,5A-25A,5A-30A,5A-66A, CA_7A-12A,7A-20A,7A-28A, CA_12A-25A,12A-30A,12A-66A, CA_13A-66A,CA_14A-30A,CA_14A-66A, CA_25A-26A,CA_29A-30A,CA_29A-66A,CA_66A-71A
GNSS		support	support
Region		EU/Middle East/Africa/South Korea/Thailand /China/India/Brazil	North America/Latin America(partial)
Certification		CE*	FCC*

# 4G LTE-A Module-SLM828G Features



High bandwidth

MIMO

USB 3.0

Carrier aggregation

## Basic Information

Packaging	299 Pin LGA	
Size(mm)	39.5x37.0x2.8	
Platform	Qualcomm SDX12	
Electric spec	3.3V~4.2V, Typ. 3.8V	
Network	FDD-LTE/TD-LTE/WCDMA	
Frequency Band	SLM828G-EU/-NA/-LA	
Memory	2+2 / 4+2	MCP
Rate	Cat.6: LTE UL: 50Mbps DL: 300Mbps WCDMA: UL: 11Mbps DL: 42Mbps Cat.12: LTE DL: 600Mbps UL: 150Mbps WCDMA UL: 11Mbps DL: 42Mbps	
GNSS	GPS / Beidou / Glonass / Galileo	
Working temperature	Normal temperature: -30°C~75°C; Extension Working temperature: -40°C~85°C	
Functions	SMS, TCP/IP, PPP,PING,QMI,Voice	

## Interface Information

HW Interface	1xPCM/1xUSB2.0/3xUART/1xSIM/1xI2C/1xPCIe/2xADC/1xSPI/Reset/Power/LED_MODE
Antenna Interface	Main Antenna, AUX Antenna, GPS Antenna, MIMO



# 4G LTE-A Module-SLM828G Cat6 Parameters

Model		SLM828G-EU-06XX	SLM828G-LA-06XX	SLM828G-NA-06XX
Category		6	6	6
LTE	LTE-FDD	B1/3/5/7/8/20/28/32	B2/4/5/7/8/20/28/66	B2/B4/B5/B7/B12/B13/B17/B25/B26/B66/B71
	LTE-TDD	B38/39/40/41/42/43	B38/39/40/41/42/43/48	B41
	DL 2CA	B1+B1/B3/B5/B7/B8/B20/B28/B32/B38/B40/B41/B42; B3+B3/B5/B7/B8/B20/B28/B32/B38/B40/B41/B42; B5+B5/B7/B38/B40/B41/B42; B7+B7/B8/B20/B28/B32; B8+B32/B38/B39/B40/B41/B42; B20+B32/B38/B40/B42; B28+B32/B38/B40/B41/B42; B38+B38; B39+B39/B41; B40+B40/B42; B41+B41/B42; B42+B42.	B2+B2/B4/B5/B7/B28/B66; B4+B4/B5/B7/B28; B5+B5/B7/B38/B40/41/48/66; B7+B7/B8/B20/B28/B42/B66; B8+B38/B39/B40/B41/B42; B20+B38/B40/B42; B28A+B38/B40/B41/B42; B38+B38; B39+B39/B41; B40+B40/B42; B41+B41/B42; B42+B42; B66+B66.	B2+B2/B4/B5/B7/B12/B13/B66/71; B4+B4/B5/B7/B12/B13/71; B5+B5/B7/25/41/66; B12+B12/B25/B66; B13+B66; B25+B25/B26/B41; B26+B41; B41+B41; B66+B66/B71
4*4 MIMO		B1/B3/B7/38/39/B40/B41/B42/B43	B2/4/7/66/38/40/41/42/43	B2/4/7/66/41
WCDMA		B1/3/5	B2/4/5	B2/4/5
GNSS		support	support	support
Region		EU/Middle East/Africa/South Korea/Thailand	Latin America	North America
Certification		CE*	Anatel*	FCC*

# 4G LTE-A Module-SLM828G Cat12 Parameters

Model		SLM828G-EU-12XX	SLM828G-LA-12XX	SLM828G-NA-12XX
Category		12	12	12
LTE	LTE-FDD	B1/3/5/7/8/20/28/32	B2/4/5/7/8/20/28/66	B2/B4/B5/B7/B12/B13/B17/B25/B26/B66/ B71
	LTE-TDD	B38/39/40/41/42/43	B38/39/40/41/42/43/48	B41
	DL 3CA	B1+B1+B3/B5/B7/B28/B41;B1+B3+B3/B5/B7/B8/B20/B28/B32/B38/B40/ B41/B42;B1+B5+B7/B38/B40;B1+B7+B7/B8/B20/B28/B42; B1+B8+B40;B1+B20+B32/B42;B1+B28+B42;B1+B40+B40; B1+B41+B41/B42;B1+B42+B42;B3+B3+B5/B7/B8/B20/B28/B41; B3+B5+B7/38/40;B3+B7+B7/B8/B20/B28/B32/B42;B3+B8+B38/B40; B3+B20+B32/B38/B42;B3+B28+B38/B40/B41/B42;B3+B40+B40; B3+B41+B41/B42;B5+B7+B7;B5+B40+B40;B7+B7+B8/B20/B28; B7+B20+B32+B42;B8+B39+B39;B8+B40+B40;B8+B41+B41; B8+B42+B42;B20+B38+B38;B20+B40+B40;B28+B40+B40; B28+B41+B41/B42;B39+B41+B41;B40+B40+B40/B42; B41+B41+B41;B42+B42+B42.	B2+B2+B4/B5/B66;B2+B4+B4/B5/B7/28; B2+B5+B5/B48/B66;B2+B7+B7/B66;B2+B66+B66; B4+B4+B5/B7;B4+B5+B5;B4+B7+B7;B5+B5+B66; B5+B7+B7;B5+B40+B40;B5+B48+B48; B5+B66+B66;B8+B39+B39;B8+B40+B40; B8+B41+B41;B8+B42+B42;B20+B38+B38; B20+B40+B40;B28+B40+B40;B28+B41+B41/42; B28+B42+B42;B39+B39+B41;B39+B41+B41; B40+B40+B40/B42;B40+B42+B42; B41+B41+B41/B42;B41+B42+B42;B42+B42+B42; B66+B66+B66.	B2+B2+B4/B5/B12/B13/B66/B71; B2+B4+B4/B7/B12/B13/B71; B2+B5+B12/66;B2+B7+B7/B12/B66; B2+B12+B12/66;B2+B13+B66; B2+B66+B66/B71; B4+B4+B5/B7/B12/B13/71; B4+B7+B7/B12;B4+B12+B12; B5+B5+B66;B5+B7+B7; B7+B66+B66;B12+B66+B66; B13+B66+B66;B25+B25+B26/B41; B25+B26+B41;B26+B41+B41; B41+B41+B41;B66+B66+B66/B71.
	DL 2CA	B1+B1/B3/B5/B7/B8/B20/B28/B32/B38/B40/B41/B42; B3+B3/B5/B7/B8/B20/B28/B32/B38/B40/B41/B42; B5+B5/B7/B38/B40/B41/B42; B7+B7/B8/B20/B28/B32; B8+B32/B38/B39/B40/B41/B42; B20+B32/B38/B40/B42;B28+B32/B38/B40/B41/B42;B38+B38; B39+B39/B41;B40+B40/B42;B41+B41/B42;B42+B42.	B2+B2/B4/B5/B7/B28/B66; B4+B4/B5/B7/B28; B5+B5/B7/B38/B40/41/48/66; B7+B7/B8/B20/B28/B42/B66; B8+B38/B39/B40/B41/B42;B20+B38/B40/B42; B28A+B38/B40/B41/B42;B38+B38; B39+B39/B41;B40+B40/B42;B41+B41/B42; B42+B42;B66+B66	B2+B2/B4/B5/B7/B12/B13/B66/71; B4+B4/B5/B7/B12/B13/71; B5+B5/B7/25/41/66; B12+B12/B25/B66; B13+B66; B25+B25/B26/B41;B26+B41; B41+B41;B66+B66/B71.
	UL 2CA	CA_3C/5B/7C/38C/40C/41C/42C	CA_38C/40C/41C/42C	41C
	4*4 MIMO	B1/B3/B7/38/39/B40/B41/B42/B43	B2/4/7/66/38/40/41/42/43	B2/4/7/66/41
	WCDMA	B1/3/5	B2/4/5	B2/4/5
GNSS	support	support	support	
Region	EU/Middle East/Africa/South Korea/Thailand	Latin America	North America	
Certification	CE*	Anatel*	FCC*	

# 4G LTE-A Module-SLM820 Features



standard package      High bandwidth

USB 3.0      Carrier aggregation

## Basic Information

Packaging	M.2	
Size(mm)	42x30x2.3	
Platform	Qualcomm MDM9650	
Electric spec	3.3V~4.2V, Typ. 3.8V	
Network	FDD-LTE/TD-LTE/WCDMA	
Frequency Band	SLM820-EU/-NA	
Memory	2+2 / 4+2	MCP
Rate	LTE (Cat.6):Max 300Mbps(DL)/50Mbps(UL) DC-HSPA+:Max 42Mbps(DL)/5.76Mbps(UL) WCDMA: Max 384kbps(DL)/384kbps(UL)	
GNSS	GPS / Beidou / Glonass / Galileo	
Working temperature	Normal temperature: -30°C~75°C; Extension Working temperature: -40°C~85°C	
Functions	SMS, TCP/IP, PPP,PING,QMI,Voice	

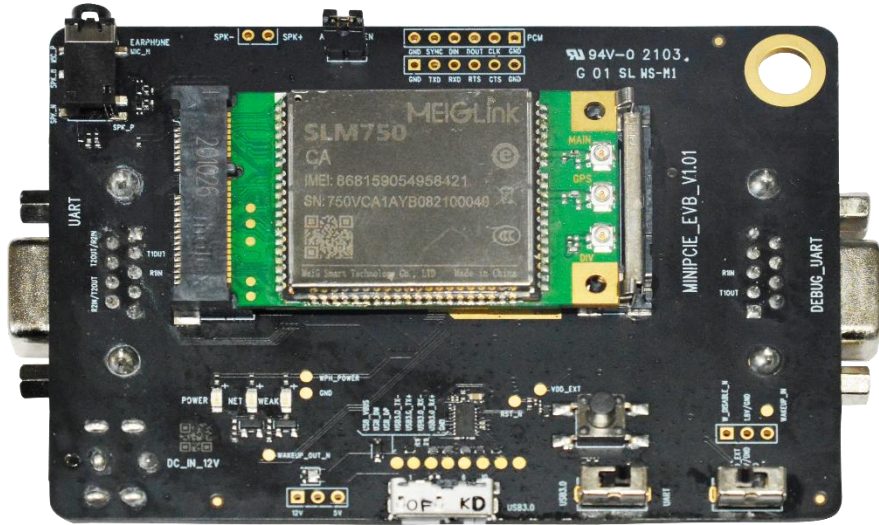
## Interface Information

HW Interface	1xUSB2.0/1xUSB3.0/3xUART/1xSIM/1xI2C/1xPCIe/2xADC/Reset/Power/LED_MODE
Antenna Interface	Main Antenna, AUX Antenna, GPS Antenna, MIMO *2

# 4G LTE-A Module-SLM820

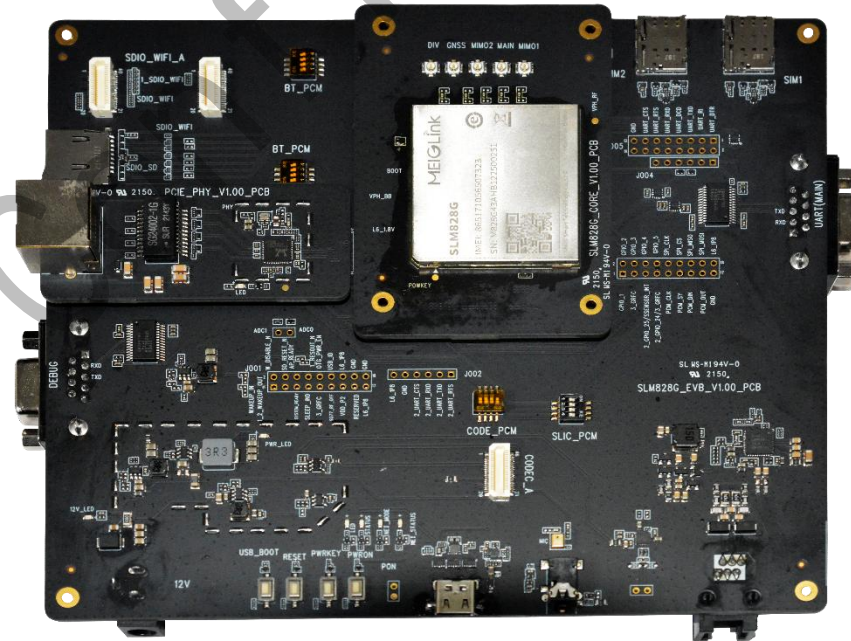
Model		SLM820-EU	SLM820-NA
Category		12	12
LTE	LTE-FDD	LTE-FDD Band: B1/B3/B5/B7/B8/B20/B28/B66	B2/B4/B5/B7/B12/B13/14/17/ B25/B26/B29/B30/B66/B71
	LTE-TDD	B38/B40/B41	B41
UMTS	WCDMA	B1/B5/B8	B2/B4/B5
DL 2CA		B1+B3/B5/B7/B8/B20/B28/B38/B40/B41 B3+B5/B7/B8/B20/B28/B38/B40/B41 B5+B7/B66/B40 B7+B8/B20/B28/B40/B41 B20+B38/B40	B2+B2+B4/B5/B12/B13/B66/B71;B2+B4+B4/B7/B12/B13/B71; B2+B5+B12/66;B2+B7+B7/B12/B66; B2+B12+B12/66;B2+B13+B66; B2+B66+B66/B71;B4+B4+B5/B7/B12/B13/71; B4+B7+B7/B12;B4+B12+B12;B5+B5+B66;B5+B7+B7; B7+B66+B66;B12+B66+B66;B13+B66+B66;B25+B25+B26/B41; B25+B26+B41;B26+B41+B41;B41+B41+B41;B66+B66+B66/B71.
DL 3CA		CA_3C-1A,CA_3C-7A,CA_3C-20A,CA_3A-7C, CA_3C-28A CA_7C-28A,CA_66C-5A,CA_3A-7A-8A,CA_3A-7A-7A CA_3A-5A-7A,CA_3A-5A-40A,CA_3A-41C CA_3A-40C, CA_3A-40CCA_3A-38C, CA_1A-8A-40A, CA_1A-7A-8A CA_1A-7A-7A, CA_1A-5A-7A, CA_1A-5A-40A CA_1A-41C, CA_1A-3A-7A, CA_1A-3A-41A, CA_1A-3A-40A	B2+B2/B4/B5/B7/B12/B13/B66/71; B4+B4/B5/B7/B12/B13/71; B5+B5/B7/25/41/66; B12+B12/B25/B66; B13+B66; B25+B25/B26/B41;B26+B41; B41+B41;B66+B66/B71.
GNSS		support	support
Region		EU/Middle East/Africa/South Korea/Thailand /China/India/Brazil	North America/Latin America(partial)
Certification		CE*	FCC*

# M2M Module-EVB Kit



## Instructions and Interfaces

- support Mini PCIE/M.2/LGA package module debugging
- UART Interface
- USB2.0 Interface
- USB3.0 Interface, Type C Interface
- SIM Slot
- Ethernet Interface
- Wi-Fi Interface
- SD卡 Interface
- Codec Audio Interface



## Accessory parts

- Adapter (GB standard/European standard)
- Antenna
- Serial Line
- USB wire
- Color box

**Part 04**

# **CAT. 1 Module**

# CAT.1 Module Roadmap

CAT.1  
EIGENCOMM  
Qualcomm

**22Q1**

**SLM328Y**

- LGA 19.6\*21.8\*2.4mm
- CAT.1
- WIFI SCAN
- PSM 2UA

CAT.1&GNSS  
紫光展锐®  
UNISOC

**22Q1**

**SLM332**

- LGA +LCC15.7x17.6x 2.3mm
- CAT.1&GNSS
- WIFI SCAN
- OPEN CPU

**22Q2**

**SLM323**

- LCC+LGA22.9x23.9\*2.4mm
- CAT.1&GNSS
- WIFI SCAN
- OPEN CPU

CAT.1&GSM  
紫光展锐®  
UNISOC

**SLM322**

- LCC+LGA 22.9\*23.8\*2.4mm
- CAT.1
- WIFI SCAN&BT
- -OPEN CPU

**SLM326**

- LCC27.6\*25.4\*2.4mm
- CAT.1&GSM
- WIFI SCAN&BT
- -OPEN CPU

**SLM328**

- LGA19.6\*\*21.8\*\*2.4mm
- CAT.1
- WIFI SCAN&BT
- -OPEN CPU

CAT.1&GNSS&GSM  
紫光展锐®  
UNISOC

**SLM320**

- LCC 29\*32\*2.4mm
- CAT.1&GNSS&GSM
- WIFI SCAN&BT
- -OPEN CPU



# CAT.1 Module- SLM332 Features



## Basic Information

Packaging: LCC 83pin+LGA 126pin      Size: 15.7×17.6×2.4mm  
 Protocols : SMS, TCP/IP, UDP, Http(s) , FTP, MQTT,PPP, NDIS, ECM  
 Frequency Band: SLM332-C (China) :  
 LTE FDD: B1/B3/B5/B8  
 TD-LTE: B34/38/B39/B40/B41

## HW Information

Module Rate: LTE FDD (Non-CA CAT 1): Max 10Mbps(DL)/5Mbps(UL)  
 TD-LTE (Non-CA CAT 1): Max 8Mbps(DL)/2Mbps(UL)  
 Electric spec:                      VBAT : 3.8V ~ 4.5V  
 Power Consumption:              40uA@Power off   2mA@sleep  
 Humidity & Temperature:      (Normal) -30° ~ +75°/ (Limited) -40° ~ +85°/ (Storage) -40° ~ +90°/  
 (Environment) 5% ~ 95%  
 Module Interface:                  UART\*2/ USB\*1 / I2C\*2/I2S\*1/SPI\*3/SIM\*2(1.8/3.0V)/ Antenna Interface:  
 Main Antenna、 BT/WIFI

- HW Compatible with SIM800
- small package
- Multi functions
- Multi frequency bands



# CAT.1 Module-SLM332 Parameters

Model		SLM332-C
LTE	LTE-FDD	B1/B3/B5/B8
	LTE-TDD	B34/38/B39/B40/B41
UMTS	WCDMA	
	TD-SCDMA	
EVDO-CDMA		
GSM		
Region		China
Certification		CCC/CTA*/SRRC*

# CAT.1 Module- SLM328Y Features



## Basic Information

Packaging: LGA 110Pin      Size: 19.6\*21.8\*2.4 mm  
 Protocols : SMS, TCP/IP, UDP, Http(s) , FTP, MQTT,PPP, NDIS, ECM  
 Frequency Band: SLM328Y-C (China) :  
 LTE FDD: B1/B3/B5/B8  
 TD-LTE: B34/38/B39/B40/B41  
 SLM328Y-E (Europe & Asia) \*:  
 LTE FDD: B1/B3/B5/B7/B8/B20  
 TD-LTE: B38/B40/B41

## HW Information

Module Rate: LTE FDD (Non-CA CAT 1): Max 10Mbps(DL)/5Mbps(UL)  
 TD-LTE (Non-CA CAT 1): Max 8Mbps(DL)/2Mbps(UL)  
 Electric spec:                      VBAT : 3.8V~4.5V  
 Power Consumption:              1uA@Power off      2.3uA@PSM  
 Humidity & Temperature: (Normal) -30° ~ +75° / (Limited) -40° ~ +85° / (Storage) -40° ~ +90° /  
 (Environment) 5% ~ 95%  
 Module Interface:                      UART\*2/ USB\*1 / I2C\*2/I2S\*1/SPI\*3/SIM\*2(1.8/3.0V)/ Antenna Interface:  
 Main Antenna、BT/WIFI

HW  
Compatible  
with SLM328

Low Power  
Consumption

High cost  
performance

Multi Frequency  
Bands

# CAT.1 Module-SLM328Y Parameters

Model		SLM328Y-C	SLM328Y-E
LTE	LTE-FDD	B1/B3/B5/B8	B1/B3/B5/B7/B8/B20
	LTE-TDD	B34/38/B39/B40/B41	B38/B40/B41
UMTS	WCDMA		
	TD-SCDMA		-
EVDO-CDMA			-
GSM			
Region		China	Europe & Asia
Certification		CCC*	CE*

# CAT.1 Module- SLM323 Features



## Basic Information

Packaging: LGA 16Pin + LCC 76Pin      Size: 22.9\*23.9\*2.4 mm  
 Protocols : SMS, TCP/IP, UDP, Http(s) , FTP, MQTT,PPP, NDIS, ECM  
 Frequency Band: SLM323-C (China) :  
 LTE FDD: B1/B3/B5/B8  
 TD-LTE: B34/38/B39/B40/B41  
 SLM323-E (Europe & Asia) \*:  
 LTE FDD: B1/B3/B5/B7/B8/B20  
 TD-LTE: B38/B40/B41

## HW Information

Module Rate: LTE FDD (Non-CA CAT 1): Max 10Mbps(DL)/5Mbps(UL)

TD-LTE (Non-CA CAT 1): Max 8Mbps(DL)/2Mbps(UL)

Electric spec:                      VBAT : 3.8V ~ 4.5V

Power Consumption:            40uA@Power off   2mA@sleep

Humidity & Temperature:    (Normal ) -30° ~ +75°/ (Limited) -40° ~ +85°/ (Storage) -40° ~ +90°/  
 (Environment) 5% ~ 95%

Module Interface:                UART\*2/ USB\*1 / I2C\*2/I2S\*1/SPI\*3/SIM\*2(1.8/3.0V)/ Antenna Interface:

Main Antenna、BT/WIFI

HW  
Compatible  
with SLM322

Low Power  
Consumption

High cost  
performance

Multi Frequency  
Bands

# CAT.1 Module-SLM323 Parameters

Model		SLM323-C	SLM323-E
LTE	LTE-FDD	B1/B3/B5/B8	B1/B3/B5/B7/B8/B20
	LTE-TDD	B34/38/B39/B40/B41	B38/B40/B41
UMTS	WCDMA		
	TD-SCDMA		-
EVDO-CDMA			-
GSM			
Region		China	Europe & Asia
Certification		CCC*	CE*

# CAT.1 Module EVB



## Interface

- 2 x UART
- 1xUSB
- Antenna Interface(4GMAIN Antenna, WIFI/BT Antenna)
- 1x SIM Slot
- 5V PIN Interface

## Accessory part


- Antenna

**Part 05**

# **NB Module**

# >>> NB Module Roadmap

EC616s




**SLM100**

- Cat NB2
- Frequency Band: B3/B5/B8
- 10.0×10.6×2.2mm
- 2.2~4.5v



**SLM160**

- Cat NB2
- Frequency Band: B3/B5/B8
- 18×16×2.2mm
- 2.2~4.5v



**SLM190**

- Cat NB2
- Frequency Band: B3/B5/B8
- 19.9×23.6×2.2mm
- 2.2~4.5v

**NEW**



**SLM130F**

- Cat NB2
- Frequency Band: B3/B5/B8
- 17.7×15.8×2.0mm
- Compatible with BC28F

EC616



**SLM130**

- Cat NB2
- Frequency Band: B3/B5/B8
- 17.7×15.8×2.0mm
- 2.2~4.5v

XY 1100

**NEW**




**SLM130X**

- Cat NB2
- Frequency Band: B3/B5/B8
- 17.7×15.8×2.0mm
- 芯真

QCX212

**Global**



**SLM130-G**

- Cat NB2
- Frequency Band: B1/B2/B3/B4/B5/B8/B12/B13/B14/B17/B18/B19/B20/B25/B26
- 2.2~4.5v

~2021

2022



# NB-IoT Module New Product Parameters

Model		SLM130X	SLM130F	SLM100	SLM130	SLM160	SLM190
LTE	LTE-FDD	-	-	-	-	-	-
	LTE-TDD	-	-	-	-	-	-
	CAT NB2	B3/B5/B8	B3/B5/B8	B3/B5/B8	B3/B5/B8	B3/B5/B8	B3/B5/B8
UMTS	WCDMA	-	-	-	-	-	-
	TD-SCDMA	-	-	-	-	-	-
EVDO-CDMA		-	-	-	-	-	-
GSM		-	-	-	-	-	-
Region		China	China	China	China	China	China
Certification		China Telecom*/SRR C*/NAL*/ROHS*	China Telecom*/SR RC*/NAL*/ROHS*	China Telecom*/SRR C*/NAL*/ROHS*	China Telecom/SRRC/NAL/ROHS	China Telecom/SRRC/NAL/ROHS	China Telecom*/SRR C*/NAL*/ROHS*

# NB Module- SLM100 Features



LGA

Low energy  
consumptionHigh  
sensitivity

Wide application

Smallest package

## Basic Information

Packaging: 36 PIN LGA

Size: 10.0×10.6×2.2mm

Frequency Band: LTE Cat NB2 B3/B5/B8

## SW Information

Protocols : TCP/UDP/SSL/MQTT/COAP

## HW Information

Module Rate: Single Tone: DL 25.5Kbps(Max), UL 16.7Kbps(Max)

Multi Tone: DL 127Kbps(Max) , UL 159Kbps(Max)

Electric spec: VBAT : 2.2V ~ 4.5V

Transmit power: 23dBm ± 2db

Power Consumption: Minimum current consumption in PSM mode: 0.96uA;

Average current consumption in idle mode: 90.70uA

Humidity & Temperature: (Normal ) -30° ~ +75°/ (Limited) -40° ~ +85°/ (Storage) -40° ~ +90°/  
(Environment) 5% ~ 95%ESD: Air discharge±8KV, Contact discharge±4KV; RF Antenna Interface: Air discharge±8KV, Contact  
discharge±4KV; Other interfaces: Air discharge±6KV, Contact discharge±3KV

Module Interface: UART / USIM(3.0V/1.8V) / ADC / Network Status Prompt Interface / Antenna Interface /

RI Interface / SPI Interface / I2C Interface

# NB Module- SLM130 Features



LCC+LGA

Low energy  
consumptionHigh  
sensitivity

built-in eSIM slot

**SW&HW Compatible with  
BC260Y Module**

## Basic Information

Packaging: 44 pin LCC &amp; 14 LGA

Size: 17.6×15.8×2.0mm

Frequency Band: LTE Cat NB2 B3/B5/B8

## SW Information

Protocols : TCP/UDP/SSL/MQTT/COAP

## HW Information

Module Rate: Single Tone: DL 25.5Kbps(Max), UL 16.7Kbps(Max)

Multi Tone: DL 127Kbps(Max) , UL 159Kbps(Max)

Electric spec: VBAT : 2.2V ~ 4.5V

Transmit power: 23dBm ± 2db

Power Consumption: Minimum current consumption in PSM mode: 0.96uA;

Average current consumption in idle mode: 90.70uA

Humidity &amp; Temperature: (Normal ) -30° ~ +75°/ (Limited) -40° ~ +85°/ (Storage) -40° ~ +90°/ (Environment) 5% ~ 95%

ESD: Air discharge±8KV, Contact discharge±4KV; RF Antenna Interface: Air discharge±8KV,

Contact discharge±4KV; Other interfaces: Air discharge±6KV, Contact discharge±3KV

Module Interface: UART\*3 / USIM(3.3V/1.8V) / ADC / Network Status Prompt Interface /

Antenna Interface / RI Interface / SPI Interface\*

# NB Module- SLM130F Features



LCC+LGA

Low energy consumption

High sensitivity

built-in eSIM slot

**HW Compatible with BC28F Module**

## Basic Information

Packaging: 44 pin LCC 和 14 LGA      Size: 17.6×15.8×2.0mm  
 Frequency Band:                      LTE Cat NB2 B3/B5/B8

## SW Information

Protocols : TCP/UDP/SSL/MQTT/COAP

## HW Information

Module Rate:                      Single Tone: DL 25.5Kbps(Max), UL 16.7Kbps(Max)  
    Multi Tone: DL 127Kbps(Max) , UL 159Kbps(Max)

Electric spec:                      VBAT : 2.2V ~ 4.5V

Transmit power:                      23dBm ± 2db

Power Consumption:                      Minimum current consumption in PSM mode: 0.96uA;      Average current consumption in idle mode: 90.70uA

Humidity & Temperature:                      (Normal ) -30° ~ +75°/ (Limited) -40° ~ +85°/ (Storage) -40° ~ +90°/ (Environment) 5% ~ 95%

ESD: Air discharge±8KV, Contact discharge±4KV; RF Antenna Interface: Air discharge±8KV, Contact discharge±4KV; Other interfaces: Air discharge±6KV, Contact discharge±3KV

Module Interface:                      UART\*3 / USIM(3.3V/1.8V) / ADC / Network Status Prompt Interface /

Antenna Interface / RI Interface / SPI Interface\*

# NB Module- SLM160 Features



LCC+LGA

Low energy  
consumptionHigh  
sensitivity

built-in eSIM slot

**HW Compatible with  
M5311 Module**

## Basic Information

Packaging: 40 pin LCC 和 9 LGA

Size: 18×16×2.2mm

Frequency Band: LTE Cat NB2 B3/B5/B8

## SW Information

Protocols : TCP/UDP/SSL/MQTT/COAP

## HW Information

Module Rate: Single Tone: DL 25.5Kbps(Max), UL 16.7Kbps(Max)

Multi Tone: DL 127Kbps(Max) , UL 159Kbps(Max)

Electric spec: VBAT : 2.2V ~ 4.5V

Transmit power: 23dBm ± 2db

Power Consumption: Minimum current consumption in PSM mode: 0.96uA; Average current consumption in idle mode: 90.70uA

Humidity &amp; Temperature: (Normal) -30° ~ +75° / (Limited) -40° ~ +85° / (Storage) -40° ~ +90° / (Environment) 5% ~ 95%

ESD: Air discharge±8KV, Contact discharge±4KV; RF Antenna Interface: Air discharge±8KV,

Contact discharge±4KV; Other interfaces: Air discharge±6KV, Contact discharge±3KV

Module Interface: UART\*3 / USIM(3.3V/1.8V) / ADC / Network Status Prompt Interface /

Antenna Interface

# NB Module- SLM190 Features



LCC+LGA

Low energy  
consumptionHigh  
sensitivity

built-in eSIM slot

**HW Compatible with  
BC95 Module**

## Basic Information

Packaging: 54 pin LCC

Size: 19.9\*23.6\*2.2mm

Frequency Band: LTE Cat NB2 B3/B5/B8

## SW Information

Protocols : TCP/UDP/SSL/MQTT/COAP

## HW Information

Module Rate: Single Tone: DL 25.5Kbps(Max), UL 16.7Kbps(Max)

Multi Tone: DL 127Kbps(Max), UL 159Kbps(Max)

Electric spec: VBAT : 2.2V ~ 4.5V

Transmit power: 23dBm ± 2db

Power Consumption: Minimum current consumption in PSM mode: 0.96uA; Average current consumption in idle mode: 90.70uA

Humidity &amp; Temperature: (Normal) -30° ~ +75° / (Limited) -40° ~ +85° / (Storage) -40° ~ +90° / (Environment) 5% ~ 95%

ESD: Air discharge±8KV, Contact discharge±4KV; RF Antenna Interface: Air discharge±8KV, Contact discharge±4KV; Other interfaces: Air discharge±6KV, Contact discharge±3KV

Module Interface: UART / USIM(3.0V/1.8V) / ADC / Network Status Prompt Interface / Antenna Interface / RI Interface

# NB Module- SLM130X Features



LCC+LGA

Low energy consumption

High sensitivity

Wide application

**XINYI Platform/BC260Y**

## Basic Information

Packaging: 44 pin LCC 和 14 LGA      Size: 17.6×15.8×2.0mm

Frequency Band:                    LTE Cat NB2 B3/B5/B8

## SW Information

Protocols :    TCP/UDP/SSL/MQTT/COAP

## HW Information

Module Rate:                    Single Tone: DL 25.5Kbps(Max),    UL 16.7Kbps(Max)

Multi Tone: DL 127Kbps(Max),    UL 159Kbps(Max)

Electric spec:                    VBAT : 2.2V ~ 4.5V

Transmit power:                    23dBm ± 2db

Power Consumption:                    Minimum current consumption in PSM mode: 0.96uA;      Average current consumption in idle mode: 90.70uA

Humidity & Temperature:                    (Normal ) -30° ~ +75°/ (Limited) -40° ~ +85°/ (Storage) -40° ~ +90°/ (Environment) 5% ~ 95%

ESD: Air discharge±8KV, Contact discharge±4KV; RF Antenna Interface: Air discharge±8KV, Contact discharge±4KV;    Other interfaces: Air discharge±6KV, Contact discharge±3KV

Module Interface:    UART\*3 / USIM(3.3V/1.8V) / ADC / Network Status Prompt Interface / Antenna Interface / RI Interface / SPI Interface\*

# NB Module-Technical Support Kit

## Technical support Kit

- SW & HW documentation
- Evaluation version & accessories
- Certification、 Report

## EVB

Interface	Accessory parts
a) Power Interface	a) EVB
b) SIM卡 Interface	b) NB Module
c) UART Interface	c) Antenna (optional)
d) Debug Interface	d) Micro USB (not included)
e) GPIO Interface	e) SIM card (not included)
f) Antenna Interface	f) Power supply (not included)





# Thanks

MEIG 美格