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全球领先的物联网终端及无线数据方案提供商

SLM759 模块规格说明

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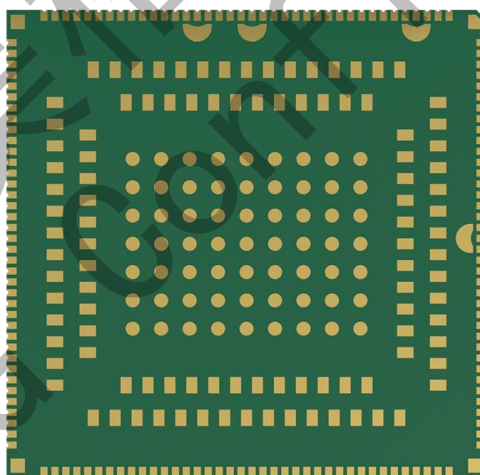
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SLM759 模块规格说明_V1.00



1. 产品概述

SLM759 系列核心板，采用高通骁龙 600 系列的 MSM8953，该 CPU 采用 14nm FinFET 制成，内置 64bit ARM、8 核 Cortex A-53、主频 1.8Ghz/2.0Ghz 处理器，支持 Decode/encode 最高 4K 30fps、H.265，支持板卡内存为 16GB/32GB/64GB 的全球不同制式多模 LTE 智能通信模块，此模块适用于 TD-LTE/FDD-LTE/WCDMA/EVDO/TD-SCDMA/CDMA/GSM 多种网络制式的宽带智能无线通信模块。SLM759 采用 Android7.1 操作系统，可支持的接入速率：

TD-LTE: 117/30Mbps

FDD-LTE: 150Mbps/50Mbps

WCDMA 可达 DC HSPA+: 42Mbps/5.76Mbps

EVDO 可达 EVDO RevA: 3.1Mbps/1.8Mbps

TD-SCDMA 可达 HSPA: 4.2Mbps/2.2Mbps

CDMA1x: 153.6kbps/153.6kbps

GSM 可达 EDGE: 236.8kbps/236.8kbps

SLM759 在提供高速宽带数据接入的同时，可提供语音、短信、通讯簿、2.4G/5G WiFi、BT 和 GPS 功能；产品支持双 1300W 的 3D 摄像或景深拍照，可广泛应用于执法仪、警务通、POS 收银机、物流终端、VR Camera、智能机器人、视频监控、安防、车载设备、智能手持终端等产品。

2. 特性列表

产品特性	描述（“*可选择支持”会有成本差异）	
平台	Qualcomm SDM450& MSM8953	
CPU	Octa-core A53 (64bit) 8*1.8GHz (SLM759L) 可选择 *Octa-core A53 (64bit) 8*2.0GHz (SLM759N)	
GPU	Adreno506; 650MHz	
系统内存	16GB eMMC + 2GB LPDDR3 933Mhz *可选择 32GB+4GB 或更大配置 memory	
操作系统	Android 7.1	
尺寸	43.0x44.0x2.85mm, LCC + LGA (323pin)	
工作温度	-30~75° C	
存储温度	-40~85° C	
网络频段（中国为例）	TDD-LTE: B38/39/40/41 FDD-LTE: B1/3/5/8 TD-SCDMA: B34/39 WCDMA: B1/5/8 EVDO: BC0 CDMA: BC0 GSM: B5/3/8	
Wi-Fi	IEEE 802.11 a/b/g/n 2.4G&5G *可选择支持 11ac（硬件成本不同） *可选择支持 5G 外置 FEM（硬件成本不同）	
Bluetooth	BT4.1	
GNSS	GPS/Beidou/Glonass/Galileo	
数据接入	TD-LTE	Cat4 TD-LTE 117/30Mbps
	FDD-LTE	Cat4 FDD-LTE 150/50Mbps
	DC-HSPA+	42/11.2Mbps
	TD-HSPA	2.8/2.3Mbps
	EVDO Rev.A	3.1/1.8Mbps
	EDGE	Class12, 236.8kbps/236.8kbps
	GPRS	Class12, 85.6kbps/85.6kbps
SIM	DSDS 双卡双待 3.0/1.8V 支持 SIM 卡热插拔 LW/G/T+G	

	LW/G/T+W LW/G/T+1X L/EVDO/CDMA1X+G 不支持双 CDMA 卡	
Display	Matrix: FULL HD: 1920*1200 60fps;	
	LCM Size: User defined	
	Interface: 1st LCM: MIPI DSI 4-lane; 2nd LCM: MIPI DSI 4-lane	
Camera (前和后双摄像头)	Interface:可支持三组 CSI, 每一组都是 4-Lane 摄像头 Pixel:后置 13-24Mp/前置 up to 13Mp, 双 ISP 可同时支持双 13MP Camera	
	Video decode	4K 30fps (SLM759L 不支持), 1080p 60fps, H.264/H.265 MP4/ WMV9/ VC1/ DivX/ VP8/VP9
	Video encode	4K 30fps (SLM759L 不支持), 1080p 60 fps: H.264/ H.265/ MP4/ VP8, 1080P 60fps De +1080p 30fps En (SLM759L 不支持)
输入设备	按键 (开关机键、home、音量+、音量-)	
	电容式 TP	
Reset	支持硬复位	
应用接口	接口名称	主要功能描述
	VBAT	3pin, 模块电源输入, 3.4V~4.2V, 标称值 3.8V
	SDIO *1	SD3.0; eMMC v5.1
	USB2.0/3.0	支持 OTG USB_BOOT (强制 USB 引导, 用于紧急下载)
	BLSP ports	8 ports(BLSP1-8), 4-bits each, multiplexed serial interface functions
	UART*4	BLSP2,BLSP4-6 support UART, up to 4 Mbps
	I2C	All BLSPs support I2C and SPI, These BLSPs use
	SPI(master only)	bits [1:0] for I2C
	GPIO	SPI is only support via BLSP
	ADC*2	待客户定义
	充电功能	标准接口采用外置充电芯片 *模块可选择增加 Qcharger 3.0 (硬件成本不同)
	马达	支持
	GPIO	50 个 GPIO,不含 BLSP 复用 GPIO
	VCOIN	实时时钟后备电池
	射频 PIN	多模 LTE 主天线 多模 LTE 分集天线 GPS 天线 2.4G WiFi-天线 5G WiFi-天线

	Audio	1 路主 MIC 1 路降噪 MIC 1 路免提喇叭（内置 0.8W D 类功放） 1 路听筒 1 路立体声耳机
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3.其他制式版本

网络频段（亚欧版本） SLM759-E	TDD-LTE: B38/40/41 FDD-LTE: B1/3/5/7/8/20/28A WCDMA: B1/2/5/8 GSM: B2/3/5/8
网络频段（北美版本） SLM759-A	FDD-LTE: B2/4/5/7/12/13/17/25/26 TDD-LTE: B41 WCDMA: B1/2/4/5 GSM: B2/5
网络频段（日本版本） SLM759-J	FDD-LTE: B1/3/8/19/26 TDD-LTE: B41 WCDMA: B1/6/8/19
网络频段（澳洲版本） SLM759-AU	FDD-LTE: B1/3/5/7/8/28 TDD-LTE: B40 WCDMA: B1/2/5/8 GSM: B2/3/5/8
网络频段（南美版本） SLM759-LA	FDD-LTE: B2/4/5/7/8/28 TDD-LTE: B40 WCDMA: B2/5/8 GSM: B2/5/8
WIFI-Only SNM759	WIFI: 802.11a/b/g/n/ac* BT4.2

4.SLM759 接口

SLM759 模块 272pin 定义:

PIN#	SLM759 PIN Name	Pad characteristics	Functional description
PIN1	VDD_RF	PO	Power for RF in SLM759 module
PIN2	VDD_RF	PO	Power for RF in SLM759 module
PIN3	GND	GND	GND
PIN4	GND	GND	GND
PIN5	UART2_MSM_TX	B-PD:nppukp	Configurable I/O,UART2 TX
PIN6	UART2_MSM_RX	B-PD:nppukp	Configurable I/O,UART2 RX
PIN7	GPIO12_UART4_TX	B-PD:nppukp	Configurable I/O,UART4 TX
PIN8	GPIO13_UART4_RX	B-PD:nppukp	Configurable I/O,UART4 RX
PIN9	VREG_L5_1P8	PO	PMIC output 1.8V for LCD,CAM,TP, sensor
PIN10	VREG_L6_1P8	PO	PMIC output 1.8V for digital I/Os
PIN11	VREG_L10_2P8_SENSOR	PO	PMIC output 2.8V for sensor
PIN12	VREG_L17_2P85	PO	PMIC output 2.8V for LCD,CAM,TP
PIN13	VREG_L2_1P1	PO	PMIC output 1.1V for main camera DVDD
PIN14	VREG_L22_2P8	PO	PMIC output 2.8V for camera AVDD
PIN15	VREG_L23_1P175	PO	PMIC output 1.175V for front camera DVDD
PIN16	VCOIN	AI,AO	Coin-cell battery or backup battery
PIN17	BAT_CON_ID	AI	Battery ID input to ADC
PIN18	GND	GND	GND
PIN19	RF_MAIN	AI	RF signal for main ANT
PIN20	GND	GND	GND
PIN21	LCD_BL_LED_A	PO	LCD Backlight anode
PIN22	LCD_BL_LED_K1	AI	LCD Backlight cathode1(20mA)
PIN23	LCD_BL_LED_K2	AI	LCD Backlight cathode2(20mA)
PIN24	LCD_BL_LED_K3	AI	LCD Backlight cathode3(20mA)
PIN25	LCD_BL_LED_K4	AI	LCD Backlight cathode4(20mA)
PIN26	FLASH_LED1+	AO	FLASH LED anode(1A)
PIN27	BAT_PLUS	AI	Battery plus(+)terminal sense input
PIN28	BAT_MINUS	AI	Battery minus(-)terminal sense input
PIN29	BAT_THERM	AI	Battery temperature input to ADC
PIN30	USB_ID	AI	USB ID
PIN31	GND	GND	GND
PIN32	USB_DP	AI,AO	USB data plus

PIN33	USB_DM	AI,AO	USB data minus
PIN34	GND	GND	GND
PIN35	GND	GND	GND
PIN36	VBAT_SNS	AI	battery voltage input to ADC
PIN37	VBAT	PI,PO	Battery,3.5V-4.2V,default 3.8V
PIN38	VBAT	PI,PO	Battery,3.5V-4.2V,default 3.8V
PIN39	KYPD_PWR_N1	DI	KEY POWER ON/OFF
PIN40	GND	GND	GND
PIN41	VBUS	PI,PO	USB Voltage
PIN42	VBUS	PI,PO	USB Voltage
PIN43	GND	GND	GND
PIN44	MIC_IN1_P	AI	Microphone 1 input plus
PIN45	MIC_IN1_M	AI	Microphone 1 input minus
PIN46	MIC_IN2_P	AI	Microphone input 2
PIN47	GND	GND	GND
PIN48	CDC_HS_DET	AI	MBHC mechanical insertion/removal-detection
PIN49	CDC_HPH_L	AO	Headphone output, left channel
PIN50	CDC_HPH_REF	AI	Headphone ground reference
PIN51	CDC_HPH_R	AO	Headphone output, right channel
PIN52	CDC_EAR_M	AO	Earpiece output, minus
PIN53	CDC_EAR_P	AO	Earpiece output, plus
PIN54	SPKR_DRV_M	AO	Class-D speaker driver output, minus
PIN55	SPKR_DRV_P	AO	Class-D speaker driver output, plus
PIN56	GND	GND	GND
PIN57	FORCE_USB_BOOT	DI	Pull up with VREG_L5 to forced USB boot
PIN58	GPIO22_I2C6_SDA	B-PD:nppukp	Configurable I/O, I2C SDA
PIN59	GPIO23_I2C6_SCL	B-PD:nppukp	Configurable I/O, I2C SCL
PIN60	GPIO20_UART6_TX	B-PD:nppukp	Configurable I/O,UART6 TX
PIN61	GPIO21_UART6_RX	B-PD:nppukp	Configurable I/O,UART6 RX
PIN62	GND	GND	GND
PIN63	VREG_L11_2P95	PO	PMIC output 2.95V for SD-card power
PIN64	GPIO133_SDCARD_DET_N	B-PD:nppukp	Configurable I/O,SD card detection
PIN65	SDC2_SDCARD_D3	BH-NP:pdpukp	Secure digital controller 2 data bit 3
PIN66	SDC2_SDCARD_D2	BH-NP:pdpukp	Secure digital controller 2 data bit 2
PIN67	SDC2_SDCARD_D1	BH-NP:pdpukp	Secure digital controller 2 data bit 1
PIN68	SDC2_SDCARD_D0	BH-NP:pdpukp	Secure digital controller 2 data bit 0
PIN69	SDC2_SDCARD_CMD	BH-NP:pdpukp	Secure digital controller 2 command
PIN70	SDC2_SDCARD_CLK	BH-NP:pdpukp	Secure digital controller 2 clock
PIN71	GPIO130_SCAM_PWD_N	B-PD:nppukp	Configurable I/O, front CAM PWDN
PIN72	GPIO129_SCAM_RST_N	B-PD:nppukp	Configurable I/O, front CAM RESET
PIN73	GPIO39_MCAM_PWD_N	B-PD:nppukp	Configurable I/O, main CAM PWDN

PIN74	GPIO40_MCAM_RST_N	B-PD:nppukp	Configurable I/O, main CAM RESET
PIN75	CAM_I2C_SCL0	B-PD:nppukp	Configurable I/O, Dedicated camera I2C0 SCL
PIN76	CAM_I2C_SDA0	B-PD:nppukp	Configurable I/O, Dedicated camera I2C0 SDA
PIN77	MIPI_CSI2_CLK_P	AI	MIPI camera serial interface 2 clock+
PIN78	MIPI_CSI2_CLK_N	AI	MIPI camera serial interface 2 clock-
PIN79	MIPI_CSI2_LANE0_P	AI	MIPI camera serial interface 2 lane0+
PIN80	MIPI_CSI2_LANE0_N	AI	MIPI camera serial interface 2 lane0-
PIN81	MIPI_CSI2_LANE1_P	AI	MIPI camera serial interface 2 lane1+
PIN82	MIPI_CSI2_LANE1_N	AI	MIPI camera serial interface 2 lane1-
PIN83	MIPI_CSI2_LANE2_P	AI	MIPI camera serial interface 2 lane2+
PIN84	MIPI_CSI2_LANE2_N	AI	MIPI camera serial interface 2 lane2-
PIN85	MIPI_CSI2_LANE3_P	AI	MIPI camera serial interface 2 lane3+
PIN86	MIPI_CSI2_LANE3_N	AI	MIPI camera serial interface 2 lane3-
PIN87	GND	GND	GND
PIN88	MIPI_CSI0_CLK_P	AI	MIPI camera serial interface 0 clock+
PIN89	MIPI_CSI0_CLK_N	AI	MIPI camera serial interface 0 clock-
PIN90	MIPI_CSI0_LANE0_P	AI	MIPI camera serial interface 0 lane0+
PIN91	MIPI_CSI0_LANE0_N	AI	MIPI camera serial interface 0 lane0-
PIN92	MIPI_CSI0_LANE1_P	AI	MIPI camera serial interface 0 lane1+
PIN93	MIPI_CSI0_LANE1_N	AI	MIPI camera serial interface 0 lane1-
PIN94	MIPI_CSI0_LANE2_P	AI	MIPI camera serial interface 0 lane2+
PIN95	MIPI_CSI0_LANE2_N	AI	MIPI camera serial interface 0 lane2-
PIN96	MIPI_CSI0_LANE3_P	AI	MIPI camera serial interface 0 lane3+
PIN97	MIPI_CSI0_LANE3_N	AI	MIPI camera serial interface 0 lane3-
PIN98	GND	GND	GND
PIN99	GPIO26_CAM_MCLK0	B-PD:nppukp	Configurable I/O, main CAM MCLK
PIN100	GPIO27_CAM_MCLK1	B-PD:nppukp	Configurable I/O, front CAM MCLK
PIN101	GND	GND	GND
PIN102	MIPI_DSI1_CLK_P	AO	MIPI display serial interface 1 clock+
PIN103	MIPI_DSI1_CLK_N	AO	MIPI display serial interface 1 clock-
PIN104	MIPI_DSI1_LANE0_P	AO	MIPI display serial interface 1 lane0+
PIN105	MIPI_DSI1_LANE0_N	AO	MIPI display serial interface 1 lane0-
PIN106	MIPI_DSI1_LANE1_P	AO	MIPI display serial interface 1 lane1+
PIN107	MIPI_DSI1_LANE1_N	AO	MIPI display serial interface 1 lane1-
PIN108	MIPI_DSI1_LANE2_P	AO	MIPI display serial interface 1 lane2+
PIN109	MIPI_DSI1_LANE2_N	AO	MIPI display serial interface 1 lane2-
PIN110	MIPI_DSI1_LANE3_P	AO	MIPI display serial interface 1 lane3+
PIN111	MIPI_DSI1_LANE3_N	AO	MIPI display serial interface 1 lane3-
PIN112	GND	GND	GND
PIN113	GPIO87_LCD1_RST	B-PD:nppukp	Configurable I/O, secondary LCD RESET

PIN114	GPIO25_LCD_TE1	B-PD:nppukp	Configurable I/O, secondary LCD TE
PIN115	MIPI_DSI0_CLK_P	AO	MIPI display serial interface 0 clock+
PIN116	MIPI_DSI0_CLK_N	AO	MIPI display serial interface 0 clock-
PIN117	MIPI_DSI0_LANE0_P	AI	MIPI display serial interface 0 lane0+
PIN118	MIPI_DSI0_LANE0_N	AI	MIPI display serial interface 0 lane0-
PIN119	MIPI_DSI0_LANE1_P	AI	MIPI display serial interface 0 lane1+
PIN120	MIPI_DSI0_LANE1_N	AI	MIPI display serial interface 0 lane1-
PIN121	MIPI_DSI0_LANE2_P	AI	MIPI display serial interface 0 lane2+
PIN122	MIPI_DSI0_LANE2_N	AI	MIPI display serial interface 0 lane2-
PIN123	MIPI_DSI0_LANE3_P	AI	MIPI display serial interface 0 lane3+
PIN124	MIPI_DSI0_LANE3_N	AI	MIPI display serial interface 0 lane3-
PIN125	GND	GND	GND
PIN126	GPIO24_LCD_TE0	B-PD:nppukp	Configurable I/O, primary LCD TE
PIN127	GPIO61_LCD_RST_N	B-PD:nppukp	Configurable I/O, primary LCD RESET
PIN128	GND	GND	GND
PIN129	2.4G/5G_ANT	AI	RF signal for 2.4G/5G WIFI&BT
PIN130	GND	GND	GND
PIN131	GPIO15_SENSOR_I2C4_SCL	B-PD:nppukp	Configurable I/O,SENSOR I2C SCL
PIN132	GPIO14_SENSOR_I2C4_SDA	B-PD:nppukp	Configurable I/O, SENSOR I2C SDA
PIN133	GND	GND	GND
PIN134	GPS_ANT	AI	RF signal for GPS ANT
PIN135	GND	GND	GND
PIN136	GPIO8_TP1_RST	B-PD:nppukp	Configurable I/O,secondary TP RESET
PIN137	GPIO9_TP1_INT	B-PD:nppukp	Configurable I/O,secondary TP INT
PIN138	GPIO64_TP_RST_N	B-PD:nppukp	Configurable I/O,primary TP RESET
PIN139	GPIO65_TP_INT_N	B-PD:nppukp	Configurable I/O,primary TP INT
PIN140	GPIO11_TP_I2C3_SCL	B-PD:nppukp	Configurable I/O, CTP I2C SCL
PIN141	VREG_L14_UIM1	PO	PMIC output for UIM1
PIN142	UIM1_DATA	B-PD:nppukp	Configurable I/O,UIM1 data
PIN143	UIM1_CLK	B-PD:nppukp	Configurable I/O,UIM1 clock
PIN144	UIM1_RESET	B-PD:nppukp	Configurable I/O,UIM1 reset
PIN145	GPIO54_UIM1_DET	B-PD:nppukp	Configurable I/O,UIM1 removal detection
PIN146	GPIO85_KEY1_VOL+	B-PD:nppukp	Configurable I/O,KEY VOL+
PIN147	PM_RESIN_N1	DI	KEY RESET or VOL-
PIN148	GND	GND	GND
PIN149	RF_DIV	AI	RF signal for diversity ANT
PIN150	GND	GND	GND
PIN151	PM8953_MPP2	AO-Z,AI,DO	Configurable MPP,PWM,ADC
PIN152	PM8953_MPP4	AO-Z,AI,DO	Configurable MPP,PWM,ADC
PIN153	PMI8952_MPP1	AO-Z,AI,DO	Configurable MPP,PWM,ADC
PIN154	Reserved		Reserved

PIN155	Reserved		Reserved
PIN156	Reserved		Reserved
PIN157	CHG_LED	AO	Current sink for charging indication
PIN158	PMI8952_MPP2	AO-Z,AI,DO	Configurable MPP,PWM,ADC
PIN159	GND	GND	GND
PIN160	PMI_HAP_OUT_N	AO	Haptics driver output negative
PIN161	PMI_HAP_OUT_P	AO	Haptics driver output positive
PIN162	FLASH_LED2+	AO	FLASH LED anode(1A)
PIN163	GND	GND	GND
PIN164	VREF_BAT_THERM	AI	Battery temperature input to ADC
PIN165	CS_PLUS	AI	Current sense resistor-plus side
PIN166	CS_MINUS	AI	Current sense resistor-minus side
PIN167	MIC_BIAS1	AO	Microphone bias #1
PIN168	GND_MIC	GND	Microphone bias filter ground
PIN169	MIC_IN3_P	AI	Microphone input 3
PIN170	GND	GND	GND
PIN171	USB3_SS_RX_P	AI	USB super-speed receive – plus
PIN172	USB3_SS_RX_M	AI	USB super-speed receive – minus
PIN173	GND	GND	GND
PIN174	USB3_SS_TX_P	AO	USB super-speed transmit – plus
PIN175	USB3_SS_TX_M	AO	USB super-speed transmit – minus
PIN176	GND	GND	GND
PIN177	GPIO98_I2C8_SDA	B-PD:nppukp	Configurable I/O, I2C SDA
PIN178	GPIO99_I2C8_SCL	B-PD:nppukp	Configurable I/O, I2C SCL
PIN179	VREG_L12_VDDPX2_SDC	PO	PMIC output 2.95V for SDC2 signal
PIN180	GPIO131_DCAM_RST_N	B-PD:nppukp	Configurable I/O, Depth camera reset
PIN181	GPIO132_DCAM_PWD_N	B-PD:nppukp	Configurable I/O, Depth camera pwn
PIN182	GND	GND	GND
PIN183	MIPI_CSI1_CLK_P	AI	MIPI camera serial interface 1 clock+
PIN184	MIPI_CSI1_CLK_N	AI	MIPI camera serial interface 1 clock-
PIN185	MIPI_CSI1_LANE0_P	AI	MIPI camera serial interface 1 lane0+
PIN186	MIPI_CSI1_LANE0_N	AI	MIPI camera serial interface 1 lane0-
PIN187	MIPI_CSI1_LANE1_P	AI	MIPI camera serial interface 1 lane1+
PIN188	MIPI_CSI1_LANE1_N	AI	MIPI camera serial interface 1 lane1-
PIN189	MIPI_CSI1_LANE2_P	AI	MIPI camera serial interface 1 lane2+
PIN190	MIPI_CSI1_LANE2_N	AI	MIPI camera serial interface 1 lane2-
PIN191	MIPI_CSI1_LANE3_P	AI	MIPI camera serial interface 1 lane3+
PIN192	MIPI_CSI1_LANE3_N	AI	MIPI camera serial interface 1 lane3-
PIN193	GND	GND	GND
PIN194	GPIO28_CAM_MCLK2	B-PD:nppukp	Configurable I/O, Depth camera MCLK
PIN195	GND	GND	GND
PIN196	CAM_I2C_SCL1	B-PD:nppukp	Configurable I/O, Dedicated camera I2C1

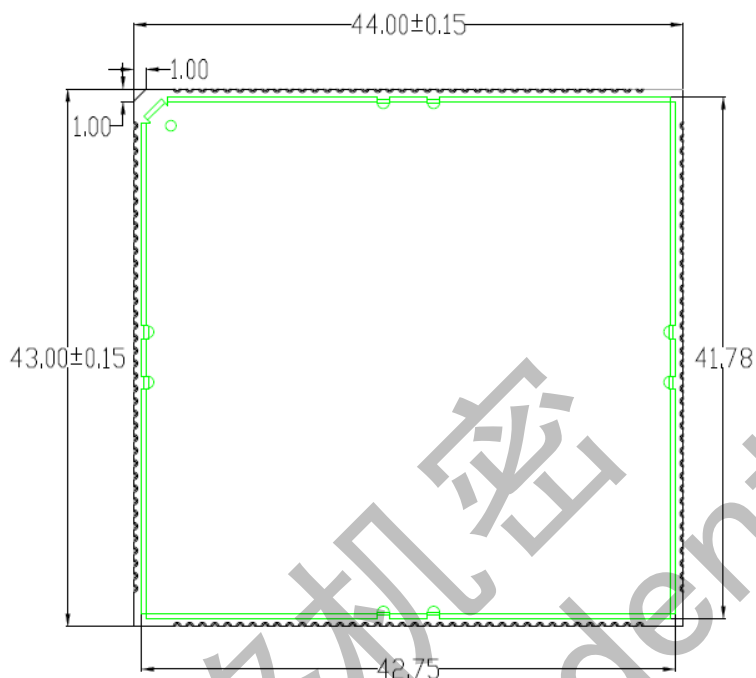
			SCL
PIN197	CAM_I2C_SDA1	B-PD:nppukp	Configurable I/O, Dedicated camera I2C1 SDA
PIN198	GPIO17_UART5_RX	B-PD:nppukp	Configurable I/O,UART5 RX
PIN199	GPIO16_UART5_TX	B-PD:nppukp	Configurable I/O,UART5 TX
PIN200	GPIO3_SPI1_CLK	B-PD:nppukp	Configurable I/O, SPI CLK
PIN201	GPIO2_SPI1_CS	B-PD:nppukp	Configurable I/O, SPI CS
PIN202	GPIO50_LNA_EN	B-PD:nppukp	Configurable I/O, LNA_EN
PIN203	GPIO136_FP_SPI_CS	B-PD:nppukp	Configurable I/O, fingerprint SPI CS
PIN204	GPIO6_I2C2_SDA	B-PD:nppukp	Configurable I/O, I2C SDA
PIN205	GPIO7_I2C2_SCL	B-PD:nppukp	Configurable I/O, I2C SCL
PIN206	GPIO10_TP_I2C3_SDA	B-PD:nppukp	Configurable I/O, CTP I2C SDA
PIN207	UIM2_RESET	B-PD:nppukp	Configurable I/O,UIM2 reset
PIN208	UIM2_CLK	B-PD:nppukp	Configurable I/O,UIM2 clock
PIN209	UIM2_DATA	B-PD:nppukp	Configurable I/O,UIM2 data
PIN210	VREG_L15_UIM2	PO	PMIC output for UIM2
PIN211	S2A		connect to S2B
PIN212	Reserved		Reserved
PIN213	Reserved		Reserved
PIN214	CBL_PWR_N1	DI	Cable power-on;
PIN215	GPIO48_FP_INT_N	B-PD:nppukp	Configurable I/O, fingerprint INT
PIN216	GPIO46_PRESSURE_INT	B-PD:nppukp	Configurable I/O, Pressure INT
PIN217	Reserved		Reserved
PIN218	Reserved		Reserved
PIN219	GND	GND	GND
PIN220	Reserved		Reserved
PIN221	Reserved		Reserved
PIN222	USB_VCONN	AI	Power input pin to drive active cables during the DFP mode
PIN223	USB_CC2	AI;AO	USB type C connector configuration channel2
PIN224	USB_CC1	AI;AO	USB type C connector configuration channel1
PIN225	GND	GND	GND
PIN226	GPIO139_USB_SS_SEL	B-PD:nppukp	Configurable I/O, USB Type C switch control
PIN227	Reserved		Reserved
PIN228	Reserved		Reserved
PIN229	GPIO97_WSA_INT	B-PD:nppukp	Configurable I/O, WSA_INT
PIN230	GPIO96_WSA_EN	B-PD:nppukp	Configurable I/O, WSA_EN
PIN231	GPIO90_DMIC0_DATA	B-PD:nppukp	Configurable I/O,DMIC0_DATA
PIN232	GPIO89_DMIC0_CLK	B-PD:nppukp	Configurable I/O,DMIC0_CLK

PIN233	S2B		connect to S2A
PIN234	GPIO66	B-PD:nppukp	Configurable I/O
PIN235	Reserved		Reserved
PIN236	GPIO128	B-PD:nppukp	Configurable I/O
PIN237	GPIO36	B-PD:nppukp	Configurable I/O
PIN238	GPIO33	B-PD:nppukp	Configurable I/O
PIN239	Reserved		Reserved
PIN240	Reserved		Reserved
PIN241	GRFC7_SEL	B-PD:nppukp	Configurable I/O,GRFC7_SEL
PIN242	GRFC5_SEL	B-PD:nppukp	Configurable I/O,GRFC7_SEL
PIN243	GND	GND	GND
PIN244	Reserved		Reserved
PIN245	GPIO19_NFC_I2C5_SCL	B-PD:nppukp	Configurable I/O,NFC I2C SCL
PIN246	GPIO18_NFC_I2C5_SDA	B-PD:nppukp	Configurable I/O, NFC I2C SDA
PIN247	GPIO1_SPI_MISO	B-PD:nppukp	Configurable I/O, SPI MISO
PIN248	GPIO0_SPI_MOSI	B-PD:nppukp	Configurable I/O, SPI MOSI
PIN249	GPIO137_FP_SPI_MOSI	B-PD:nppukp	Configurable I/O, fingerprint SPI MOSI
PIN250	GPIO135_FP_SPI_CLK	B-PD:nppukp	Configurable I/O, fingerprint SPI CLK
PIN251	GPIO138_FP_SPI_MISO	B-PD:nppukp	Configurable I/O, fingerprint SPI MISO
PIN252	GPIO42_ACCL_INT1	B-PD:nppukp	Configurable I/O,ACCL INT
PIN253	GPIO43_ALSP_INT_N	B-PD:nppukp	Configurable I/O,ALSP INT
PIN254	GPIO44_MAG_INT	B-PD:nppukp	Configurable I/O,MAG INT
PIN255	GPIO45_GYRO_INT	B-PD:nppukp	Configurable I/O,GYRO INT
PIN256	GPIO58_UIM2_DET	B-PD:nppukp	Configurable I/O,UIM2 removal detection
PIN257- PIN323	GND	GND	GND

	GND
	GPIO
	POWER
	AUDIO
	PMIC
	MIPI
	RF
	OTHERS
	Reserved

5. 模块 2D 结构图

TOP:



BOTTOM:

