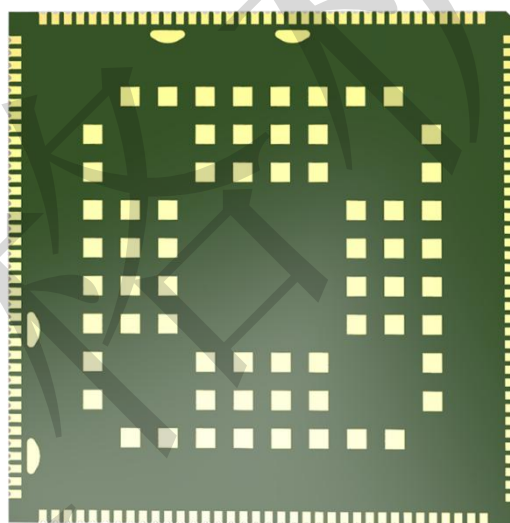


## SLM755 模块规格说明\_V1.01



受控文件名称	SLM755 模块规格说明
受控版本号	V1.01
发布机构	深圳市美格智能技术股份有限公司
发布日期	2016 年 08 月

# 1. 产品概述

SLM755 是一款板卡内存为 8GB(兼容 16GB)的全制式多模 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。SLM755 采用 Android5.1 操作系统，可支持的接入速率：

TDD-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

SLM755 在提供高速宽带数据接入的同时，可提供语音、短信、通讯簿、WiFi、BT 和 GPS 功能，可广泛应用于视频监控、安防、车载设备、智能平台手持终端等产品。

## 2. 特性列表

产品特性		描述
平台		Qualcomm MSM8916
CPU		Quad-core A53 (64bit) 1.2GHz
GPU		A306 400MHz
系统内存		8GB eMMC + 1GB LPDDR3 兼容 16GB+2GB
操作系统		Android5.1
尺寸		40.5x40.5x3.0mm, 邮票孔封装+底部焊盘 210pin
网络频段 SLM755 8916-5		TDD-LTE: B38/39/40/41 FDD-LTE: B1/3 TD-SCDMA: B34/39 WCDMA: B1/B5 EVDO: BC0 CDMA: BC0 GSM: B5/3/8
Wi-Fi		IEEE 802.11b/g/n 2.4G
Bluetooth		BT4.0
FM		支持
GNSS		GPS/Beidou/Glonass
数据 接入	TDD-LTE	Cat4 TDD-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		DSDA 双卡双待 3.0/1.8V 支持 SIM 卡热插拔 L/W/G+G with CSFB to W/G L/TDS/G+G with CSFB to TDS/G L/EVDO/CDMA1x+CDMA1x
Display		Matrix: HD: 1280*800@60fps; FULL HD:1920*1200 30fps
		LCM Size: User defined
		Interface: MIPI DSI 4-lane

Camera (前和后双摄像头)	Interface: main: MIPI CSI0 4-lanes; front: MIPI CSI1 2-lanes	
	摄像头 Pixel: Max: 前置 5M/后置 13M	
	Video decode	1080p 30 fps: H264/ MP4/ WMV9/ VC1/ DivX/ VP8 HEVC (H.265) 720p 30fps in SW
	Video encode	1080p 30 fps: H264/ H263/ MP4/ VP8
输入设备	按键 (开关机键、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	模块电源输入, 3.3V~4.2V, 标称值 3.8V
	SDIO *1	TF Card, 最大支持 32GB
	USB	支持 OTG FORCE_USB_BOOT (上拉强制 USB 引导, 用于紧急下载)
	UART*2	一组 4 线 uart, 一组 2 线 uart
	I2C*4	For sensors/TP/others
	SPI*1	Master only
	ADC*2	支持
	充电功能	支持外部充电芯片
	马达	支持
	GPIO	24
	VCOIN	实时时钟后备电池
	射频接口	邮票孔
	Audio	1 路单端 MIC(非硅 MIC), 1 路耳机 MIC 1 路免提喇叭 (带功放) 1 路听筒 1 路立体声耳机

## 3. SLM755 接口

### SLM755 模块 210pin 定义:

pin#	pin name	Pad characteristics	Functional description
1	VBAT	PI,PO	Battery
2	VBAT	PI,PO	Battery
3	GND	GND	GND
4	MIC_IN1_P	AI	Microphone 1 input, single-ended
5	GND_MIC	GND	MIC GND
6	MIC_IN2_P	AI	Earphone Microphone input, single-ended
7	GND	GND	GND
8	CDC_EAR_P	AO	Earpiece amplifier output, differential plus
9	CDC_EAR_M	AO	Earpiece amplifier output, differential minus
10	SPKR_OUT_P	AO	Speaker (0.85w) driver output, plus
11	SPKR_OUT_M	AO	Speaker (0.85w) driver output, minus
12	GND	GND	GND
13	USB_DM	AI, AO	USB data minus
14	USB_DP	AI, AO	USB data plus
15	GND	GND	GND
16	USB_ID	AI	USB ID
17	UIM2_DET_N	DI,B-PD:nppukp	Configurable I/O UIM2 removal detection
18	UIM2_RESET	DO,B-PD:nppukp	Configurable I/O UIM2 reset
19	UIM2_CLK	DO,B-PD:nppukp	Configurable I/O UIM2 clock
20	UIM2_DATA	B,B-PD:nppukp	Configurable I/O UIM2 data
21	VREG_L15_UIM2	PO	PMIC supply for UIM2
22	UIM1_DET_N	DI,B-PD:nppukp	Configurable I/O UIM1 removal detection
23	UIM1_RESET	DO,B-PD:nppukp	Configurable I/O UIM1 reset
24	UIM1_CLK	DO,B-PD:nppukp	Configurable I/O UIM1 clock
25	UIM1_DATA	B,B-PD:nppukp	Configurable I/O UIM1 data
26	VREG_L14_UIM1	PO	PMIC supply for UIM1
27	GND	GND	GND
28	VIB_DRV_N	PI	Vibration motor driver output control
29	PM8916_MPP4	AO-Z;DI, DO	Configurable MPP; used for PWM or ADC
30	TP_INT_N	DI;B-PD:nppukp	Configurable I/O Touchscreen interrupt
31	TP_RST_N	DI;B-PD:nppukp	Configurable I/O Touchscreen reset
32	GPIO14_I2C_SDA	DO;B-PD:nppukp	Configurable I/O GPIO or I2C SDA
33	GPIO15_I2C_SCL	DO;B-PD:nppukp	Configurable I/O GPIO or I2C SCL
34	UART_TX	B-PD:nppukp	Configurable I/O UART
35	UART_RX	B-PD:nppukp	Configurable I/O UART

36	UART_CTS	B-PD:nppukp	Configurable I/O UARTor I2C SDA
37	UART_RTS	B;B-PD:nppukp	Configurable I/O UARTor I2C SCL
38	VREG_L11_SDC	PO	PMIC output 2.95V
39	SDC2_SDCARD_CLK	BH-NP:pdpukp	Secure digital controller 2 clock
40	SDC2_SDCARD_CMD	BH-PD:nppukp	Secure digital controller 2 command
41	SDC2_SDCARD_D0	BH-PD:nppukp	Secure digital controller 2 data bit 0
42	SDC2_SDCARD_D1	BH-PD:nppukp	Secure digital controller 2 data bit 1
43	SDC2_SDCARD_D2	BH-PD:nppukp	Secure digital controller 2 data bit 2
44	SDC2_SDCARD_D3	BH-PD:nppukp	Secure digital controller 2 data bit 3
45	SDC2_SDCARD_DET	B-PD:nppukp	Configurable I/O ,SD_DET_N
46	FORCE_USB_BOOT	B-PD:nppukp	pullup to 1.8v will force MSM to boot from USB_HS port
47	TP_I2C_SCL	B;B-PD:nppukp	Configurable I/O CTP I2C
48	TP_I2C_SDA	B;B-PD:nppukp	Configurable I/O CTP I2C
49	LCD_RST_N	B-PD:nppukp	Configurable I/O, #DSI_RST#,MDP_VSYNC_S
50	LCD_TE0	B-PD:nppukp	Configurable I/O,CCI_TIMER0, GP_CLK0
51	GND	GND	GND
52	MIPI_DSI0_CLK_N	AO	MIPI display serial interface 0 clock – negative
53	MIPI_DSI0_CLK_P	AO	MIPI display serial interface 0 clock –positive
54	MIPI_DSI0_LANE0_N	AI, AO	MIPI display serial interface 0 lane 0 – negative
55	MIPI_DSI0_LANE0_P	AI, AO	MIPI display serial interface 0 lane 0 –positive
56	MIPI_DSI0_LANE1_N	AI, AO	MIPI display serial interface 0 lane 1 – negative
57	MIPI_DSI0_LANE1_P	AI, AO	MIPI display serial interface 0 lane 1 –positive
58	MIPI_DSI0_LANE2_N	AI, AO	MIPI display serial interface 0 lane 2 –negative
59	MIPI_DSI0_LANE2_P	AI, AO	MIPI display serial interface 0 lane 2 –positive
60	MIPI_DSI0_LANE3_N	AI, AO	MIPI display serial interface 0 lane 3 –negative
61	MIPI_DSI0_LANE3_P	AI, AO	MIPI display serial interface 0 lane 3 –positive
62	GND	GND	GND
63	MIPI_CSI0_CLK_N	AI	MIPI camera serial interface 0 CLK – negative
64	MIPI_CSI0_CLK_P	AI	MIPI camera serial interface 0 CLK –positive
65	MIPI_CSI0_LANE0_N	AI, AO	MIPI camera serial interface 0 lane 0 – negative
66	MIPI_CSI0_LANE0_P	AI, AO	MIPI camera serial interface 0 lane 0 – positive
67	MIPI_CSI0_LANE1_N	AI, AO	MIPI camera serial interface 0 lane 1 – negative
68	MIPI_CSI0_LANE1_P	AI, AO	MIPI camera serial interface 0 lane 1 – positive
69	GND	GND	GND
70	MIPI_CSI1_CLK_N	AI	MIPI camera serial interface 1 clock –negative
71	MIPI_CSI1_CLK_P	AI	MIPI camera serial interface 1 clock – positive
72	MIPI_CSI1_LANE0_N	AI, AO	MIPI camera serial interface 1 lane 0–negative
73	MIPI_CSI1_LANE0_P	AI, AO	MIPI camera serial interface 1 lane 0 – positive
74	CAM0_MCLK	DO;B-PD:nppukp	Camera master clock 0
75	CAM1_MCLK	DO;B-PD:nppukp	Camera master clock 1 Configurable I/O

76	GND	GND	GND
77	RF_WIFI/BT	AI,AO	RF signal
78	GND	GND	GND
79	CAM0_RST_N	DO;B-PD:nppukp	Rear camera reset; Configurable I/O
80	CAM0_PWDN	DO;B-PD:nppukp	Rear camera pwn Configurable I/O
81	CAM1_RST_N	DO;B-PD:nppukp	Front camera reset Configurable I/O
82	CAM1_PWDN	DI;B-PD:nppukp	Front camera pwn Configurable I/O
83	CAM_I2C_SCL	B-PD:nppukp	Camera I2C_SCL,can't be used for other
84	CAM_I2C_SDA	B-PD:nppukp	Camera I2C_SDA,can't be used for other
85	GND	GND	GND
86	GND	GND	GND
87	RF_MAIN	AI,AO	RF signal-Main ANT
88	GND	GND	GND
89	GND	GND	GND
90	GPIO109_KYPD_SNS2	DI;B-PD:nppukp	Configurable I/O Keypad sense bit 2
91	GPIO23_I2C_SCL	DO;B-PD:nppukp	Configurable I/O I2C or GPIO
92	GPIO22_I2C_SDA	DO;B-PD:nppukp	Configurable I/O I2C or GPIO
93	UART_MSM_RX	B;B-PD:nppukp	Configurable I/O UART for debug
94	UART_MSM_TX	BD;B-PD:nppukp	Configurable I/O UART for debug
95	GPIO107_KYPD_SNS0	DI;B-PD:nppukp	Configurable I/O Keypad sense bit 0
96	GPIO108_KYPD_SNS1	DI;B-PD:nppukp	Configurable I/O Keypad sense bit 1
97	GPIO112	DO;B-PD:nppukp	Configurable I/O
98	GPIO113	DO;B-PD:nppukp	Configurable I/O
99	GPIO115	B;B-PD:nppukp	Configurable I/O
100	GPIO116	B;B-PD:nppukp	Configurable I/O
101	GPIO117	B-PD:nppukp	Configurable I/O
102	GPIO118	B-PD:nppukp	Configurable I/O
103	GPIO120	B-PD:nppukp	Configurable I/O
104	GPIO121	B-PD:nppukp	Configurable I/O
105	GPIO6_I2C_SDA	B-PD:nppukp	Configurable I/O I2C or GPIO
106	GPIO7_I2C_SCL	B;B-PD:nppukp	Configurable I/O I2C or GPIO
107	GPIO49	B-PD:nppukp	Configurable I/O
108	GPIO50	B-PD:nppukp	Configurable I/O
109	GPIO51	B;B-PD:nppukp	Configurable I/O
110	GPIO52	B-PD:nppukp	Configurable I/O
111	VREG_L5_1P8	OUPUT	PMU Supply 1.8V
112	GPIO62	B-PD:nppukp	Configurable I/O for SMB INT
113	GPIO36	B-PD:nppukp	Configurable I/O
114	KYPD_PWR_N	DI	Power on key
115	GPIO114	B-PD:nppukp	Configurable I/O
116	GPIO11_SPI_CLK	B-PD:nppukp	Configurable I/O SPI or I2C

117	GPIO10_SPI_CS	B-PD:nppukp	Configurable I/O SPI or I2C
118	GPIO9_SPI_MISO	B-PD:nppukp	Configurable I/O SPI
119	GPIO8_SPI_MOSI	B-PD:nppukp	Configurable I/O SPI
120	GND	GND	GND
121	RF_GPS	AI	RF signal-GPS ANT
122	GND	GND	GND
123	GPIO31	B-PD:nppukp	Configurable I/O,
124	GPIO69	B-PD:nppukp	Configurable I/O,
125	VREG_L6_1P8	OUPUT	PMU Supply 1.8V
126	VCOIN	PI	VCOIN
127	CHARGE_SEL	DI	SMB CHAGER SEL
128	PM8916_MPP2	AO-Z;DI, DO	Configurable MPP; used for PWM or ADC
129	VREG_L17_2P85	OUPUT	PMU Supply 2.85V
130	GND	GND	GND
131	RF_DIV	AI	RF signal-DIV ANT
132	GND	GND	GND
133	VBATT_SNS	PI	Battery voltage sense point
134	BAT_THERM	DI	Battery therm monitor
135	GND	GND	GND
136	CDC_HPH_R	AO	Earphone right output
137	CDC_HPH_REF	AI	Earphone driver amplifier ground reference
138	CDC_HPH_L	AO	Earphone left output
139	CDC_HS_DET	DI	Headset detection
140	GND	GND	GND
141	VBUS	PI	USB VBUS Voltage
142	VBUS	PI	USB VBUS Voltage
143	GND	GND	GND
144	GND	GND	GND
145	VBAT	PI,PO	Battery
146	VBAT	PI,PO	Battery
147	GND	GND	GND
148	GND	GND	GND
149	GND	GND	GND
150	GND	GND	GND
151	RESERVED		RESERVED
152	RESERVED		RESERVED
153	RESERVED		RESERVED
154	RESERVED		RESERVED
155	RESERVED		RESERVED
156	RESERVED		RESERVED
157	RESERVED		RESERVED



158	MIPI_CSI1_LANE1_N	AI, AO	MIPI camera serial interface 1lane 1 – negative
159	MIPI_CSI1_LANE1_P	AI, AO	MIPI camera serial interface 1lane 1 – positive
160	GND	GND	GND
161	GND	GND	GND
162	GND	GND	GND
163	GND	GND	GND
164	GND	GND	GND
165	GND	GND	GND
166	GND	GND	GND
167	GND	GND	GND
168	GND	GND	GND
169	GND	GND	GND
170	GND	GND	GND
171	GND	GND	GND
172	GND	GND	GND
173	GND	GND	GND
174	GND	GND	GND
175	GND	GND	GND
176	GND	GND	GND
177	GND	GND	GND
178	GND	GND	GND
179	PM_RESIN_N	DI	PMIC reset
180	GND	GND	GND
181	GND	GND	GND
182	GND	GND	GND
183	VREG_L12_SDC	PO	PMU supply 2.95V
184	GND	GND	GND
185	GND	GND	GND
186	GND	GND	GND
187	MIPI_CSI0_LANE3_P	AI, AO	MIPI camera serial interface 0 lane 3 – positive
188	GND	GND	GND
189	GND	GND	GND
190	RF_FM	AO	RF signal-FM ANT
191	RESERVED		RESERVED
192	GND	GND	GND
193	GND	GND	GND
194	RESERVED		RESERVED
195	RESERVED		RESERVED
196	RESERVED		RESERVED
197	RESERVED		RESERVED
198	GND	GND	GND

199	RESERVED		RESERVED
200	GND	GND	GND
201	GND	GND	GND
202	RESERVED		RESERVED
203	MIPI_CSI0_LANE3_N	AI, AO	MIPI camera serial interface 0 lane 3 –negative
204	MIPI_CSI0_LANE2_P	AI, AO	MIPI camera serial interface 1 lane 1 – positive
205	MIPI_CSI0_LANE2_N	AI, AO	MIPI camera serial interface 1 lane 1 –negative
206	RESERVED		RESERVED
207	RESERVED		RESERVED
208	GND	GND	GND
209	GND	GND	GND
210	CBL_PWR_N	DI	Cable poweron detect input

## 4. 模块 2D 结构图

