

ROM-5721

NXP i.MX8M Mini Cortex-A53 SMARC v2.1 核心模块



- NXP i.MX 8M Mini处理器, 具有多达4个Arm Cortex A53内核
- 1个Arm Cortex-M4内核
- LPDDR4内存和eMMC闪存
- 1个4通道MIPI-CSI, 1个双通道LVDS或1个显示接口
- 4个USB2.0、1个USB 2.0 OTG、4个UART、4个I2C、12个GPIO、1个PCIe2.0、1个千兆局域网接口
- 支持硬件加速器 OpenGL ES 2.0 / 1.1
- 低功耗设计
- 支持Linux和Android BSP系统



产品介绍

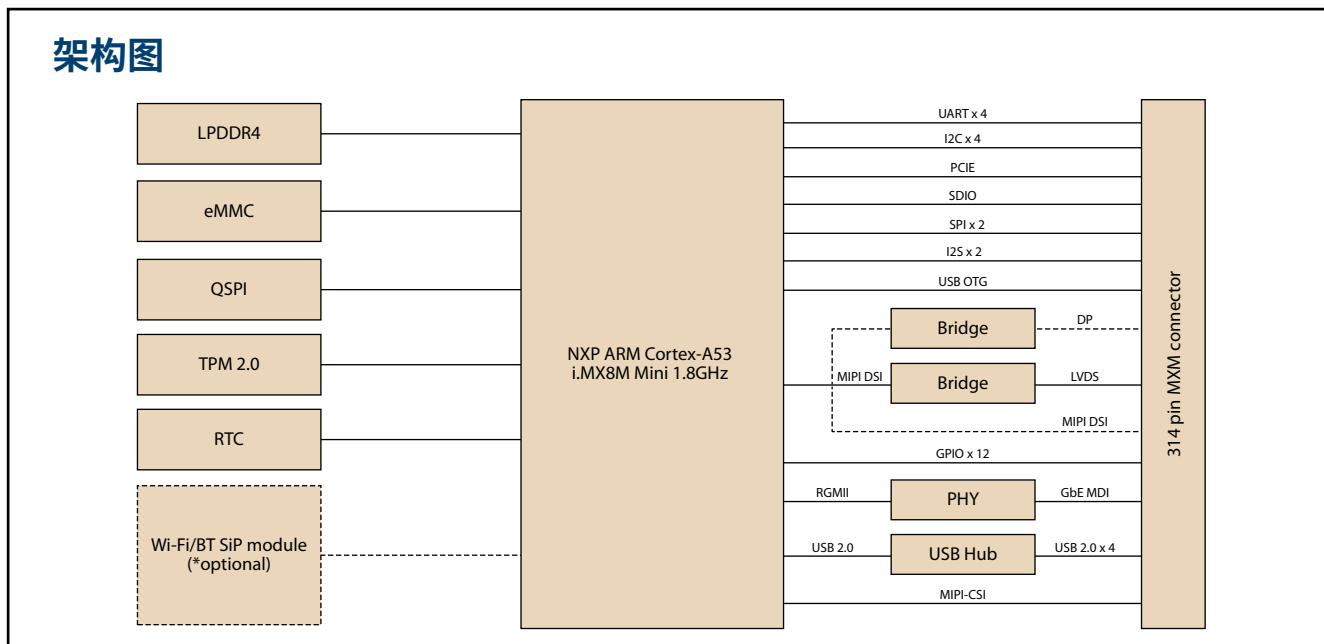
研华ROM-5721 SMARC 2.0 / 2.1核心模块搭载NXP i.MX8M Mini SOC, 包含4个Arm Cortex-A53内核, 一个Cortex-M4实时处理器以及Vivante GC320、GC NanoUltra 3D图形引擎。该模组提供USB2.0、千兆以太网接口、MIPI-CSI、PCIExpress、双通道LVDS以及MIPI-CSI接口, 支持嵌入式应用。

ROM-5721搭载研华ROM-DB5901载板, 能够加快最终产品外设集成和上市。同时提供用于载板开发的参考电路和布线检查表, 以及开源Linux BSP、实用测试工具、硬件设计工具和参考驱动器。

规格

Form Factor		SMARC2.0 & SMARC2.1 compliance
Processor System	CPU	NXP i.MX 8M Mini up to 4 Arm Cortex A53 cores, up to 1.8GHz
	MCU	1 x Arm Cortex-M4 core
Memory	Technology	LPDDR4-1866
	Capacity	Onboard 1GB/2GB LPDDR4
	Flash	8/16 GB eMMC NAND Flash for O.S. and 8 MB QSPI NOR Flash for board information
Graphics	LVDS/MIPI DSI	1 x 4 lane MIPI-CSI, 1 x Dual channel LVDS or 1 x Display Port up to 1080P
	HDMI	-
	Parallel RGB	-
	VGA	-
	Graphics Engine	Vivante GC320, GC NanoUltra 3D GPU Support OpenGL ES 2.0, VG 1.1
	H/W Video Codec	Decoder: H.265, H.264, VP8/9 1080p Encoder:H.264, VP8 1080p
Ethernet	Chipset	1 x NXP i.MX8M Mini GbE controller
	Speed	10/100/1000 Mbps
RTC	RTC	Yes
WatchDog Timer		Yes
Security		TPM 2.0
I/O	PCIe	1 x PCIe 2.0
	SATA	-
	USB	4 USB 2.0 1 USB 2.0 OTG
	Audio	2 x I ² S
	SPDIF	-
	SDIO	1
	Serial Port	2 x 4-wire UART and 2 x 2-wire UART
	SPI	2
	CAN	-
	GPIO	12
	I ² C	4
	Camera Input	1 x 4-lane MIPI CSI
	System Bus	-
	Touch	-
Keypad	-	
Power	Power Supply Voltage	Fixed 5V DC source and allow 3.3 V ~ 5.25 V operates directly from single level Lithium Ion cells
	Power Consumption	TBD
Environment	Operating Temperature	0 ~ 60 °C / -40 ~ 85 °C
	Operating Humidity	5 ~ 95% relative humidity, non-condensing
Mechanical	Dimensions (W x D)	82 x 50 mm
Operation System		Linux & Android
Certifications		CE/FCC Class B

架构图



订货信息

Part No.	CPU	Memory	Flash Memory	UART	LAN	USB 2.0	Display	PCIe	SD	I2S	I2C	SPI	WiFi/BT	Power input	Operating Temperature
ROM-5721CQ-REA2E	i.MX8M Mini Quad	2GB	16GB	4	1	5	1 x Dual ch LVDS	1	1	2	4	2	(Optional)	3 ~ 5.25V	0 ~ 60 °C
ROM-5721CD-RDA2E	i.MX8M Mini Dual	1GB	8GB	4	1	5	1 x MIPI DSI	1	1	2	4	2	(Optional)	3 ~ 5.25V	0 ~ 60 °C
ROM-5721CS-RDA2E	i.MX8M Mini Solo	1GB	N/A	4	1	1	1 x MIPI DSI	1	1	2	4	2	(Optional)	3 ~ 5.25V	0 ~ 60 °C
ROM-5721WQ-QEA2E	i.MX8M Mini Quad	2GB	16GB	4	1	5	1 x Dual ch LVDS	1	1	2	4	2	(Optional)	3 ~ 5.25V	-40 ~ 85 °C
ROM-5721WD-QDA2E	i.MX8M Mini Dual	1GB	8GB	4	1	5	1 x MIPI DSI	1	1	2	4	2	(Optional)	3 ~ 5.25V	-40 ~ 85 °C
ROM-5721WS-QDA2E	i.MX8M Mini Solo	1GB	N/A	4	1	1	1 x MIPI DSI	1	1	2	4	2	(Optional)	3 ~ 5.25V	-40 ~ 85 °C

*QUAD-Lite/DUAL-Lite/SOLO-Lite SoC, WiFi/BT SiP module, DRAM and eMMC of other capacity are available through project-based support. Please contact sales for details.

开发底板

Part No.	Description
ROM-DB5901-SWA1	Development Board for SMARC 2.0 Module

OS 规格

Operating System	Version Support
Linux	Yocto 2.5
Android	Android 9.0

Please visit <https://adv.t.ch/aim-linux-download> to know our latest software update

可选配件

Part No.	Description
1701100300	Debug port cable for ROM-5721
1700019474	D-SUB 9P(F)/D-SUB 9P(F) RS232/RS485 100c
1970005258N001	Heat Spreader
1970005259T001	Semi Heat Sink (0 ~ 60 °C)
1970005260T001	Semi Heat Sink (-40 ~ 85 °C)
193B021490	Screw for Heat Spreader and Semi Heat Sink
96PSA-A36W12R1-3	ADAPTER 100-240V 36W 12V 3A
1700001524	Power Cord 3P UL 10A 125V 180cm
170203183C	Power Cord 3P Europe (WS-010+WS-083) 183cm
170203180A	Power Cord 3P UK 2.5A/3A 250V 1.83M
1700008921	Power Cord 3P PSE 183cm
SQF-ISDM1-16G-21C	SQF SD Card I-SD UHS-I MLC 16G (0~70°C)
SQF-ISDM1-16G-21E	SQF I-SD UHS-I MLC 16G (-40~85°C)
EWM-W163M201E	802.11 a/b/g/n/ac,QCA6174A,2T2R,w/BT4.1,M.2 2230
1750008717-01	Dipole Ant. D.B 2.4/5G WiFi 3dBi SMA/M-R BLK
1750007965-01	Antenna Cable R/P SMA (M) to MHF4, 300mm
EWM-C117FL06E*	LTE 4G,3G WCDMA/DC-HSPA+, 2G module, MPCII-L280H
1750007990-01	Antenna 4G/LTE full band L=11 cm 50 Ohm
1750006009	Antenna Cable SMA (F) to MHF 1.32 25cm

SW 规格

Software Application	Function Support
SUSI API	I2C, GPIO, SPI, WDT, RTC, Backlight Control
WISE-PaaS/DeviceOn	Built-in

尺寸图

