

ROM-3620

NXP i.MX8X Cortex-A35
RTX v2.1 核心模块



- 搭载基于2-4 x Arm Cortex-A35内核的 NXP i.MX 8X处理器
- 板载LPDDR4内存和 eMMC 16GB
- 支持宽范围电源输入 5V~24V
- 支持 Vivante GC7000 Lite 硬件加速器
- 支持超高清4K/全高清1080p视频解码和高清 1080p视频编码硬件引擎
- 支持1 PCIe、1 USB 3.0、1 USB 2.0、1 USB OTG2.0、5 I2C、1 I2S、1 Camera in、2 CANbus、10 GPIO
- 低功耗无风扇设计
- 支持Linux 和 Android BSP



产品介绍

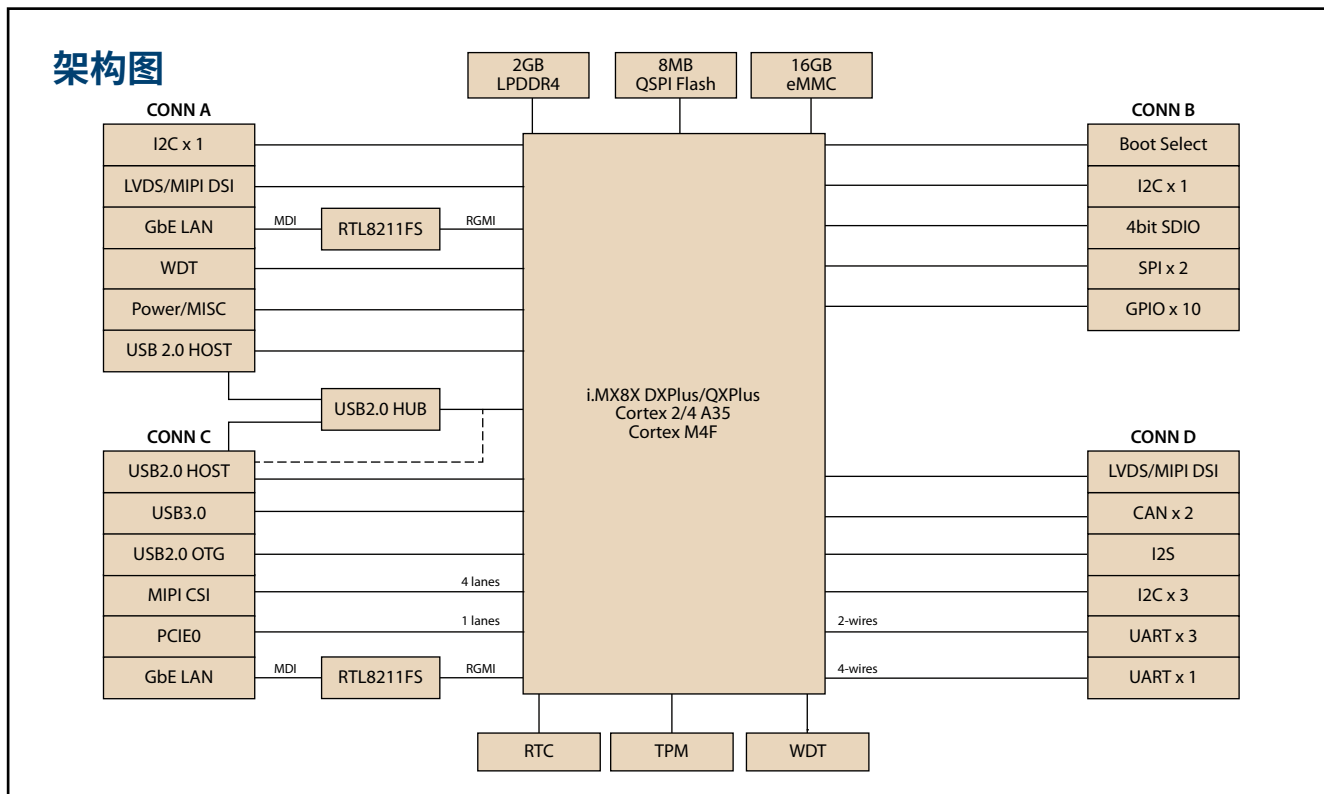
研华ROM-3620 RTX2.1 核心模块搭载NXP i.MX 8X SoC, 其中内置2- 4个 Arm Cortex-A35 内核, 用于中档汽车和工业细分市场, 一个 Cortex-M4F 内核用于实时处理技术, 以及一个 Tensilica Hi-Fi 4 DSP, 用于高效音频和语音编解码器执行功能。此外, 通过 Vivante GC7000 Lite、4K H.265解 码器和1080P60双显控制器, 该模块可提升其图形性能。

ROM-3620 RTX2.1模块可提供ROM-DB3900评估载板, 便于集成和硬件设计参考, 此外, 还提供 Linux BSP 实用程序和参考代码, 用于应用程序开 发和设备集成。

规格

Form Factor		RTX v2.1	
Processor System	CPU	NXP i.MX 8X DualXPlus/QuadXPlus; 2/4 x Arm Cortex-A35 1.2GHz; Cortex M4F	
	Technology	LPDDR4	
Memory	Capacity	On-board 2GB/4GB	
	Flash	16 GB eMMC NAND Flash and 8MB QSPI NOR FLASH	
Graphics	LVDS/MIPI DSI	2 x 24-bit single channel LVDS 1080p or 2 x 4-LANE MIPI DSI	
	Graphics Engine	Vivante GC7000 Lite	
	H/W Video Codec	Decoder: H.265 / H.264 Encoder: H.264	
Ethernet	Chipset	2 x NXP i.MX8X integrated RGMII (with AR8035)	
	Speed	2 x 10/100/1000 Mbps	
PMIC	PMIC	NXP PF8100	
RTC	RTC	Yes	
WatchDog Timer		256-level timer interval, from 0 ~ 128 sec	
I/O	PCIe	1 x PCIe 3.0	
	USB		1 USB 3.0, 1 USB 2.0
			1 USB 2.0 OTG
	Audio	I ² S	
	SPDIF	-	
	SDIO	1	
	Serial Port	3 UART (1 x 4 wire/ 2 x 2 wire)	
	SPI	2	
	CAN	2 CAN/ CAN-FD	
	GPIO	10	
	I ² C	5	
	Camera Input	1 x 4-lane MIPI CSI	
	System Bus	-	
Touch	-		
Keypad	-		
Power	Power Supply Voltage	5 ~ 24 V	
	Power Consumption	4.497W (Max)	
Environment	Operating Temperature	0 ~ 60 °C/ -40 ~ 85 °C	
	Operating Humidity	5% ~ 95% relative humidity	
Mechanical	Dimensions (W x D)	68 x 68 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 Host	USB OTG	Display	PCIe	SD	CANbus	I ² C	SPI	Size	Power input	Operating Temperature
ROM-3620CE-OEA2E	i.MX8X DualXPlus 1.2GHz	2GB	16GB	4	2	2	1	2 x single channel LVDS or 2 x 4-lane MIPI DSI	1	1	2	5	2	68 x 68 x 7 mm	5V-24V	0 ~ 60 °C
ROM-3620WE-OEA2E	i.MX8X DualXPlus 1.2GHz	2GB	16GB	4	2	2	1	2 x single channel LVDS or 2 x 4-lane MIPI DSI	1	1	2	5	2	68 x 68 x 7 mm	5V-24V	-40 ~ 85 °C
ROM-3620CU-OEA2E	i.MX8X QuadXPlus 1.2GHz	2GB	16GB	1	1	3	1	2 x single channel LVDS or 2 x 4-lane MIPI DSI	1	1	2	5	2	68 x 68 x 7 mm	5V-24V	0 ~ 60 °C
ROM-3620WU-OEA2E	i.MX8X QuadXPlus 1.2GHz	2GB	16GB	1	1	3	1	2 x single channel LVDS or 2 x 4-lane MIPI DSI	1	1	2	5	2	68 x 68 x 7 mm	5V-24V	-40 ~ 85 °C

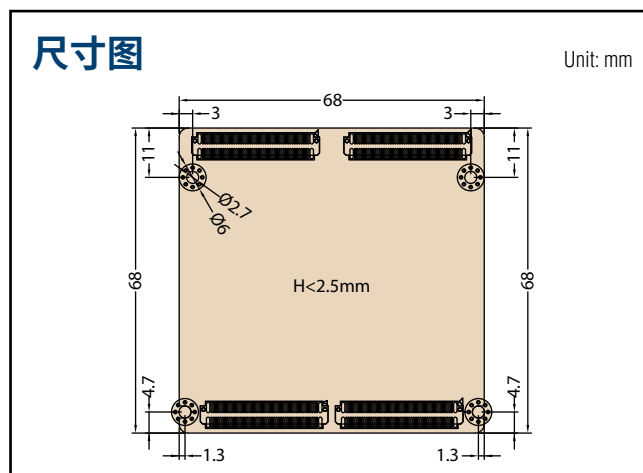
开发底板

Part No.	Description
ROM-DB3900-SWA2E	Development board for RTX2.1 module

可选配件

Part No.	Description
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
1700008921	Power cord 3P PSE 183cm
170203180A	Power cord 3P UK 2.5A/3A 250V 1.83M
1700019146	Power Cord CCC 3P 10A 250V 183cm
SQF-ISDM1-16G-21C	SQ Flash SD card UHS-I MLC 16GB (0 ~ 70 °C)
SQF-ISDM1-16G-21E	SQ Flash SD card UHS-I MLC 16GB (-40 ~ 85 °C)
EWM-W188M201E	WiFi 802.11ac/abgn 2T2R and BT4.2
1750008671-01	Dipole Ant.SMA/M-R 2.4/5G 2.5/4dBi BLK 109mm
1750007965-01	Antenna cable, SMA (M) to MHF4, 300mm
EWM-C117FL06E*	LTE 4G, 3G WCDMA/DC-HSPA+, 2G module, MPC1-L280H
1750008303-01	Antenna AN0727-64SP6B5M
1750006009	Antenna Cable SMA (F) to MHF 1.32 25cm

尺寸图



Unit: mm