

# ROM-7421

NXP i.MX6 Cortex-A9  
Qseven v2.0 核心模块



- NXP ARM Cortex-A9 i.MX6 Solo / Dual Plus / Quad Plus 1 GHz高性能处理器
- 1 GB / 2 GB DDR3内存
- 4 GB eMMC NAND闪存
- 支持OpenGL ES 2.0和OpenVG 1.1硬件加速器, 全高清1080p视频编解码器
- HDMI, 双通道24位LVDS
- 1个CAN、2个UART、2个I2C、8个GPIO、1个I2S
- 4个USB、1个SDIO、1个SATA II
- 1个10/100/1000 Mbps以太网接口; 1个PCIe x1 Gen2
- 可选散热解决方案



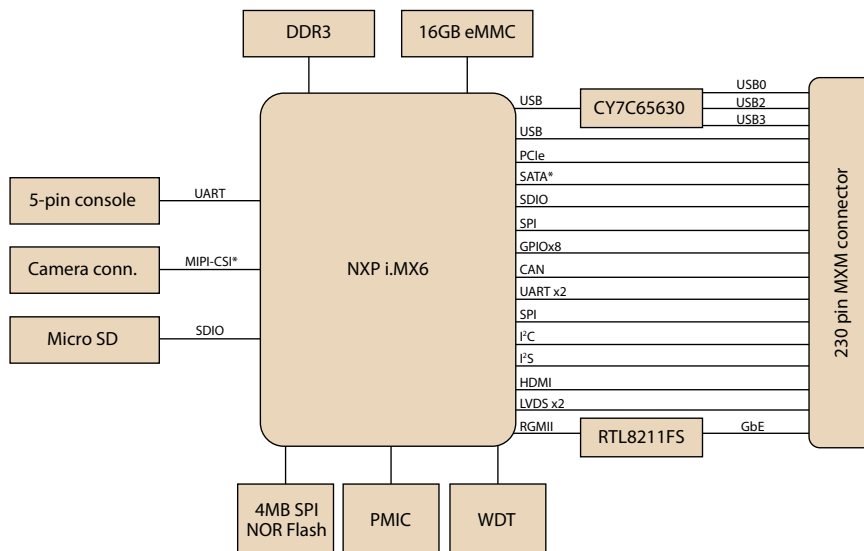
ROM-7421 Qseven核心模块搭载ARM Cortex-A9 NXP i.MX6系列超低功耗SoC和Linux I/O解决方案。NXP i.MX6支持2D、3D图形加速、全高清1080P视频解码和高清1080p视频编码硬件引擎。

ROM-7421搭载研华ROM-DB7501评估板, 易于系统集成和设计参考; 我们还提供用于载板开发的参考电路和布线检查表, 以及用于应用开发和设备集成的Linux BSP、实用测试工具、硬件设计工具和参考代码。

## 规格

Form Factor		Qseven 2.0
Processor System	CPU	NXP Arm Cortex-A9 i.MX6 Solo/Dual Plus/Quad Plus 1 GHz
Memory	Technology	DDR3 1066 MHz
	Capacity	On-board DDR3 1 GB/2 GB
	Flash	4 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for Advantech boot loader
Graphics	LVDS	2 x 24-bit LVDS, 1366 x 768 for 1ch; 1920 x 1080 for 2ch
	HDMI	1920 x 1080
	Graphics Engine	2 IPU's. OpenGL ES 2.0 for 3D, BitBlit for 2D and OpenVG 1.1
	H/W Video Codec	Decoder: MPEG-4 ASP, H.264 HP, H.263, MPEG-2 MP, MJPEG BP Encoder: MPEG-4 SP, H.264 BP, H.263, MJPEG BP
Ethernet	Chipset	NXP i.MX6 integrated RGMII
	Speed	1 x 10/100/1000 Mbps
RTC	RTC	Yes
WatchDog Timer		HW Watchdog Timer
I/O (Edge finger)	PCIe	1 PCIe, 1 x Lane
	SATA	1 SATA II
	USB	4 USB 2.0 (1 USB OTG)
	Audio	I <sup>2</sup> S
	SPDIF	-
	SDIO	1
	Serial Port	2 UART (4 wire)
	SPI	1
	CAN	1
	GPIO	8
	I <sup>2</sup> C	2
	System Bus	-
	Touch	-
Keypad	-	
I/O (On board)	UART	1 (for console)
	SD	1 microSD
	Camera	1 MIPI Video Capture Port
Power	Power Supply Voltage	5 V
	Power Consumption	4.4 Watts (Max)
Environment	Operational Temperature	0 ~ 60° C
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions (W x D)	70 x 70 mm
Operating System		Linux Ubuntu 14.04/16.04/18.04 /Debian 8 /Yocto 2.1/2.5 & Android 6.0.1
Certifications		CE/FCC Class B

### 架构图



\* Solo SKU doesn't support

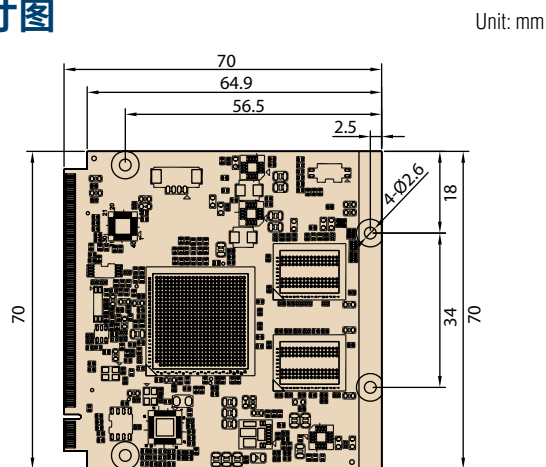
### 订货信息

Part No.	CPU	Memory	Flash Memory	UART	LAN	USB Host	USB OTG	Display	SATA	PCIe	HDMI	SD	CANbus	I2C	SPI	Size	Power Input	Operating Temperature
ROM-7421CE-MDA2E	i.MX6 Dual Plus 1 GHz	1 GB	16 GB	2	1	4	1	2 x 24-bit LVDS	1	1	1	1	1	2	1	70 x 70 x 5mm	5V	0 ~ 60° C
ROM-7421CU-MEA2E	i.MX6 Quad Plus 1 GHz	2 GB	16 GB	2	1	4	1	2 x 24-bit LVDS	1	1	1	1	1	2	1	70 x 70 x 5mm	5V	0 ~ 60° C
ROM-7421CS-MDA2E	i.MX6 Solo 1 GHz	1 GB	16 GB	2	1	4	1	2 x 24-bit LVDS	-	1	1	1	1	2	1	70 x 70 x 5mm	5V	0 ~ 60° C

### 开发底板

Part No.	Description
ROM-DB7501-SCA1E	Development board for RISC Qseven 2.0 module

### 尺寸图



### 可选配件

Part No.	Description
1700022373-01	Debug Port Cable for ROM-7421
9696ED2000E	Debug Port Adapter for ROM-7421
96PSA-A36W12R1-3	ADP A/D 100-240V 36W 12V C6 DC PLUG 90° 62368
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-ISDS1-2G-86E	SQFlash SD card SLC 2G, 1CH (-40 ~ 85° C)
EWM-W142F01E	802.11 b/g/n,AR9287,2T2R,Full size Mini PCIe
1750007050-01	WiFi RP-SMA short SMA Jack(9.5mm) to U.FL_100mm (WiFi Cable)
1750000318	EMI Antenna 2DBI 2.4GHz SMA CONN for ARK-3384 (WiFi Antenna)
968EMW0093	Telit HE910-D Mini PCIe
1750007156-01	Cellular/GPS SMA Short JACK(9.5MM) L=100mm (3G Cable)
1750005865	Antenna L=10.9cm 500hm AN8921F-5701SM (3G Antenna)
1960079757N000	H.D R2 freescale-iMX6 S-7W 70x63x8-SC R0 (Not required for 0 ~ 60° C)



Note: Dimension is dependent on connector height used

All measurements are in millimeters. All dimensions without tolerance ±0.2mm