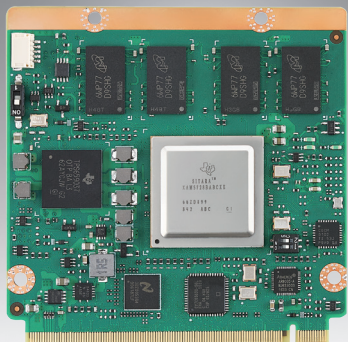


ROM-7510

TI Sitara™ AM5728 Cortex -A15 1.5GHz Qseven Module



Introduction

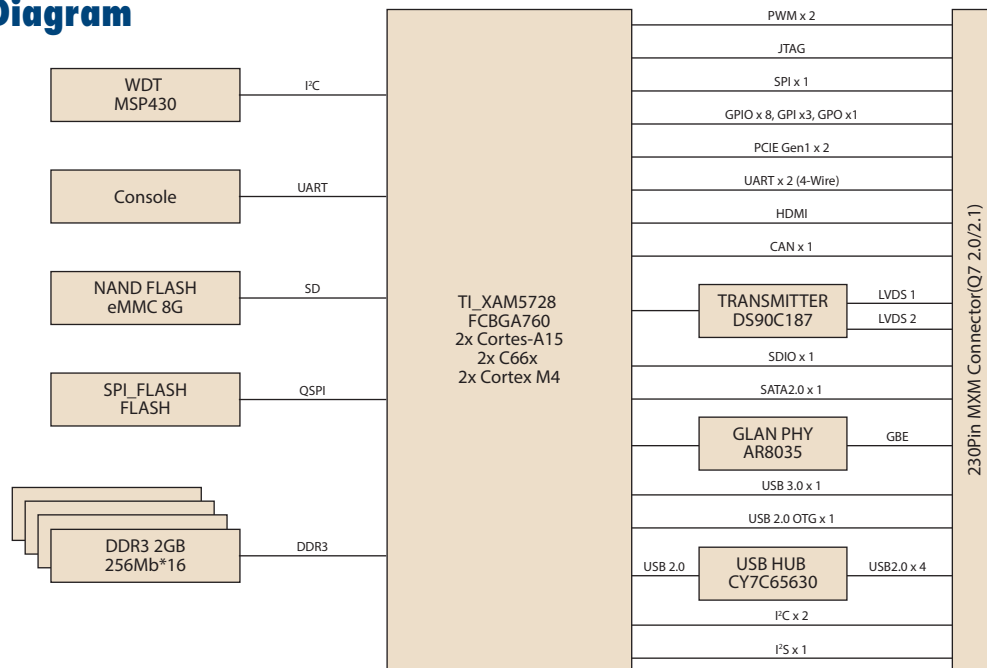
ROM-7510 Qseven Module integrates ARM Cortex-A15 TI AM5728 high performance SoC and I/O solution chips to be Linux support ready. TI AM5728 is provided by dual-core ARM Cortex-A15 RISC CPUs with Neon™ extension, and two TI C66x VLIW floating-point DSP cores. The ARM allows developers to keep control functions separate from other algorithms programmed on the DSPs and coprocessors, thus reducing the complexity of the system software.

ROM-7510 has Advantech ROM-DB7502 Evaluation Carrier Board for easy integration and design reference; we also offer referenced schematics and layout checklists for carrier board development. Additionally, Linux BSP, test utilities, HW design utilities and reference codes are ready for application development and device integration.

Specifications

Form Factor		Qseven
Processor System	CPU	TI ARM Cortex-A15 Sitara AM5728 1.5GHz
Memory	Technology	DDR3 on board 1066MHz
	Capacity	2GB
	Flash	8GB eMMC NAND Flash for O.S & 4MB SPI NOR Flash for ADV loader
Graphics	LVDS	1 x Dual channel 24-bit LVDS, 1920 x 1200
	HDMI	1
	Parallel RGB	-
	Graphics Engine	2 IPUs, Vivante™ GC320 for 2D, PowerVR® SGX544 for 3D
Ethernet	Chipset	TI AM5728 Integrated RGMII
	Speed	1 x 10/100/1000 Mbps
RTC	RTC	Yes
WatchDog Timer		MSP430 (time out : 0.1~6553.5s, power on/off 4s)
I/O	USB	1 x USB3.0, 1 x USB 2.0 OTG, 4 x USB2.0 Host
	I²S	1
	SDIO	1
	UART	2 x UART w/ 4wires
	SPI	1
	CAN	1
	GPIO	8
	I²C	2
	SATA	1
	PCIE	2, 1-lane
Power	PWM	2
	Power Supply Voltage	5V DC, AT/ATX
	Power Consumption	TBD
Environment	Operating Temperature	0 ~ 60 °C/ -40 ~ 85 °C
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions (W x D)	70 x 70 mm
Operating System	Linux	Kernel 4.4.19
Certifications		CE/FCC Class B

Block Diagram



Ordering Information

Part Number	CPU	Memory	Flash	Parallel RGB	LAN	GPIO	USB 3.0	USB 2.0	I ² C	I ² S	SDIO	SPI	UART	CAN	Operating Temperature
ROM-7510CD-PEA1E	TI Sitara AM5728	2GB	8GB	-	1	8	1	5	2	1	1	1	2	1	0 ~ 60 °C
ROM-7510WD-PEA1E	TI Sitara AM5728	2GB	8GB	-	1	8	1	5	2	1	1	1	2	1	-40 ~ 85 °C

Development Board

Part No.	Description
ROM-DB7502-SCA1E	Development Board for Qseven 2.0/2.1 Module

Optional Accessories

Part Number	Description
9696ED2000E	Debug adapter board
1700022373-01	Debug port cable for ROM-3420/5420/3310
96PSA-A36W12R1	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
1700019146	Power Cord CCC 3P 10A 250V 183cm
SQF-ISDS1-4G-82C SQF	SDHC C10 SLC 4G, 1CH (0~70°C)
SQF-ISDS1-8G-82C SQF	SDHC C10 SLC 8G, 1CH (0~70°C)
SQF-ISDS1-8G-82E SQF	SDHC C10 SLC 8G, 1CH (-40~85°C)
968AD00018	Wifi BT module AW-NB136NF
1750002842	Wireless Antenna R-AN2450-5701RS R/P SM
1750007965-01	Antenna Cable R/P SMA (M) to MHF4, 300mm
968AD00081	Qucetel EC20CEFA Mini-PCIe 4G module
1750006264	Antenna cable SMA(F)/MHF 15cm
1750007990-01	Antenna 4G/LTE full band L=11 cm 50 Ohm
1960081645T001	Heat spreader ROM-7510
1930006016-02	Screw M2.5x11L F/S D=5 H=0.8 (1+) ST/H Ni
1960061089N001	heatsink 70x63x34-SC 85C
193B021490	Screw M2.5x14L F/S D=4.5 H=1 (1+) ST BZn NK

Dimensions

Unit: mm

