SolidRun

SOM A388

Datasheet

Marvell ARMADA A388 dual core System on Module

Embedded Edge Computing

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Overview

Embedded system product developers, device makers and OEMs can now drastically shorten their development cycle and complexity with SolidRun's micro System on a Module (SOM) family. The ARMADA A388 SOM is the perfect building block for a fast and efficient system, and especially optimized for IoT systems.

SOM A388 Highlighted Features

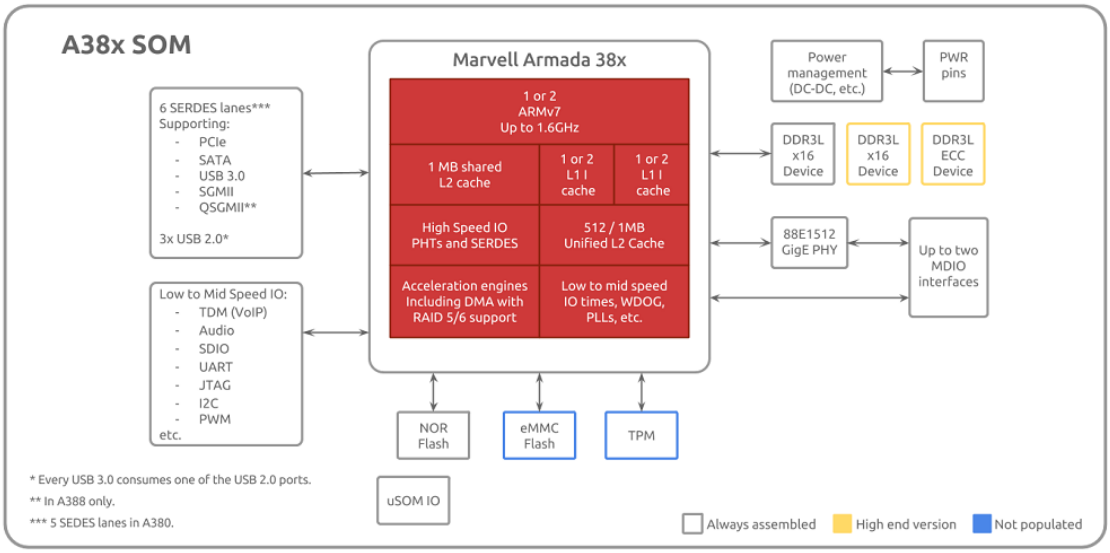
- Based on Marvell's ARMADA A388 SoC
- Up to 2GB DDR3L (default size 1GB)
- Small size 50x35mm
- Variety of temperature grades:
    - Commercial: 0°C to 70°C
    - Industrial: -40°C to 85°C
- Long Longevity of 10 years
- Optimal for networking and storage applications
- Broad software support

System Specifications

SOM A388		
Processor	ARMADA A388 dual core Cortex Arm A9 Up to 1.6Ghz (commercial) / Up to 1.3Ghz (Industrial)	
Floating Point	✓	
SIMD	NEON	
L1 Cache	32KB per core	
L2 Cache	1MB shared	
Memory Type	32 bit DDR3L	
ECC	Optional	
Memory Capacity	1GB (up to 2GB)	
SPI Flash	Optional	
eMMC	Optional (8GB)	
10/100/1000 Mbps MAC	3 ports	
On SOM GE PHY	1	
SDIO	✓	
I2C / SPDIF / TDM	✓	
USB 2.0	3	
RTC Support (battery on carrier)	✓	
GPIO pins	✓	
Power Management Signaling	Optional	
JTAG	✓	
Total MUXED SERDES*	6	
SATA	4x Gen III	
PCIe 2.0 x1	4x Gen II	
USB 3.0**	2	
QSGMII	1 x QSGMII (3 MACs)	
OS Support	U-Boot Linux Kernel 3.x and 4.x OpenWrt Yocto	
Environment	Ambient temp. (commercial): Enclosed ambient temp. (commercial): CPU die temp. (commercial):	0°C to 70°C 0°C to 40°C 0°C to 115°C
	Ambient temp. (industrial): Enclosed Ambient temp. (industrial): CPU die temp. (industrial):	-40°C to 85°C -40°C to 55°C -40°C to 105°C
	Humidity (non-condensing): 10% - 90%	
Voltage	3.3V-5V (I/O voltage: 3.3V, 1.8V)	
SOM Interface	Hirose DF40 connectors 1.5mm, 3mm mating height	
Dimensions (WxL)	35mm x 50mm	

(*) Refer to articles on developer.solid-run.com for complete table
(**) Requires USB 2.0 port as well.

Block Diagram



Ordering Information

SR | M6828 | S32 | D01G | EXXX | V21 | @ | 0

SKU Format

SPI Flash	S32
S32	32MB SPI

Memory*	D01G
D01G	1GB DDR3L

(*) Different configurations available for MOQ

Storage	EXXX
E000	No eMMC
E008	8GB eMMC

Revision	V20
V21	Revision 2.1

Temperature	@
C	Commercial (0C…70C)
I	Industrial (-40C…85C)

Available SKUs for SOM A388

SKU	Description
SRM6828S32D512E000V21C0	A388 |32MB SPI|512MB DDR|No eMMC|Com. Temp|R2.1
SRM6828S32D512E008V21C0	A388 |32MB SPI|512MB DDR|8GB eMMC|Com. Temp|R2.1
SRM6828S32D512E000V21I0	A388 |32MB SPI|512MB DDR|No eMMC|Ind. Temp|R2.1
SRM6828S32D512E008V21I0	A388 |32MB SPI|512MB DDR|8GB eMMC|Ind. Temp|R2.1
SRM6828S32D01GE000V21C0	A388 |32MB SPI|1GB DDR|No eMMC|Com. Temp|R2.1
SRM6828S32D01GE008V21C0	A388 |32MB SPI|1GB DDR|8GB eMMC|Com. Temp|R2.1
SRM6828S32D01GE000V21I0	A388 |32MB SPI|1GB DDR|No eMMC|Ind. Temp|R2.1
SRM6828S32D01GE008V21I0	A388 |32MB SPI|1GB DDR|8GB eMMC|Ind. Temp|R2.1
SRM6828S32D02GE000V21C0	A388 |32MB SPI|2GB DDR|No eMMC|Com. Temp|R2.1
SRM6828S32D02GE008V21C0	A388 |32MB SPI|2GB DDR|8GB eMMC|Com. Temp|R2.1
SRM6828S32D02GE000V21I0	A388 |32MB SPI|2GB DDR|No eMMC|Ind. Temp|R2.1
SRM6828S32D02GE008V21I0	A388 |32MB SPI|2GB DDR|8GB eMMC|Ind. Temp|R2.1

(*) Different configurations available for MOQ

Available Accessories and Development Boards

SKU	Description
HS00007	SOM Heatsink
SRCFCPE000CV21	ClearFog Pro|Com. Temp|R2.1
SRCFCBE000CV12	ClearFog Base|Com. Temp|R1.2
SRCFCPE000IV21	ClearFog Pro|Ind. Temp|R2.1
SRCFCBE000IV12	ClearFog Base|Ind. Temp|R1.2

Safety Notice

a. This device is to be used with Certified Power adaptor with output rated 12VDC, 1.5A. Power adapter must meet Limited power source (LPS) requirements.
b. Power adapter must meet local safety standards and requirements based on product intended use.
c. Power adapter must meet operating environment conditions as specified above.

Disposal

Follow local regulations regarding disposal of the product. Dispose of your product in accordance with local regulations. In some areas, the disposal of these items in household or business trash may be prohibited.

Help us protect the environment - recycle!

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Support

For technical support please visit:

Our developer resources – https://developer.solid-run.com/

For direct support please contact us at: support@solid-run.com

Documentation

Additional documentation available at:
https://developer.solid-run.com/products/a388-som/