

SolidRun's MicroSoM™:

ClearFog | SolidRun-uSOM ARMADA 38x



SolidRun's leading micro System on a Module (Micro-SOM™) family is designed for embedded systems product developers and OEMs. SolidRun packed a Marvell ARMADA 38X SoC (System-on-Chip), memory subsystem, I/O and interconnected subsystems into a single ultra-compact system-on-module.

The tightly packed Micro-SOM™, gives engineers a unique set of off-the-shelf design features and benefits. SolidRun's SR-uSOM-ARMADA 38X delivers faster time to market, lowers design costs, and reduces design risks.

- > Reduces TTM and Design Risks
- > Provides Complete Design Freedom
- > Extremely Small SOM (35mm×50mm)
- > Lowers Costs



Applications

NAS (Network Attached Storage)

- > WEB Servers
- > Printers Servers
- > Network Appliances
- > Operators

Security

- > VPN
- > Server Security
- > Firewall
- > Cyber
- > Encryption

WAP (WiFi Access Point)

- > Location-Based Services
- > Enterprise/SMB Network solutions
- > Financial Services
- > Travel Services
- > Home Automation

Surveillance

- > Portable Proxy Recorders
- > DVR
- > NVR
- > Cameras connected to the cloud

Monitoring & Control

- > Home Automation, Smart Grid
- > Health
- > Transportation & Aviation
- > Environmental Sensors

	MicroSoM-a1	MicroSoM-a2
System on Chip	Marvell Armada 380 (88F6810)	Marvell Armada 388 (88F6828)
Core		
Processor Core	Single core ARM Cortex A9	Dual core ARM Cortex A9
Processor Speed	Up to 1.6GHz in commercial grade Up to 1.3GHz in industrial grade	Up to 1.6GHz in commercial grade Up to 1.3GHz in industrial grade
Floating Point	✓	✓
SIMD	Neon	Neon
L1 Cache	32KB	32KB per core
L2 Cache	1MB	1MB shared
Memory Type	16 bit DDR3L	32 bit DDR3L
ECC	Optional *	Optional
Memory Size	256MB	1GB
SPI Flash	32Mbit	32Mbit
eMMC	Optional	Optional
Connectivity		
10/100/1000 Mbps MAC	2 ports	3 ports
On MicroSoM GE PHY	1	1
SDIO	✓	✓
I2S / SPDIF / TDM	✓	✓
USB 2.0	3	3
RTC Support (battery on carrier)	✓	✓
GPIO pins	✓	✓
Power Managements Signaling	Optional	Optional
JTAG	✓	✓
Connectivity - MUXED SERDES Interfaces **		
Total MUXED SERDES	5	6
SATA	2xGen III	4xGen III
PCIE 2.0 x1	3xGen II	4xGen II
USB 3.0 (Requires USB 2.0 port too)	2	2
QSGMII	✗	1xQSGMII (3 MACs)
OS Support		
U-Boot	✓	✓
Linux Kernel 3.x	✓	✓
OpenWrt	✓	✓
Yocto	✓	✓
Mechanical and Electronic specifications		
Temperature Range ***	Commercial (0°C ~ 70°C ambient) Industrial (-40°C ~ 85°C ambient)	Commercial (0°C ~ 70°C ambient) Industrial (-40°C ~ 85°C ambient)
Supply Voltage	3.3V - 5V	3.3V - 5V
I/O Voltage	3.3V, 1.8V	3.3V, 1.8V
SoM Interface	Hirose DF40 connectors 1.5mm, 3mm mating height	Hirose DF40 connectors 1.5mm, 3mm mating height
Dimensions (WxL)	35mm x 50mm	35mm x 50mm

* Optional means not supported by default. Can be supported per customer's request.

** Refer to the SR-Armada-MicroSoM-Reference-Manual for complete table.

*** ARMADA 38x SoC maximum die temperature must be below 115°C in both Commercial and Industrial grades.



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