



NXP-Freescale i.MX6

SOM i1

Single Core SOM (System-On-Module)
Rev 1.5



Simple. Robust. Computing Solutions

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Overview

The entry level SOM featuring a single core and 512 MByte of DRAM with a 1GHz processor and onboard storage.

SOM i1 Highlighted Features

- ✿ Based on NXP's iMX6 Single Core SoC
- ✿ 512MB DDR3
- ✿ Onboard 8GB eMMC
- ✿ Small size 47mm×30mm
- ✿ Variety of temperature grades:
 - Commercial 0°C...60°C
 - Industrial -40°C...85°C
 - Automotive -40°C...105°C
- ✿ Long longevity of 10 years
- ✿ Low power consumption
- ✿ Broad SW support (Linux)

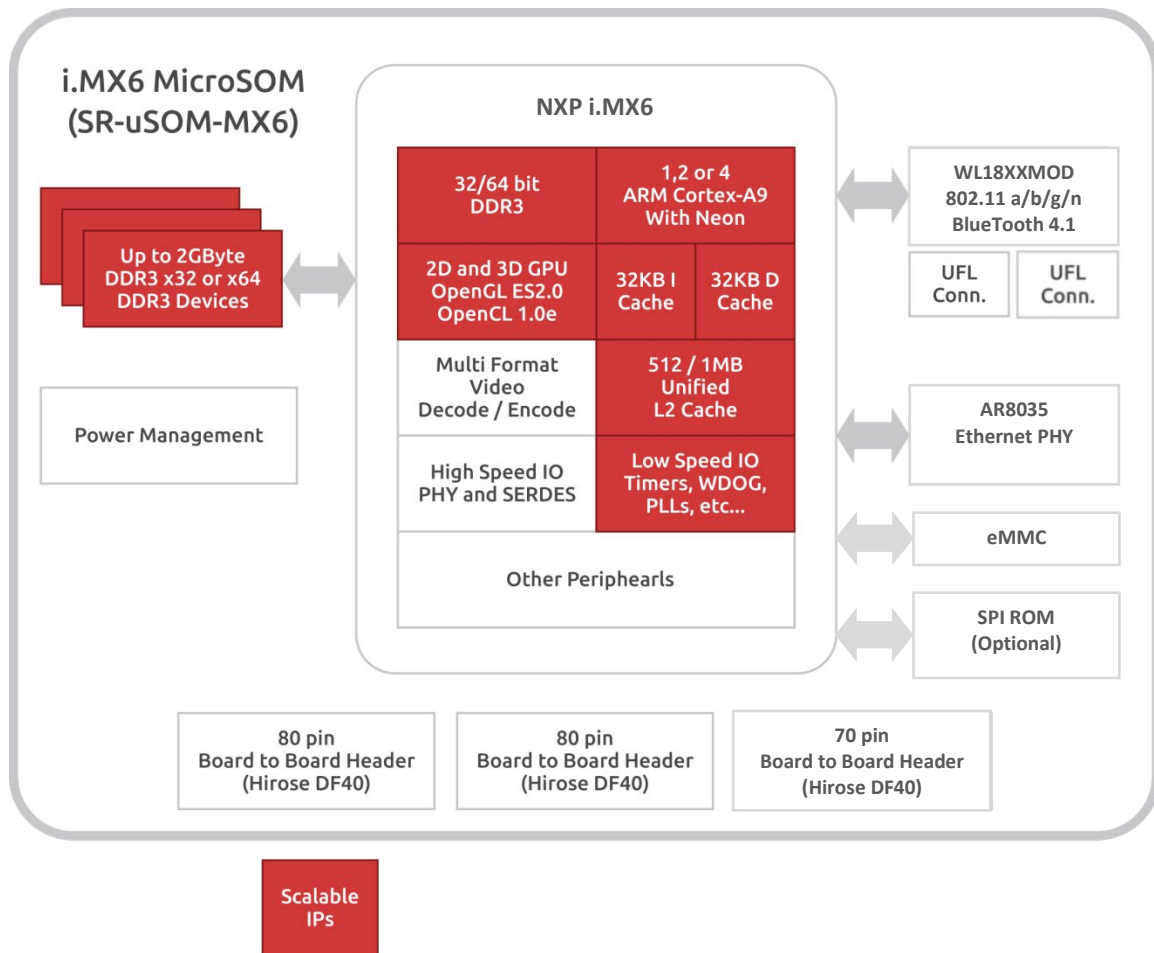
System Specifications

i.MX6 Solo	
System On Chip	i.MX6 Solo
Processor core	Single core ARM A9
Processor speed	1GHz (up to 1.2GHz)
Floating Point	VFPv3
SIMD	NEON
Graphics Processing Unit	Vivante GC880
3D GPU Support	OpenGL ES1.1/2.0
HW Video Dec/Enc	Multi Format
Memory	32 bit, 512MB DDR3 @ 800Mbps
Wired Network	10/100/1000 Mbps* Mbps
Wireless Network	Optional (WL1831)
Bluetooth	Optional (WL1831)
Display Max resolution	HDMI: 1080p, LCD: WUXGA(1920 x 1200)
Display Interfaces	LVDS, HDMI 1.4, DSI, Parallel
Dual display support	✓
Supported Internal Storage	eMMC, SPI ROM (Optional)
Supported External Storage	NOR-Flash, eMMC, SD/microSD, PCIe SSD
SD/MMC	3
USB 2.0 host	1
USB OTG	1
Serial ports	3
Digital audio serial interface	1
Camera interface port	2 Lane CSI
CAN bus	✓
S-ATA	—
PCI-Express 2.0	x1
Second Ethernet	Via PCIe or USB NIC
I2C	3
SPI	3
PWM	4
GPIO	75
JTAG	Test Point Header
S/PDIF Input	✓
S/PDIF Output	✓
1-Wire	1-Wire Transceiver on carrier board
RTC	On Carrier
Linux Support	✓

Temperature range	Commercial, Industrial, Automotive
Main Voltage	5V
IO Voltage	3.3V
SOM interface	Hirose DF40 connectors 1.5mm up to 4.0mm mating height
Dimensions (W x L)	47mm x 30mm

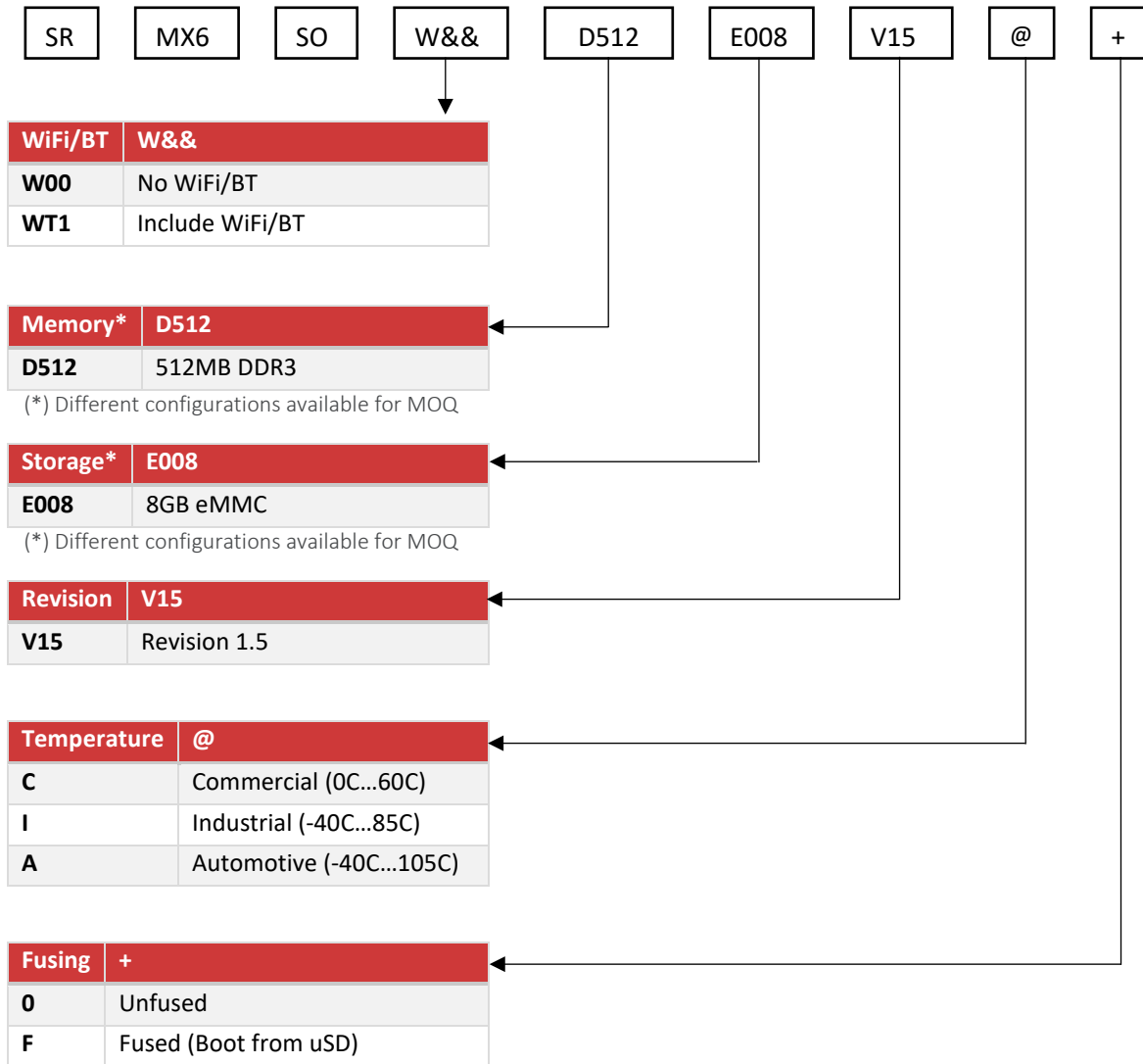
(*) Note that due to internal i.MX6 buses the 1000Mbps interface speed is limited to 470Mbps.

Block Diagram



Ordering Information

SKU Format



Available* SKUs for SOM i1

SKU	Description
SRMX6SOW00D512E008V15C0	iMX6 Solo No WiFi/BT 512MB DDR 8GB eMMC Com. Temp R1.5 Unfused
SRMX6SOWT1D512E008V15C0	iMX6 Solo TI WiFi/BT 512MB DDR 8GB eMMC Com. Temp R1.5 Unfused
SRMX6SOW00D512E008V15I0	iMX6 Solo No WiFi/BT 512MB DDR 8GB eMMC Ind. Temp R1.5 Unfused
SRMX6SOWT1D512E008V15I0	iMX6 Solo TI WiFi/BT 512MB DDR 8GB eMMC Ind. Temp R1.5 Unfused
SRMX6SOW00D512E008V15A0	iMX6 Solo No WiFi/BT 512MB DDR 8GB eMMC Auto. Temp R1.5 Unfused
SRMX6SOWT1D512E008V15A0	iMX6 Solo TI WiFi/BT 512MB DDR 8GB eMMC Auto. Temp R1.5 Unfused

(*) Different configurations available for MOQ

Available Accessories and Carrier Boards

SKU	Description
HS00010K	iMX6 Heatsink Kit
AN00001	2.4Ghz WiFi UFL Antenna
SRHBCCE000CV14	HummingBoard Edge No eMMC Com. Temp R1.4
SRHBCGE000CV14	HummingBoard Gate No eMMC Com. Temp R1.4
SRHBCPE000CV35	HummingBoard Pro Com. Temp R3.5
SRHBCBE000CV35	HummingBoard Base Com. Temp R3.5
SRCBCBE000CV11	CuBox Base Com. Temp R1.1
SRCBCPE000CV11	CuBox Pro Com. Temp R1.1

Safety Notice

- This device is to be used with Certified Power adaptor with output rated 5VDC, 3A. Power adapter must meet Limited power source (LPS) requirements.
- Power adapter must meet local safety standards and requirements based on product intended use.
- 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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For technical support please visit:

Our Developer Center – <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/imx6-som/>