



NXP-Freescale i.MX6

# SOM i4Pro

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



Simple. Robust. Computing Solutions

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## Overview

Adds capabilities such as quad core CPU, 2GByte DRAM, GigaBit Ethernet and onboard storage.

## SOM i4Pro Highlighted Features

- ✿ Based on NXP's iMX6 Quad Core SoC
- ✿ 2GB 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)

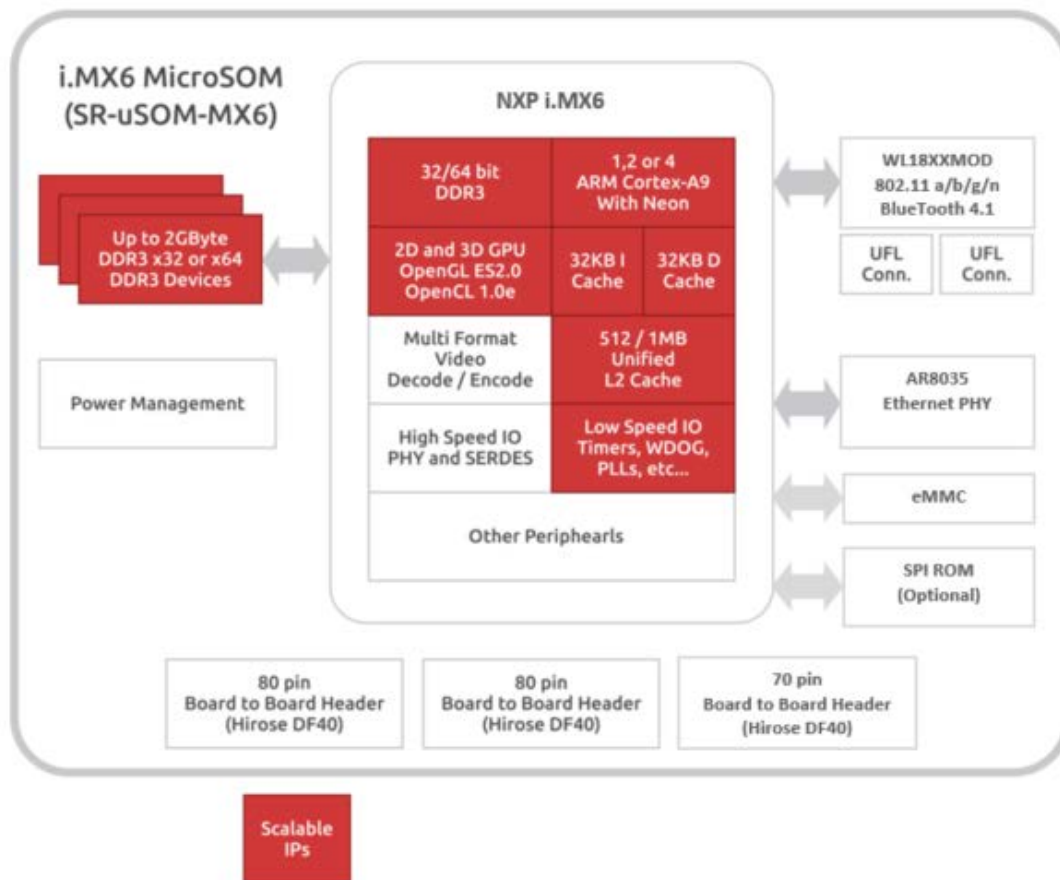
## System Specifications

i.MX6 Quad	
<b>System On Chip</b>	i.MX6 Quad
<b>Processor core</b>	Quad core ARM A9
<b>Processor speed</b>	1GHz (up to 1.2GHz)
<b>Floating Point</b>	VFPv3
<b>SIMD</b>	NEON
<b>Graphics Processing Unit</b>	Vivante GC2000
<b>3D GPU Support</b>	OpenGL ES 1.1/2.0,OpenCL 1.1E
<b>HW Video Dec/Enc</b>	Multi Format
<b>Memory</b>	64 bit, 2GB DDR3 @ 1066Mbps
<b>Wired Network</b>	10/100/1000 Mbps* Mbps
<b>Wireless Network</b>	Optional (WL1831)
<b>Bluetooth</b>	Optional (WL1831)
<b>Display Max resolution</b>	HDMI: 1080p, LCD: WUXGA(1920 x 1200)
<b>Display Interfaces</b>	LVDS, HDMI 1.4, DSI, Parallel
<b>Dual display support</b>	✓
<b>Supported Internal Storage</b>	eMMC, SPI ROM (Optional)
<b>Supported External Storage</b>	NOR-Flash, eMMC, SD/microSD, PCIe SSD
<b>SD/MMC</b>	3
<b>USB 2.0 host</b>	1
<b>USB OTG</b>	1
<b>Serial ports</b>	3
<b>Digital audio serial interface</b>	1
<b>Camera interface port</b>	4 Lane CSI
<b>CAN bus</b>	✓
<b>S-ATA</b>	Gen II, 3Gbps
<b>PCI-Express 2.0</b>	x1
<b>Second Ethernet</b>	Via PCIe or USB NIC
<b>I2C</b>	3
<b>SPI</b>	3
<b>PWM</b>	4
<b>GPIO</b>	75
<b>JTAG</b>	Test Point Header
<b>S/PDIF Input</b>	✓
<b>S/PDIF Output</b>	✓
<b>1-Wire</b>	1-Wire Transceiver on carrier board
<b>RTC</b>	On Carrier
<b>Linux Support</b>	✓

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

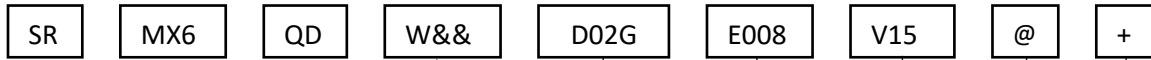
(\*) Note that due to internal i.MX6 buses the 1000Mbps interface speed is limited to 470Mbps.

# Block Diagram



## Ordering Information

### SKU Format



WiFi/BT	W&&
<b>W00</b>	No WiFi/BT
<b>WA1</b>	Include WiFi/BT

Memory*	D02G
<b>D02G</b>	2GB DDR3

(\*) Different configurations available for MOQ

Storage*	E008
<b>E008</b>	8GB eMMC

(\*) Different configurations available for MOQ

Revision	V15
<b>V15</b>	Revision 1.5

Temperature	@
<b>C</b>	Commercial (0C...60C)
<b>I</b>	Industrial (-40C...85C)
<b>A</b>	Automotive (-40C...105C)

Fusing	+
<b>0</b>	Unfused
<b>F</b>	Fused (Boot from uSD)

## Available\* SKUs for SOM i4P

SKU	Description
SRMX6QDW00D02GE008V15C0	iMX6 Quad No WiFi/BT 2GB DDR 8GB eMMC Com. Temp R1.5 Unfused
SRMX6QDWT1D02GE008V15C0	iMX6 Quad TI WiFi/BT 2GB DDR 8GB eMMC Com. Temp R1.5 Unfused
SRMX6QDW00D02GE008V15I0	iMX6 Quad No WiFi/BT 2GB DDR 8GB eMMC Ind. Temp R1.5 Unfused
SRMX6QDWT1D02GE008V15I0	iMX6 Quad TI WiFi/BT 2GB DDR 8GB eMMC Ind. Temp R1.5 Unfused
SRMX6QDW00D02GE008V15A0	iMX6 Quad No WiFi/BT 2GB DDR 8GB eMMC Auto. Temp R1.5 Unfused
SRMX6QDWT1D02GE008V15A0	iMX6 Quad TI WiFi/BT 2GB DDR 8GB eMMC Auto. Temp R1.5 Unfused

(\*) Different configurations available for MOQ

## Available Accessories and Development Boards

SKU	Description
HS00010	SOM Heatsink
AN00001	2.4Ghz WiFi UFL Antenna
SRHBC EE000CV14	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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## Support

For technical support please visit:

Our Wiki – <http://wiki.solid-run.com/>

Our Forums - <http://forum.solid-run.com/>

For direct support please contact us at: [support@solid-run.com](mailto:support@solid-run.com)

## Documentation

Additional documentation available at:

<http://wiki.solid-run.com/doku.php?id=products:imx6:documents>