



NXP-Freescale i.MX6

# SOM i2eX

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



Simple. Robust. Computing Solutions

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## Overview

Introduces better capabilities such as a higher end processing power, a dual CPU and onboard storage.

## SOM i2eX Highlighted Features

- ✿ Based on NXP's iMX6 Dual Core SoC
- ✿ 1GB 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)

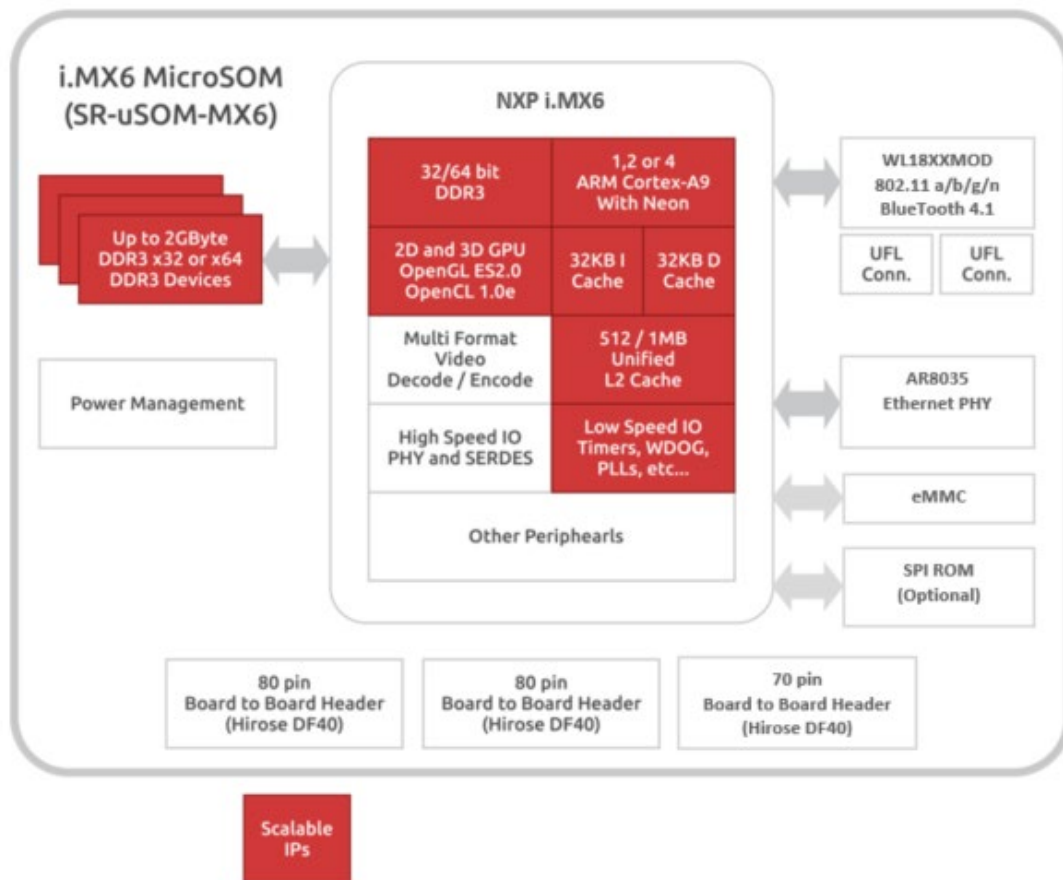
## System Specifications

i.MX6 Dual	
<b>System On Chip</b>	i.MX6 Dual
<b>Processor core</b>	Dual 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, 1GB 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

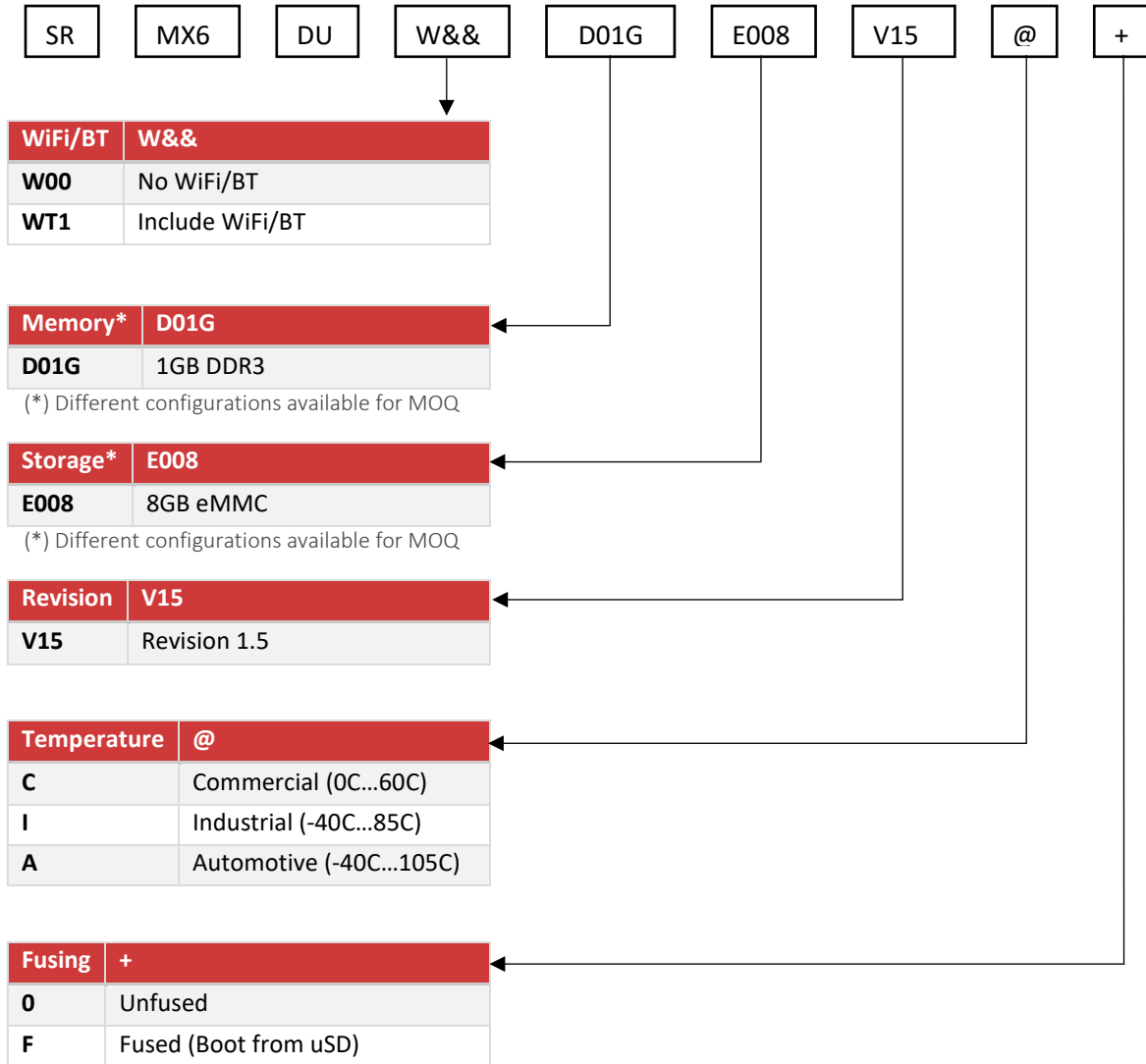
(\*) Note that due to internal i.MX6 buses the 1000Mbps interface speed is limited to 470Mbps.

## Block Diagram



## Ordering Information

### SKU Format



## Available\* SKUs for SOM i2eX

SKU	Description
SRMX6DUW00D01GE008V15C0	iMX6 Dual No WiFi/BT 1GB DDR 8GB eMMC Com. Temp R1.5 Unfused
SRMX6DUWT1D01GE008V15C0	iMX6 Dual TI WiFi/BT 1GB DDR 8GB eMMC Com. Temp R1.5 Unfused
SRMX6DUW00D01GE008V15I0	iMX6 Dual No WiFi/BT 1GB DDR 8GB eMMC Ind. Temp R1.5 Unfused
SRMX6DUWT1D01GE008V15I0	iMX6 Dual TI WiFi/BT 1GB DDR 8GB eMMC Ind. Temp R1.5 Unfused
SRMX6DUW00D01GE008V15A0	iMX6 Dual No WiFi/BT 1GB DDR 8GB eMMC Auto. Temp R1.5 Unfused
SRMX6DUWT1D01GE008V15A0	iMX6 Dual TI WiFi/BT 1GB DDR 8GB eMMC Auto. Temp R1.5 Unfused

(\*) Different configurations available for MOQ

## Available Accessories and Development Boards

SKU	Description
HS00010K	iMX6 Heatsink Kit
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
SRHBC EE008IV12	HummingBoard Edge 8GB eMMC Ind. Temp R1.2
SRHBCGE000IV12	HummingBoard Gate No eMMC Ind. Temp R1.2

## 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 Developer Center – <https://developer.solid-run.com/>

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

## Documentation

Additional documentation available at:

<https://developer.solid-run.com/products/imx6-som/>