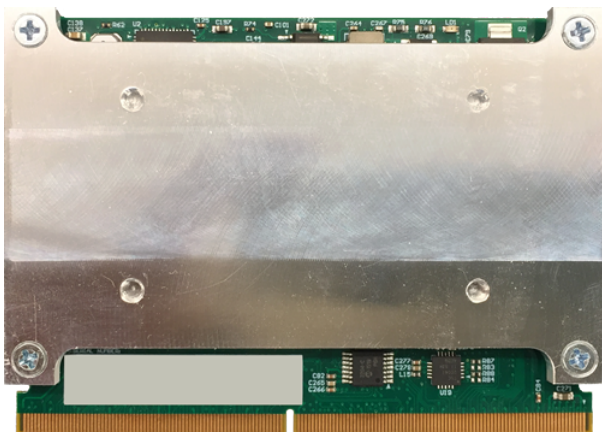
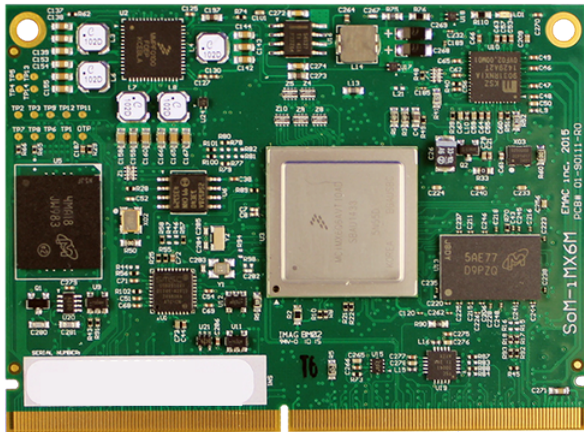


Source URL: <http://emacinc.com/content/som-imx6m-system-module>

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## SoM-iMX6M System on Module



\*Optional Heat Spreader for SoM-iMX6M Dual & Quad Versions

Image not found

[EMAC OEM](http://www.emacinc.com/sites/default/files/EMAC%20OEM%20LOGO_sm_web-opt_2.png)

- Solo/Dual/Quad NXP/Freescale i.MX6 ARM Cortex A9 Fanless 800MHz/1GHz/Up to 1.2GHz Processor standard offering:
  - iMX6 Solo 1GHz Processor
  - iMX6 Dual Core 1GHz Processor
  - iMX6 Quad Core 1GHz Processor
  - Other CPU speeds are optional, offering 800MHz to 1.2GHz
- 4 GB of eMMC Flash & up to 16 MB of Serial Data Flash
- Up to 2 GB of DDR3 RAM
- 1x HDMI Video
- 1x LVDS 24-bit Video
- 1x 4-Wire Resistive Touch Controller
- 4x 12-bit A/D Channels
- 1x Serial Video Capture (CSI) Port
- 1x SATA Port
- 2x SDIO Ports
- 4x Serial Ports with handshake
- 2x CAN Ports

- 2x USB 2.0 High Speed Host Ports
- 1x USB 2.0 High Speed OTG Port
- 2x I2S Ports & 1x SPDIF Port
- 1x 1000 BaseT Ethernet with Status LED Drive
- 1x PCIe Channel
- 2x SPI Ports
- 4x I2C Ports
- 16x GPIO Lines
- I2C hardware port
- 2x Timer/Counters & 4x PWMs
- Programmable LED
- Hardware Video encoding on Dual or Quad CPU supporting up to 1080p x 30fps at 20Mbps encoding of video.
- Supporting H.264, MJPEG, MPEG4, H.263, H.264-MVC for 3D codecs with hardware acceleration Encode or Decode
- RoHS compliance
- Extended Temperature
- Dimensions: 3.15" x 2.37" (80mm x 60mm)
- 5V Input Voltage

The SoM-iMX6 is a System on Module (SoM) based on the Freescale iMX.6 Cortex A9 Single, Dual or Quad Core processor. Designed and manufactured in the USA, this wide temperature, fanless ARM 1GHz SoM has 10/100/1000 BaseT Ethernet included along with 4 serial ports. It utilizes up to 4GB of eMMC Flash, up to 16MB of serial data flash, and up to 1GB of LP DDR2 RAM. A SoM is a small embedded module that contains the core of a microprocessor system.

## Specifications

### SOM Type:

Microcontroller SODIMM Modules

#### Processor

##### Processor:

Freescale NXP Solo/Dual/Quad iMX6 ARM Cortex A9 Fanless Processor

##### Clock Speed:

1 GHz

##### Real Time Clock:

##### Processor Misc.:

MCIMX6S7CVM08AC Solo 800Mhz

MCIMX6D6AVT10AD Dual 1GHz

MCIMX6Q6AVT10AD Quad 1GHz

Optional 1.2GHz processor available ( Minimum Order Quantity Applies)

#### Memory

##### Primary Flash:

4 GB of eMMC Flash

##### Secondary Flash:

16 MB of Serial Data Flash

##### Memory Misc.:

Dual- 1GB DDR3 memory onboard

Quad- 2GB DDR3 memory onboard

Primary I/O

**GPIO:**

16 GPIO

**SDIO:**

2x SDIO

**Disk Interface:**

1x SATA

**SPI:**

2x SPI Ports

**Video Out:**

24 bit LVDS / HDMI

**Audio:**

2x I2S & 1x SPDIF

**Ethernet:**

1x 1000 BaseT Ethernet with Status LEDs

**USB:**

3x USB 2.0 High Speed Host ports & 1x USB 2.0 High OTG

**Serial Ports:**

4x Serial Ports with handshake

**I2C:**

4x I2C Ports

**Watchdog:**

**Primary I/O Misc.:**

Programmable LED

Secondary I/O

**CAN:**

2x CAN 2.0B Ports

**Timers/ Counters/ PWM:**

2x Timer/Counters & 4x PWMs

**Video Capture:**

1x Serial Video Capture (CSI) Port

**LPT Port:**

**Keypad:**

**PS/2:**

**Touch:**

4 wire analog resistive Touchscreen

**Secondary I/O Misc.:**

- Hardware Video encoding on Dual or Quad CPU supporting upto 1080px 30fps at 20Mbps encoding of video.
- supporting H.264, MJPEG, MPEG4, H.263, H.264-MVC for 3D codecs with hardware acceleration

#### Video performance-

- 266MHz (Will change the VPU spec to 350MHz)
- Video Decode Performance 1080i/p@60fps, 3D support at 30fps per view
- Video Encode Performance 1080p@30fps

#### Analog on

**A/D:****A/D Channels:**

4

**A/D Resolution:**

12 bit

**D/A:**

#### Dimensions

**Dimensions:**

3.23 × 2.363 in

**Form Factor:**

314-pin SODIMM

#### Power Requirements

**Voltage:**

5 V

#### Environmental

**Low Operating Temperature:**

-40 C

**High Operating Temperature:**

85 C

**Environmental Misc.:**

Optional PER-FAN-00013-AR Heat-spreader recommended for operation in temperatures above 40°C

#### Pricing

**SoM-iMX6M-352 (Dual)**

iMX6 Dual, iMX6D 2x1GHz, 1GB DDR3, 16MB Serial Data Flash, 4GB eMMC, PCIe, CSI, CAN, HDMI, LVDS (-40° to 85°C, Heat-spreader recommended above 40°C)

\$198.00

Stock

**Order:**

0

**Base Product:**

SoM-iMX6M

**SoM-iMX6M-364 (Quad)**

iMX6 Quad, iMX6Q 4x1GHz, 2GB DDR3, 16MB Serial Data Flash, 4GB eMMC, PCIe, CSI, CAN, HDMI, LVDS (-40° to 85°C, Heat-spreader recommended above 40°C)

\$220.00

**Order:**

0

**Parent Product:**

SoM-iMX6M

**Base Product:**

SoM-iMX6M

**SOM-iMX6M-131 (Solo)**

iMX6 Solo, iMX6S 1GHz, 512MB DDR3, 4GB eMMC, HDMI/LVDS/PCIe, (0°C to 60°C)

\$150.00

Stock

**Order:**

0

**Parent Product:**

SoM-iMX6M

**Base Product:**

SoM-iMX6M

**SoM-iMX6M-354 (Quad)**

iMX6 Quad, iMX6Q 4x1GHz, 1GB DDR3, 16MB Serial Data Flash, 4GB eMMC, PCIe, CSI, CAN, HDMI, LVDS (-40° to 85°C, Heat-spreader recommended above 40°C)

\$0.00

Build to Order

**Order:**

0

**Base Product:**

SoM-iMX6M

**SoM-iMX6M-141 (Solo)**

iMX6 Solo, iMX6S 800MHz / 512MB DDR3, 16MB Serial Data Flash, 4GB eMMC, PCIe, CSI, CAN, HDMI, LVDS (-40° to 85°C)

\$180.00

Build to Order

**Order:**

0

**Base Product:**

SoM-iMX6M

**Non-Stock NCNR:**

0

**Carrier Boards:**

**Title: SoM-350ES-000**

Standard Carrier Board 7" LCD 800x480 WVGA, No Wireless

\$399.00

**Base Product:**

SoM-350ES

**Title: SoM-350ES-017**

Barebones Carrier Board with 802.11 a/b/g/n Wi-Fi & Bluetooth (No LCD)

\$285.00

**Base Product:**

SoM-350ES

**Title: SoM-350ES-011**

Deluxe Carrier Board 10" LCD 1024 x 600 WSVGA with 802.11 a/b/g/n Wi-Fi & Bluetooth

\$435.00

**Base Product:**

SoM-350ES