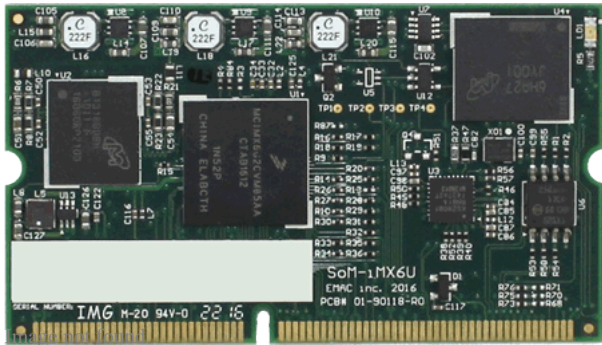


Source URL: <http://emacinc.com/content/som-imx6u-system-module>

SoM-IMX6U System on Module



[EMAC OEM](http://emacinc.com/sites/default/files/EMAC%20OEM%20LOGO_sm_2_0.png) http://emacinc.com/sites/default/files/EMAC%20OEM%20LOGO_sm_2_0.png

- Freescale/NXP i.MX6 UltraLite Cortex A7 528Mhz Processor
- Ultra Low-Power consumption
- 3.5mA APM Sleep, or less.
- 4 GB of eMMC Flash
- 16 MB of Serial Data Flash
- 128 MB of LP DDR2 RAM
- 4x serial port with no handshake
- 1x serial ports with handshake
- 1x 10/100 BaseT Ethernet port
- 1x USB 2.0 High Speed Host port
- 1x USB 2.0 High Speed Host/Device OTG port
- 4x channels of 12 bit A/D (0 to 3.3V)
- Internal Real time clock/calendar (with external battery backup)
- External Address/Data Bus
- 22x GPIO (3.3V) Lines (Shared with Timer/Counters, Prog Clocks, PWM, I2S, etc.)
- 1x CAN Port
- 1x I2C Port
- Small, form factor (2.66" x 1.5")
- External Reset Button provision and green Status (software controlled) LED
- 1x SDIO SD port
- +3.3 volt board input voltage required
- Temperature Range: -40 to +85C

Designed and manufactured in the USA, the SoM-iMX6U is an ultra low power System on Module (SoM) designed to plug into an EMAC carrier board that contains all the connectors and I/O required for a system. The SoM-iMX6U is based on the Freescale/NXP i.MX6 UltraLite Cortex A7 processor and has ARM Sleep Mode of 3.5mA.

A SoM is a small embedded module that contains the core of a microprocessor system. The SoM-iMX6U is industrial wide temperature, ultra-low power 528 MHz module with 4GB of eMMC Flash, 8MB of serial

data flash, and 512MB of LP DDR2 RAM. The module has 10/100 BaseT Ethernet, 5x serial ports (4x without handshake and 1x with handshake). The recommended development / carrier board is the SoM-112 or SoM-150 carrier board.

The SoM approach allows clients to develop a product using a commercial off the shelf (COTS) development/baseboard/carrier board for the proof of concept or production units. If the product or project has specific dimensional, I/O or connector placement requirements a custom carrier board can be created in as little as a month. Use of an off-the-shelf carrier board allows clients to start developing their software while the custom carrier board is being designed and build. Using the SoM approach, product lifecycle concerns for the processor, memory and other SoM based components are minimized.

The System On Module approach provides the flexibility of a fully customized product at a greatly reduced cost.

Specifications

SOM Type:

Microcontroller SODIMM Modules

Processor

Processor:

Freescale/NXP i.MX6 UltraLite (MCIMX6G1) Cortex A7 Processor

Clock Speed:

528 MHz

Real Time Clock:

Memory

BIOS/ Bootloader:

Uboot

Primary Flash:

4GB eMMC Flash

Secondary Flash:

16MB of Serial Data Flash

Memory Misc.:

Other Memory sizes Build to order

Primary I/O

GPIO:

22 GPIO (3.3V) Lines (Shared with Timer/Counters

Prog Clocks

PWM

I2S

etc.)

SDIO:

1x SDIO SD Port

Disk Interface:

1x SD Flash Card Socket

SPI:

1x SPI

Audio:

1x I2S Audio Port with Line In/Out

Ethernet:

1x 100 BaseT Ethernet

USB:

2x USB 2.0 Hosts & 1 USB OTG

Serial Ports:

5x Serial Ports

I2C:

1x I2C hardware port

Watchdog:**Secondary I/O****CAN:**

1x CAN port

Timers/ Counters/ PWM:

2 Timer/Counters/PWM

LPT Port:**Keypad:****PS/2:****Analog on****A/D:****A/D Channels:**

4

A/D Resolution:

12

D/A:**Dimensions****Dimensions:**

2.66 × 1.5 in

Form Factor:

144-pin SODIMM

Power Requirements**Voltage:**

3.3 V

Sleep Current:

3.5 mA

Idle Current:

150 mA

Typical Current:

160 mA

Max Boot Current:

270 mA

Power Misc.:

APM Sleep Mode of 3.5mA, Low power, High-performance SOM

Environmental**Low Operating Temperature:**

-40 C

High Operating Temperature:

85 C

Upper Operating Humidity:

90%

Environmental Misc.:

Operating temperature of -40° to +85°C optional

Pricing**SOM-IMX6U-120**

SOM-IMX6U, MCIMX6G1, 128MB RAM, 4GB eMMC, 16MB Serial Data Flash, 2x USB, 10/100 LAN, (-40° to 85°C)

\$115.00

Stock

Order:

0

Parent Product:

SoM-IMX6U

Base Product:

SoM-IMX6U

SOM-IMX6U-140

SOM-IMX6U, MCIMX6G1, 512MB RAM, 4GB eMMC, 16MB Serial Data Flash, 2x USB, 10/100 LAN, (-40° to 85°C)

\$115.00

Build to Order

Order:

0

Parent Product:

SoM-IMX6U

Base Product:

SoM-IMX6U

Non-Stock NCNR:

0

Carrier Boards:**Title: SOM-112ES-100R**

Standard version (does not have WiFi, Audio or multi-I/O options)

\$165.00

Base Product:

SOM-112ES

Title: SOM-112ES-131R

Deluxe version with multi-I/O, wifi, audio

\$195.00

Base Product:

SOM-112ES

Title: SoM-150ES-000

Standard Carrier Board

\$150.00

Base Product:

SoM-150ES

Title: SoM-150ES-007

Bare-Bones Carrier Board

\$100.00

Base Product:

SoM-150ES

Title: SoM-150ES-030

Standard Carrier Board with A/D, D/A

\$190.00

Base Product:

SoM-150ES

Source URL: <http://emacinc.com/content/som-imx6u-system-module>