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ROM-51003 SMARC-sAMX6i



Freescale[™] i.MX6 family SoC

Scalable from Solo Core up to Quad Core

- Industrial Temperature Operation
- Robust SMARC input offerings
- ARM specific featureset incl. PCIe and graphic
- Up to 64GB NAND/eMMC on-module (Custom Option)

Gigabit Ethernet

4x Serial ports

Up to 3x PCIe x1, MLB150, 12xGPIOs, SDIO, SATA eMMC, 2x SPI, 5x I2C, 2x I2S, SPDIF, WDT, 2x CAN, Battery and System Management

The highly scalable SMARC-sAMX6i modules with single, dual or quad core Freescale i MX6 processors cover an extremely wide performance range. Based on the ARM Cortex A9 technology, they enable an efficient development of smart devices in an extremely compact, fanless design with balanced processor and graphics performance. The X86 alike interfacing of SMARC-sAMX6i allows an easy integration in any kind of application.

The SMARCTM standard was developed especially for new modules with ARM- and SOC-processors and is characterized by the extremely flat build of its form factor. It is based on the MXM 3.0 connector with 314 pins and a construction height of just 4.3 millimeters and it thus allows robust and flatly constructed designs with a cost-effective card edge connector. The connector is also available in a shock- and vibration-resistant version for rough environmental conditions. Furthermore, the standard integrates dedicated interfaces for the latest ARM and SOC processors which not only means LVDS, 24-bit RGB and HDMI support but also support of embedded DisplayPort for future designs. In addition, and for the first time, dedicated camera interfaces are being incorporated into a COM standard. OEMs profit from minimized design effort and bill of material costs. SMARCTM defines two different module sizes in order to offer a high level of flexibility regarding different mechanical requirements: a short modules measuring 82 mm x 50 mm and a full-size module measuring 82 mm x 80 mm.

SMARCTM is the low-power embedded architecture platform for computer-on-modules based on ARM technology.

- » Creating mobile, embedded, connected solutions
- » Scalable building blocks
- » Optimized pin-out definition for ARM technology
- » Ultra low-power, low-profile solutions
- » Constructed to withstand harsh industrial environments
 - Specifications
- SOM Type:
- Microcontroller SODIMM Modules
- Processor Processor Freescale i.MX6 Clock Speed: 800 MHz Real Time Clock: Processor Misc.: Freescale i.MX 6 Solo, Dual and Quad Core ARM Cortex-A9 800 MHz
- BiOS/ Booloader: U-Boot Boot loader Primary Flash: up to 32GB onboard eMMC(SLC) Secondary Flash: SD Card / eMMC support Memory Misc.: Max Memory is 1GB for Solo CPU
- Grinder I/O 12x GPIO SDIO: 1x SDIO Disk Interface: 1x SATA II Video Out: LVDS HDMI and TTL LCD SPI: 2x SPI Audio: I2S interface Ethernet: Broadcom Phy Gigabit Ethenret USB: 3x USB 2.0 Serial Ports: 4x COM ports I2C: 5x I2C Watchdog:

Primary I/O Misc.:

SATA is not available on modules with i.MX6 solo processor.

Secondary I/O CAIN. 2x CAN 2.0B Video Capture: 2x CSI camera support LPT Port: Keypad: PS/2:

Expansion Bus misc..

3x PCIe x1

Analog A/D. D/A:

Dimensions Dimensions. 3.23 × 1.97 in Form Factor: 314-pin SODIMM

Power Requirements

3V to 5.25V - Operates directly from single level Lithium Ion cells, or fi xed 3.3V or 5V power supplies

i.MX6 solo

• Typical- 2.46W

• Max-4W

i.MX6 quad

• Typical- 2.87W

• Max- 5W

Environmental Low Operating Temperature: -40 C High Operating Temperature: 85 C Upper Operating Humidity: 90% \$176.00 Order: 0 Parent Product: ROM-51003 Base Product: ROM-51003 ROM-51003-082-R 51003-1040-08-2, SMARC-sAMX6i, i.MX6 2x800MHz, 1GB DDR3, 4GB eMMC, SATA, 4xCOM, 3xUSB2, GbE, 2xCAN, HDMI (-40~85C) \$225.00 Order: 0 Parent Product: ROM-51003 Base Product: ROM-51003 ROM-51003-084-R 51003-1040-08-4, SMARC-sAMX6i, i.MX6 4x800MHz, 1GB DDR3, 4GB eMMC, SATA, 4xCOM, 3xUSB2, GbE, 2xCAN, HDMI (-40~85C) \$239.00 Order: 0 Parent Product: ROM-51003 Base Product: ROM-51003 Non-Stock NCNR: 0

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