

SoM-5282M

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SoM-5282M Bottom View

Small, 144 pin SODIMM form factor (2.66" x 1.5")

V2 ColdFire core delivering 54 MIPS at 66 MHz & 66 MIPS at 80 MHz running from Cache/RAM

10/100BaseT Ethernet with on-board PHY

3 serial port with handshake

1 CAN 2.0B port

16 MB of SDRAM

Up to 4.5 MB of Flash

64K of Nonvolatile Battery RAM

Battery backed Real Time Clock

SDHC/MMC Flash Card Interface through SPI

SPI & I2C

Timer/Counters and Pulse Width Modulation (PWMs) port

Analog-to-Digital converter

Typical power requirement less than 1 Watt

JTAG & BDM for debug, including real-time trace

FREE Eclipse IDE with GCC & GDB development tools

The SoM-5282M is based on the Freescale Coldfire MCF5282 processor. This 32-bit 68000 code compatible processor has an Ethernet MAC built-in along with 3 serial ports. It can directly access 4 GB of memory and can utilize uClinux Operating System. A SoM (System on Module) is a small embedded module that contains the core of a microprocessor system.

Using the same small SODIMM form-factor utilized by other EMAC SoM modules, the SoM-5282 is the ideal processor engine for your next design. All of the Coldfire processor core is included on this tiny board including: Flash, Memory, Serial Ports, Ethernet, CAN, PWMs, Timer/Counters, A/D, digital I/O lines, Clock/Calendar, and more.

The SoM-5282M is designed to plug into a carrier board that contains all the connectors and any custom I/O required for the application.

requirements without having to worry about the processor, memory, and standard I/O functionality. With this System on Module approach, a semi-custom hardware platform can be developed in as little as a month.

In addition to the option of the developing a Carrier board, one can be purchased off-the-shelf from EMAC. EMAC provides off-the-shelf

Carrier boards that feature A/D, D/A, MMC/SD card, keypad, LCD, and Modem interfaces. The off-the-shelf Carrier Board (**SoM-100ES**)

allows the user to immediately start coding their application using the powerful uClinux Operating System and Tools.

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

Embedded Coldfire MCF5282 processor

Clock Speed:

66 MHz

Real Time Clock:

Memory

BIOS/ Bootloader:

Resident Flash Bootloader (Das Uboot)

Primary Flash:

2 MB External Flash (4MB optional)

Secondary Flash:

512K of Internal Flash

Memory Misc.:

System Reset: Supervisor with external Reset Button provision

Battery Backed RAM: 64K

Primary I/O

16 General Purpose I/Os with 25 ma. drive when used as output

SPI:

High-Speed Queued SPI port

Serial Ports:

3 serial TTL level serial ports with a max. baud rate of 115K baud (each UART requires external RS level shifting)

I2C:

Bus Controller

Watchdog:

Primary I/O Misc.:

Bus Interface: Local Coldfire MCF5282 Bus accessible through SODIMM provides 22 address lines, 16 data bus lines, and control lines.

Secondary I/O
CAN.

CAN 2.0B

Timers/ Counters/ PWM:

4x 32-bit timers/counters with capture, compare, and DMA capability

8x 16-bit timer/counters with capture, compare, and PWM capability

LPT Port:

Keypad:

PS/2:

Analog on
A/D.

D/A:

Analog Misc.:

Analog I/O: 8 channel, 10-bit queued analog-to-digital converter (QADC)

Dimensions
Dimensions.

2.66 × 1.5 in

Form Factor:

144-pin SODIMM

Power Requirements
Voltage.

3.3 V

Typical Current:

300 mA

Typical Voltage:

3.3 V

Environmental
Low Operating Temperature:

0 C

High Operating Temperature:

70 C

Upper Operating Humidity:

90%

Pricing
Non-Stock Minimum Order:

50

Non-Stock NCNR:

1

Carrier Boards:

SoM-100ES-000

Standard Carrier Board

\$150.00

Base Product:

SoM-100ES

SoM-100ES-030

Standard Carrier Board with A/D, D/A

\$250.00

Base Product:

SoM-100ES

SoM-100ES-007

Bare Bones Carrier Board

\$95.00

Base Product:

SoM-100ES

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