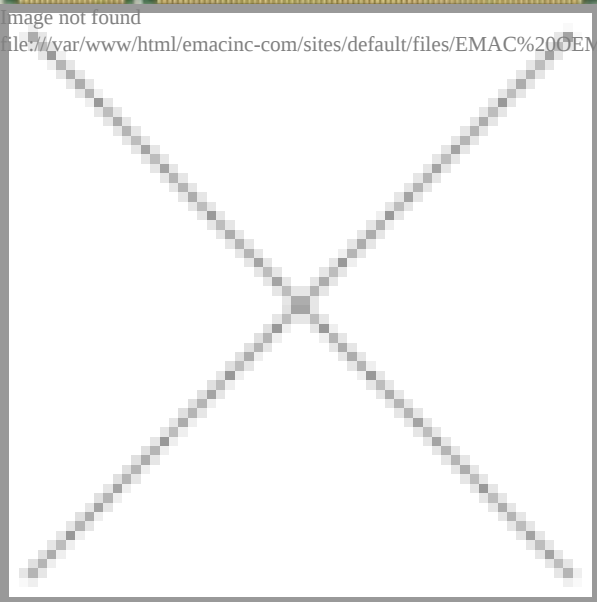


SoM-9307M ARM System on Module



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Small, 200 pin SODIMM form factor (2.66" x 2.375")

Cirrus ARM9 EP9307 200Mhz Processor

MaverickCrunch Hardware Floating Point Math Coprocessor

10/100BaseT Ethernet with on-board PHY

3 Serial ports with handshake

3 USB 2.0 (Full Speed) Host ports

Up to 128 MB of SDRAM

Up to 64 MB of Flash

128K Bytes of Serial Flash

Battery backed Real Time Clock

SD/MMC Flash Card Interface

1 SPI port

1 I2S Audio port

Timer/Counters and Pulse Width Modulation (PWM) ports

8 Channel 12-bit Analog-to-Digital converter

Graphic LCD Interface with 2D acceleration up to 1024 x 768 Resolution

Touchscreen Interface

Typical power requirement less than 1 Watt

JTAG for debug, including real-time trace

FREE Eclipse IDE with GCC & GDB development tools

Linux

RoHS 2 (2011) compliance

Designed and manufactured in the USA the SoM-9307M is an ARM System-on-Module (SOM) type Single Board Computer (SBC) based on the Cirrus ARM9 EP9307 processor. This ARM9 core processor has an Ethernet MAC built-in along with 3 serial ports. It utilizes external SDRAM and includes MMU which allows it to run Linux Operating Systems. A SoM (System on Module) is a small embedded module that contains the core of a microprocessor system.

Using the same small 200 pin SODIMM form-factor utilized by other EMAC SoM modules, the SoM-9307 is the ideal processor engine for your next design. All of the ARM processor core is included on this tiny board including: Flash, Memory, Serial Ports, Ethernet, I2S Audio, PWMs, Timer/Counters, A/D, digital I/O lines, Clock/Calendar, and more.

The SoM-9307M is designed to plug into a carrier board that contains all the connectors and any custom I/O required for the application.

This approach allows the customer or EMAC to design a **Custom Carrier Board**, that meets the customer's I/O, dimensional, and connector

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, Touchscreen, and Audio interfaces. The recommended off-the-shelf

Linux 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 Cirrus ARM9 EP9307

Clock Speed:

200 MHz

Real Time Clock:

Processor Misc.:

System Reset: Supervisor with external Reset Button provision.

Memory

Primary Flash:

Up to 64 MB External NOR Intel P30 Flash

Secondary Flash:

128K utility serial Flash

Memory Misc.:

Flash Disk: SPI serial HCSD/MMC interface.

Primary I/O

32x GPIO with 8 ma. drive when used as an output

Video Out:

2D Accelerated Video Interface with up 1024 x 768 resolution

SPI:

High-Speed SPI port with Chip Selects

Audio:

I2S Synchronous Serial Controller with analog interface support

USB:

3x Full Speed USB 2.0 ports

Serial Ports:

3x Serial Ports (RS485 & some with handshaking) UART requires external RS level shifting

Watchdog:

Primary I/O Misc.:

MAC: Ethernet on chip MAC

PHY: Intel/Cortina LXT927ALC with software PHY shutdown control

Interface: IEEE 802.3u 10/100 BaseT Fast Ethernet (requires external magnetics & Jack)

Secondary I/O

Timers/ Counters/ PWM:

2x general purpose 16-bit

1x 32-bit timer

2x 16-bit PWMs

LPT Port:

Keypad:

PS/2:
Touch:
12-Bit 4-5-7 or 8-wire Analog Resistive Touch Screen Interface
Secondary I/O Misc.:
Keypad: 64-key (8x8) with auto debounce, scanning & decoding.

Dimensions
A/D Channels:
8
A/D Resolution:
12-bit
D/A:

Dimensions
2.66 × 2.375 in
Form Factor:
200-pin SODIMM

Power Requirements
Typical Current:
300 mA
Typical Voltage:
3.3 V
Power Misc.:

Power: Power Management Controller allows selectively shutting down on processor I/O functionality and running from a slow clock.

Environmental
Low Operating Temperature:
0 C
High Operating Temperature:
70 C
Upper Operating Humidity:
90%

Pricing
SoM-9307M-130
w/ CPU, 64 MB FLASH 64 MB RAM
\$190.00
Stock
Base Product:
SoM-9307M
SoM-9307M-120

w/ CPU, 32 MB FLASH 32 MB RAM
\$170.00

Non-Stock
Base Product:
SoM-9307M
Non-Stock Minimum Order:
50

Non-Stock NCNR:
1
Carrier Boards:
SoM-200ES-000

Standard Carrier Board with CAN, PLD & 4.3" LCD

\$245.00

Base Product:

SoM-200ES

SoM-200ES-001

Deluxe Carrier Board with Audio, CAN, PLD & 4.3" LCD

\$295.00

Base Product:

SoM-200ES

SoM-200ES-007

Bare-Bones Carrier Board, with CAN, without PLD & LCD

\$145.00

Base Product:

SoM-200ES

SoM-200GS-000

Standard 200-pin Carrier with SD Card, Audio, CAN, PLD & 4.3" LCD

\$245.00

Base Product:

SoM-200GS

SoM-200GS-001

Deluxe 200-pin Carrier with WiFi, Audio, CAN, PLD & 4.3" LCD, without SD Card Socket

\$295.00

Base Product:

SoM-200GS

SoM-200GS-007

Bare Bones 200-pin Carrier w/SD Card & CAN, without Audio, PLD & LCD

\$145.00

Base Product:

SoM-200GS

SoM-212ES-000

Standard Carrier Board with Touch Screen

\$175.00

Base Product:

SoM-212ES

SoM-212ES-003

Deluxe Carrier Board with Touch Screen, POE, and Stereo Audio

\$225.00

Base Product:

SoM-212ES

SoM-212ES-007

Bare Bones Carrier Board

\$110.00

Base Product:

SoM-212ES

SoM-250ES-000

Standard Carrier Board with CAN, Audio, 7" LCD & Touch Screen

\$399.00

Base Product:

SoM-250ES

SoM-250ES-001

Deluxe Carrier Board with CAN, Audio, 10" LVDS LCD & Touch Screen

\$445.00

Base Product:

SoM-250ES
SoM-250ES-007
Bare-Bones Carrier Board, no LCD
\$199.00
Base Product:
SoM-250ES

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