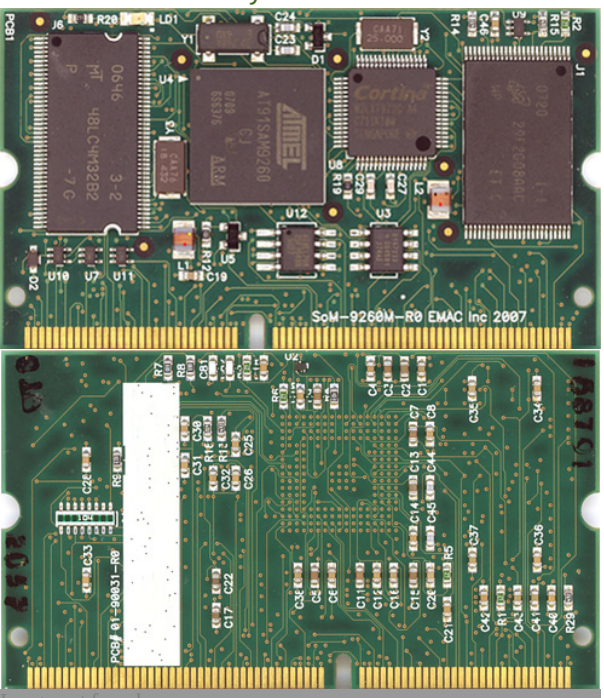
SoM-9260M ARM System on Module



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

Atmel ARM9 Jazelle AT91SAM9260 200Mhz Processor

Up to 64MB SDRAM

Up to 64MB Flash

128KB Serial Data Flash

SD/MMC Flash Card Interface

1x 10/100BaseT Ethernet with on-board PHY

6x Serial ports (3 with handshake)

2x USB 2.0 (Full Speed) Host ports

1x USB 2.0 (Full Speed) Device port

Battery backed Real Time Clock

2x SPI Ports

1x I2S Audio Port

Image Sensor Interface (ISI), ITU-R BT 610/656

Timer/Counters and Pulse Width Modulation (PWM)Pports

4x A/D Channel 10-bit Analog-to-Digital Converter

Typical power requirement less than 1 Watt

JTAG for debug, including real-time trace

FREE Eclipse IDE with GCC & GDB development tools

Green Hills Integrity BSP available

RoHS 2 (2011) compliance

Designed and manufactured in the USA the SoM-9260M is an ARM System-on-Module (SOM) based on the Atmel ARM9 AT91SAM9260 processor. This ARM9 core processor has an Ethernet MAC built-in along with 6 serial ports. It utilizes external SDRAM and includes an MMU which allows it to run Linux and WinCE Operating Systems. A SoM (System on Module) is a small embedded module that contains the core components a microprocessor based computer system needs to function on a single interchangeable card.

Using the same small SODIMM form-factor utilized by other EMAC SoM modules, the SoM-9260 is the ideal processor engine for your next design. All of the ARM processor core functionality 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-9260M 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 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, Audio, and Modem interfaces. The recommended off-the-shelf Carrier

or WindowsCE 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

Processor:
Embedded Atmel ARM9 AT91SAM9260
Clock Speed:
200 MHz
Real Time Clock:

Memory

BIOS/ Bootloader:
Resident Flash Bootloader (Das Uboot)
Primary Flash:
64MB of NAND Flash
Secondary Flash:
128kB of utility serial Flash
Memory Misc.:
System Reset: Supervisor with external Reset Button provision.

Primary I/O

GPIO:
32x GPIO
16 ma. drive when used as an output
SPI:
2x SPI High-Speed Ports with Chip Selects
Audio:
1x I2S Audio port
USB:
2x USB 2.0 Full Speed Host
1x USB 2.0 Full Speed Device
Serial Ports:
6x Serial ports (3 with handshake)
I2C:
2x I2C Ports
Watchdog:

Secondary I/O

Timers/ Counters/ PWM:
2x 3 channel
16-bit timers/counters with capture
compare
and PWM. 20-bit interval timer plus 12-bit interval counter
LPT Port:
Keypad:
PS/2:

Analog on

A/D:
A/D Channels:
4

D/A:

Analog Misc.:

Analog I/O: 4 channel, 10-bit Analog-to-Digital converter (ADC)

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

Dimensions

Dimensions:

2.66 × 1.5 in

Form Factor:

144-pin SODIMM

Power Requirements

Voltage:

3.3 V

Idle Current:

280 mA

Constant Busy Loop Current:

380 mA

Typical Current:

300 mA

Typical Voltage:

3.3 V

Max Boot Current:

400 mA

Power Misc.:

Idle system with Ethernet PHY disabled: 150 mA

APM sleep mode using slow clock with Ethernet PHY disabled: 6 mA

APM sleep mode using slow clock with Ethernet PHY enabled: 135 mA

Sleep Current: ~5mA

Environmental

Low Operating Temperature:

-40 C

High Operating Temperature:

85 C

Upper Operating Humidity:

90%

Pricing

SoM-9260M-120

w/ CPU, 32 MB FLASH 32 MB RAM

$170.00

Stock

Base Product:

SoM-9260M

SoM-9260M-130

w/ CPU, 64 MB FLASH 64 MB RAM

$185.00

Stock

Base Product:
SoM-9260M
Non-Stock Minimum Order:
50
Non-Stock NCNR:
1
Carrier Boards:
SoM-150ES-000
Standard Carrier Board
$150.00
Base Product:
SoM-150ES
SoM-150ES-007
Bare-Bones Carrier Board
$100.00
Base Product:
SoM-150ES
SoM-150ES-031
Deluxe Carrier Board with A/D, D/A, Audio
$220.00
Base Product:
SoM-150ES
