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SoM-3354M ARM System on Module

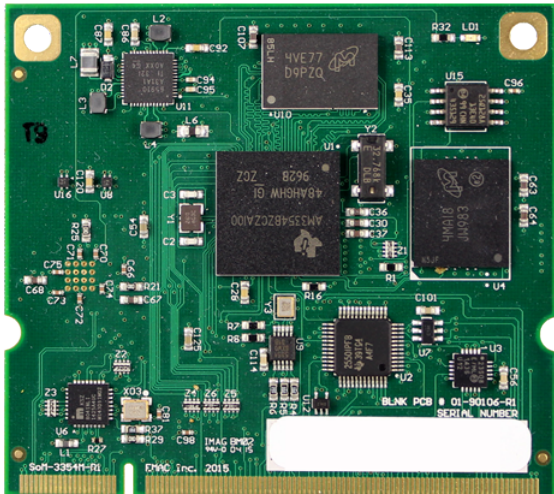


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[EMAC OEM](http://www.emacinc.com/sites/default/files/EMAC%20OEM%20LOGO_sm_8.png)

- 200 pin SODIMM form factor with the height dimension extended (2.66" x 2.375")
- Wide Temperature -40 to +85
- TI AM3354 ARM Cortex-A8 1 GHz processor
- 512MB of DDR3L SDRAM
- 16MB Serial Data Flash
- 4GB of eMMC Flash
- 4x Serial Ports with RTS/CTS Handshake
- 1 CAN Port (transceiver on carrier)
- 16-bit TFT LCD interface
- I2C hardware port
- 2x USB 2.0 High speed Host ports
- 1x USB 2.0 High speed OTG (Host or Device)
- Synchronous I2S analog audio interface port
- 10/100 BaseT Ethernet with on-board KSZ8041 PHY (External magnetics & status LEDs)
- Oscillator shutdown & Interrupt for PHY
- Real Time Clock Internal with battery backed provision
- 3.3 Volt source voltage with on-board core/memory regulators
- Provision for external 3.3 Volt Lithium Battery
- 4, 12-bit A/D inputs
- Internal Resistive Touchscreen Controller

- External MMC/SD card interface with card detect
- 2x SPI port with 4 slave selects
- 2x Timer/Counters/PWM
- Status on module LED
- RoHS compliance
- Extended Temperature

The SoM-3354 is an ARM System on Module (SoM) based on the TI AM3354 Cortex-A8 processor. Designed and manufactured in the USA, this wide temperature 1GHz SoM utilizes 16MB of Serial Data Flash, 4GB of eMMC Flash (up to 16GB optional) and has 512MB of DDR3 RAM. Additional Flash storage can be had using the modules SDIO interface allowing the use of external SD flash cards.

The SoM-3354 has 4x Serial Ports, 10/100 BaseT Ethernet, 2x USB 2.0 High Speed Host Ports, 1x USB 2.0 High Speed Host/Device Port, 4x channels of 12 bit A/D, 4-Wire Resistive Touch Controller, and a 16-bit LCD Controller. The module also features an External Address/Data Bus for easy expansion, an Internal Real Time Clock/Calendar with external battery backup provision, 22x GPIO Lines, and 2x Timer/Counters/PWM. The SoM-3354 has 1x Synchronous Serial I/O (I2S) Audio port, 2x SPI Ports with 4 slave selects, 1x I2C Port, 1x CAN Ports, SDIO, and on module status (software controlled) LED.

Using the same small 200 pin SODIMM form-factor utilized by other EMAC SoM modules, the SoM-3354 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-3354 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 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 custom 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 board for the SoM-3354 is the [SoM-200GS](#) or [SOM-250GS](#) which allows you to immediately start coding your application using EMAC OE Linux and Qt Development tools.

Specifications

SOM Type:

Microcontroller SODIMM Modules

Processor

Processor:

TI AM3354 ARM Cortex-A8 1 GHz processor

Clock Speed:

1 GHz

Real Time Clock:

Memory

Primary Flash:

4GB of eMMC Flash

Secondary Flash:

16MB of Serial Data Flash

Memory Misc.:

16 GB eMMC Flash upgrade

Primary I/O**GPIO:**

22x GPIO (3.3V) Lines

SDIO:

1x SDIO Port

SPI:

2x SPI ports with 4 slave selects

Video Out:

3D Video 16-bit LCD Controller with Touch Screen

Audio:

1 I2S Audio port

Ethernet:

10/100 BaseT Ethernet

USB:

2x USB 2.0 High Speed Host Ports

1x USB 2.0 High speed OTG (Host or Device)

Serial Ports:

4x Serial Ports (1x with full handshake

3x with RTS/CTS handshake)

I2C:

1x I2C hardware port

Watchdog:**Primary I/O Misc.:**

Ethernet: on-board KSZ8041 PHY (External magnetics & status LEDs)

Secondary I/O**CAN:**

1x CAN 2.0B Port

Timers/ Counters/ PWM:

2x Timer/Counters/PWM

LPT Port:**Keypad:****PS/2:****Touch:**

4-wire Resistive Touch Controller

Analog on**A/D:****A/D Channels:**

4

A/D Resolution:

12 bit
D/A:

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

Power Requirements
Voltage:
3.3 V

Environmental

Pricing

SoM-3354M-140

SOM-3354, TI AM3354 ARM-A8, 512MB RAM, 4GB eMMC Flash, 16MB Serial Data flash, 4x COM, 3x USB2, 10/100 ETH, Video (-40 to +85)

\$160.00

Order:

0

Base Product:

SoM-3354M

SoM-3354M-141

SOM-3354, TI AM3354 ARM-A8, 512MB RAM, 4GB eMMC Flash, 16MB Serial Data flash, 2x COM, 3x USB2, 10/100 ETH, Video (-40 to +85)

\$150.00

Build to Order

Order:

0

Base Product:

SoM-3354M

Non-Stock NCNR:

0

Carrier Boards:

Title: SoM-200GS-000

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

\$245.00

Base Product:

SoM-200GS

Title: 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

Title: SoM-200GS-007

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

\$145.00

Base Product:

SoM-200GS

Title: SoM-212ES-000

Standard Carrier Board with Touch Screen

\$175.00

Base Product:

SoM-212ES

Title: SoM-212ES-003

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

\$225.00

Base Product:

SoM-212ES

Title: SoM-212ES-007

Bare Bones Carrier Board

\$110.00

Base Product:

SoM-212ES

Title: SoM-250GS-000

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

\$399.00

Base Product:

SoM-250GS

Title: SoM-250GS-001

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

\$375.00

Base Product:

SoM-250GS

Title: SoM-250GS-007

Bare-Bones Carrier Board with CAN, Audio, WiFi, without LCD

\$250.00

Base Product:

SoM-250GS

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