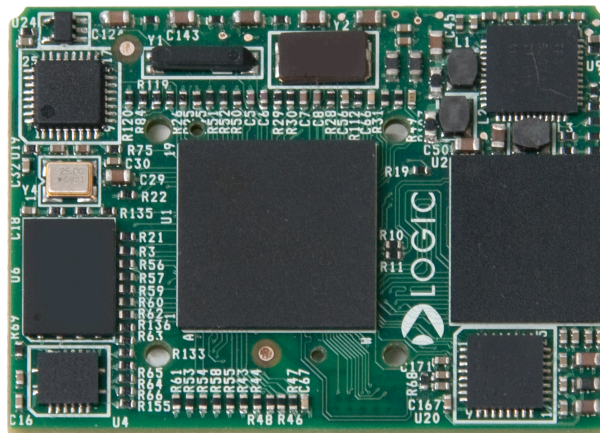# AM1808 SOM-M1
System on Module

Essential features for handheld and embedded networking applications

The AM1808 System on Module (SOM) is a compact, product-ready hardware and software solution that fast forwards embedded designs while reducing risk and controlling cost.

Based on the Texas Instruments (TI) AM1808 processor and designed in the SOM-M1 form factor, the AM1808 module offers essential features for handheld and embedded networking applications.

The AM1808 SOM-M1 brings the industry leading low power ARM926 core to a small, off-the-shelf solution. The standard SOM-M1 form factor allows developers to reuse existing baseboard designs when upgrading to new Sitara processors, which extends roadmap possibilities for end-products.

The compact size of the AM1808 SOM-M1 is ideal for medical patient monitoring wearables and other portable instrumentation applications; the built-in Serial ATA (SATA) controller provides fast access to large capacity storage devices. For medical, industrial, audio, and communication products, the AM1808 SOM-M1

AM1808 SOM-M1

allows for powerful versatility, long-life, and greener products.

We also offer an EVM Development Kit, which allows developers to choose the platform best suited to their application needs. By starting with the EVM Development Kit, engineers can write application software on the same hardware that will be used in their final product.
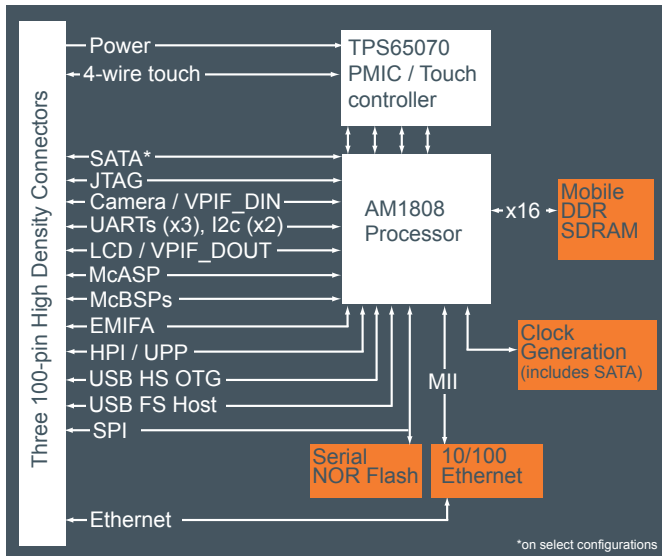
AM1808 SOM-M1 :: HIGHLIGHTS:

+ Product-ready System on Module with a TI AM1808 processor running at 450 MHz
+ Compact form factor—SOM-M1 (30 x 40 x 4.5 mm)
+ Long product lifecycle
+ Linux™ SDKs
+ Commercial temp (0˚C to 70˚C) Industrial temp (-40˚C to 85˚C)
+ RoHS compliant
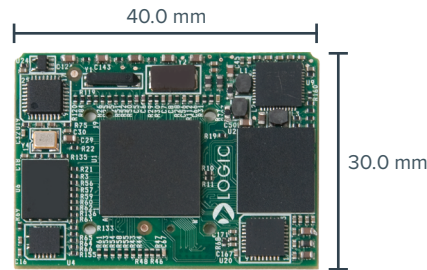
ZOOM DEVELOPMENT KIT
EVM Development Kit

+ AM1808 SOM-M1
+ Application baseboard
+ User Interface (UI) board
+ WLAN daughter card
+ 4.3" WQVGA LCD panel
+ Necessary accessories to immediately get up and running

AM1808 SOM-M1 Block Diagram

Three 100-pin High Density Connectors		
Power	→	TPS65070 PMIC / Touch controller
4-wire touch	→	
SATA*	→	AM1808 Processor
JTAG	→	
Camera / VPIF_DIN	→	
UARTs (x3), I2c (x2)	→	
LCD / VPIF_DOUT	→	
McASP	→	
McBSPs	→	
EMIFA	→	
HPI / UPP	→	
USB HS OTG	→	
USB FS Host	→	
SPI	→	
Ethernet	→	

x16 → Mobile DDR SDRAM

Clock Generation (includes SATA)

MII

Serial NOR Flash | 10/100 Ethernet

*on select configurations

(Block diagram is not drawn to scale; for reference purposes only.)

40.0 mm

30.0 mm

AM1808 SOM-M1 Ordering Information

Model Number	Processor	Speed (MHz)	mDDR (MB)	NOR Flash (MB)	10/100 Ethernet	SATA	Temp (°C)
SOMAM1808-10-1503QHCR	AM1808	450	64	16	Y	N	0°–70°
SOMAM1808-10-1603QHIR	AM1808	450	128	16	Y	N	-40°–85°

NOTE: Custom configurations are available by special order. Please contact Logic PD Sales for details.

Zoom™ AM1808 Development Kit Ordering Information

Development Kit[1]	Model Number	SOM-M1 Configuration Included	Suggested Resale
EVM Development Kit	TMDXEVMWIFI1808L	SOMAM1808-10-1602AHCR[2]	$1150

NOTES: 1. The EVM kit available through Texas Instruments distributors.
        2. This configuration has added power measurement circuitry.

Product Features

Processor
+ TI AM1808 processor with ARM926EJ-S core running at 450 MHz

SDRAM Memory
+ Mobile DDR (64 or 128 MB)

Flash Memory
+ Scalable serial NOR flash (16 MB standard)

Display
+ Programmable color LCD controller supports up to a 16 bpp TFT interface

Touchscreen
+ Integrated 4-wire touchscreen controller (TPS65070)

Network Support
+ 10/100 Base-T Ethernet controller

Serial ATA Controller
+ SATA 1.5 & 3.0 Gbps support

PC Card Expansion
+ MMC/SD card support

USB
+ One USB 2.0 high-speed On-the-Go interface
+ One USB 1.1 full-speed host interface

Serial Ports
+ Three external UARTs
+ Two I2Cs

GPIO
+ Programmable I/O depending on peripheral requirements

Software
+ U-Boot (bootloader/monitor)
+ Linux™ SDK

Mechanical
+ SOM-M1 form factor
+ 30.0 mm wide x 40.0 mm long x 4.5 mm high

RoHS Compliant

LOGIC PD WEBSITE :: DESIGN RESOURCES:
+ Logic PD Products : www.logicpd.com/products
+ Logic PD Technical Support : support.logicpd.com
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