OMAP-L138 SOM-M1 System on Module

:: SUPPORTED PROCESSORS:
   OMAP-L138
   TMS320C6748

The OMAP-L138 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 Texas Instruments' OMAP-L138 processor and designed in the SOM-M1 form factor, the OMAP-L138 module offers essential features for handheld and embedded networking applications. The OMAP-L138 SOM-M1 features the superset OMAP-L138 processor, but also supports the TMS320C6748 digital signal processor (DSP).

The OMAP-L138 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 OMAP processors, which extends roadmap possibilities for their end-product.

Two Zoom™ Development Kit options allow developers to choose the platform best suited to their application needs. By starting with the corresponding Zoom Development Kit, engineers can write application software on the same hardware that will be used in their final product.
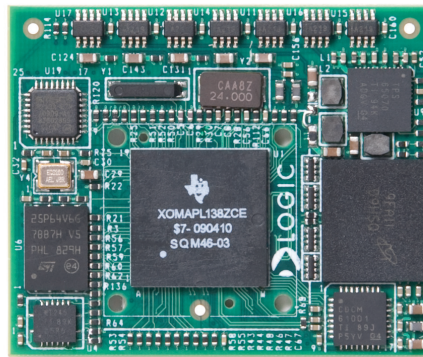
OMAP-L138 SOM-M1

The compact size of the OMAP-L138 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 OMAP-L138 SOM-M1 allows for powerful versatility, long-life, and greener products.

OMAP-L138 SOM-M1 :: HIGHLIGHTS:

+ Product-ready System on Module with a TI OMAP-L138 processor or TMS320C6748 DSP running at 300 MHz
+ Compact form factor—SOM-M1 (30 x 40 x 4.5 mm)
+ Long product lifecycle
+ Open source Linux™ BSP
+ 0°C to 70°C (commercial temp)
+ RoHS compliant

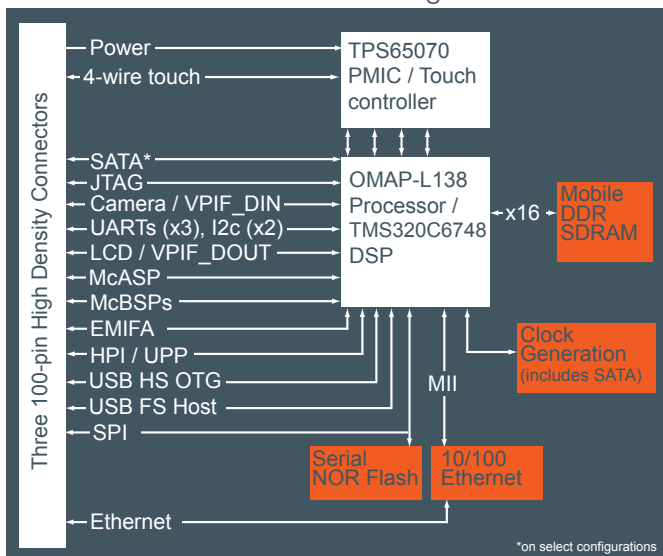## ZOOM DEVELOPMENT KIT :: OPTIONS:

Low-cost eXperimenter Kit

+ OMAP-L138 SOM-M1 (64 MB Mobile DDR)
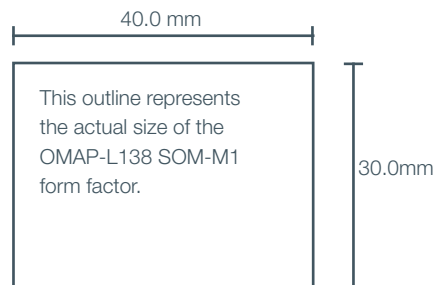+ Application baseboard

EVM Development Kit

+ OMAP-L138 SOM-M1 (128 MB Mobile DDR)
+ TMS320C6748 SOM-M1 (128 MB Mobile DDR)
+ Application baseboard
+ User Interface (UI) board
+ Necessary accessories to immediately get up and running

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OMAP-L138 SOM-M1 Block Diagram

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

*on select configurations

This outline represents the actual size of the OMAP-L138 SOM-M1 form factor.

40.0 mm

30.0mm

OMAP-L138 SOM-M1 Ordering Information

Model Number	Processor	Speed (MHz)	mDDR (MB)	NOR Flash (MB)	Wired Ethernet	SATA
SOMXOMAPL138-10-1602AHCR	XOMAPL138	300	128	8	Y	Y
SOMXOMAPL138-10-1502AHCR	XOMAPL138	300	64	8	Y	Y
SOMXOMAPL138-10-1502QHCR	XOMAPL138	300	64	8	Y	N
SOMXC6748-10-1602AHCR	TMX320C6748	300	128	8	Y	Y

NOTE: Custom configurations are available by special order. Please contact Logic Sales for details: product.sales@logicpd.com.

Zoom™ OMAP-L138 Development Kit Ordering Information

Development Kit[1]	Model Number	SOM-M1 Configuration(s) Included	Suggested Resale
EVM Development Kit	TMDXOSKL138BET	SOMXOMAPL138-11-1602AHCR[2] SOMXC6748-10-1602AHCR	$849
eXperimenter Kit	SDK-XOMAPL138-10-6408R	SOMXOMAPL138-10-1502AHCR	$149

NOTES: 1. The EVM Development Kit is available through Texas Instruments distributors. The eXperimenter Kit is available through Logic distributors.
2. This configuration is the SOMXOMAPL138-10-1602AHCR with added power measurement circuitry.

LOGIC WEBSITE :: DESIGN RESOURCES:

+ Logic Products : www.logicpd.com/products

+ Logic Technical Support : www.logicpd.com/product-support

+ For more information contact Logic Sales : product.sales@logicpd.com

Product Features

Choice of Processor
+ TI OMAP-L138 processor with dual core ARM926EJ-S and C6748 VLIW DSP running at 300 MHz
+ TI TMS320C6748 VLIW DSP running at 300 MHz

SDRAM Memory
+ Mobile DDR, 64 or 128 MB

Flash Memory
+ Scalable serial NOR flash (8 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)
+ Open source Linux BSP
+ Code Composer Studio (CCS) v3.3
+ DSP/BIOS
+ Board Support Library (BSL) sample programs

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

RoHS Compliant

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