

# OMAP-L138 SOM-M1

## System on Module

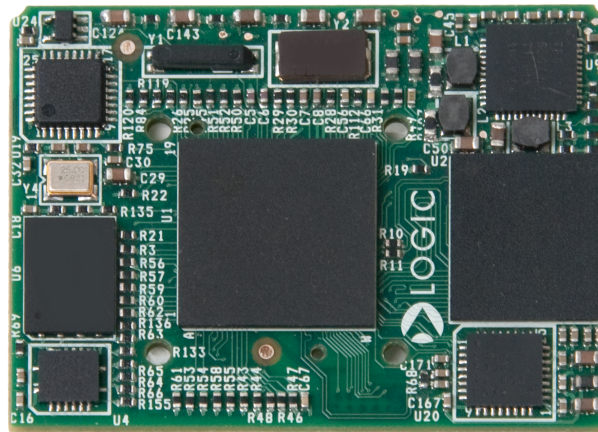
Essential features for handheld and embedded networking applications and DSP functionality

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.

For medical, industrial, audio, and communication products, the OMAP-L138 SOM-M1 allows for powerful versatility, long-life, and greener products.



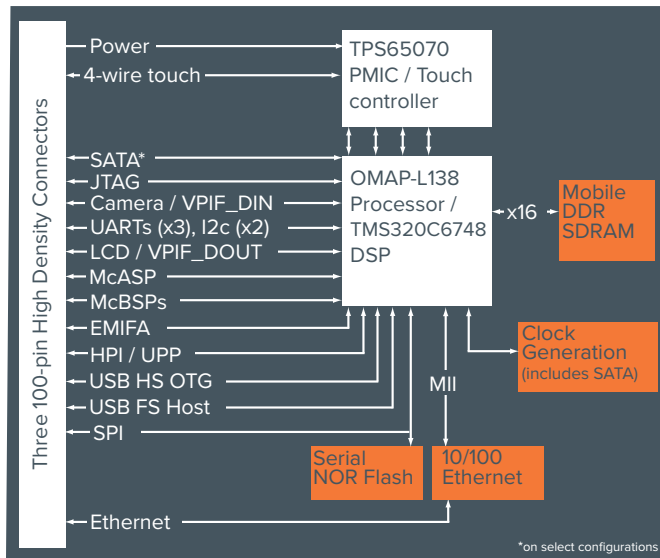
OMAP-L138 SOM M-1

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.

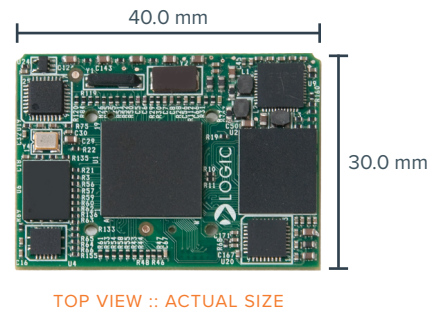
### OMAP-L138 SOM-M1 :: HIGHLIGHTS:

- + Product-ready System on Module with a TI OMAP-L138 processor or TMS320C6748 DSP running at 375 MHz
- + Compact form factor—SOM-M1 (30 x 40 x 4.1 mm)
- + Linux™ DVSDK
- + Commercial temp (0°C to 70°C)  
Industrial temp (-40°C to 85°C)
- + Long product lifecycle
- + RoHS compliant

## OMAP-L138/C6748 SOM-M1 Block Diagram



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



## OMAP-L138/C6748 SOM-M1 Ordering Information

| Model Number            | Processor   | Speed (MHz) | mDDR (MB) | NOR Flash(MB) | 10/100 Ethernet | SATA | Temp (°C) |
|-------------------------|-------------|-------------|-----------|---------------|-----------------|------|-----------|
| SOMOMAPL138-10-1603AHCR | OMAPL138    | 375         | 128       | 16            | Y               | Y    | 0°–70°    |
| SOMOMAPL138-10-1503QHCR | OMAPL138    | 375         | 64        | 16            | Y               | N    | 0°–70°    |
| SOMOMAPL138-10-1603QHCR | OMAPL138    | 375         | 128       | 16            | Y               | N    | -40°–85°  |
| SOMC6748-10-1603AHCR    | TMS320C6748 | 375         | 128       | 16            | Y               | Y    | 0°–70°    |

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

## Product Features

### Choice of Processor

- +TI OMAP-L138 processor with dual core ARM926EJ-S and C6748 VLIW DSP running at 375 MHz
- +TI TMS320C6748 VLIW DSP running at 375 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™ DVSDK
- +Windows® Embedded CE SDK
- +DSP/BIOS
- +Board Support Library (BSL) sample programs

### Mechanical

- +SOM-M1 form factor
- +30.0 mm wide x 40.0 mm long x 4.1 mm high

### RoHS Compliant



6201 Bury Dr. | Eden Prairie, MN 55346

T : 952.941.8071 F : 952.941.8065 | [www.logicpd.com](http://www.logicpd.com)

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