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-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

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

OMAP-L138/C6748 SOM-M1 Ordering Information

<table>
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<th>Model Number</th>
<th>Processor</th>
<th>Speed (MHz)</th>
<th>mDDR (MB)</th>
<th>NOR Flash (MB)</th>
<th>10/100 Ethernet</th>
<th>SATA</th>
<th>Temp (°C)</th>
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NOTE: Custom configurations are available by special order. Please contact Logic PD Sales for details.