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## Understanding [Embedded - Microcontroller, Microprocessor, FPGA Modules](#)

Embedded - Microcontroller, Microprocessor, and FPGA Modules are fundamental components in modern electronic systems, offering a wide range of functionalities and capabilities. Microcontrollers are compact integrated circuits designed to execute specific control tasks within an embedded system. They typically include a processor, memory, and input/output peripherals on a single chip. Microprocessors, on the other hand, are more powerful processing units used in complex computing tasks, often requiring external memory and peripherals. FPGAs (Field Programmable Gate Arrays) are highly flexible devices that can be configured by the user to perform specific logic functions, making them invaluable in applications requiring customization and adaptability.

## Applications of [Embedded - Microcontroller,](#)

### Details

Product Status	Obsolete
Module/Board Type	MPU, DSP Core
Core Processor	ARM® Cortex®-A8, OMAP3530
Co-Processor	TMS320C64x (DSP)
Speed	600MHz
Flash Size	512MB (NAND), 8MB (NOR)
RAM Size	256MB
Connector Type	Board-to-Board (BTB) Socket - 240
Size / Dimension	1.23" x 3.01" (31.2mm x 76.5mm)
Operating Temperature	-40°C ~ 85°C
Purchase URL	<a href="https://www.e-xfl.com/product-detail/logic-pd/somomap3530-11-1782jfir">https://www.e-xfl.com/product-detail/logic-pd/somomap3530-11-1782jfir</a>

**PRODUCT BRIEF:**

Logic PD :: Texas Instruments  
www.logicpd.com/ti

## OMAP35x SOM-LV System on Module

**:: SUPPORTED PROCESSORS:**

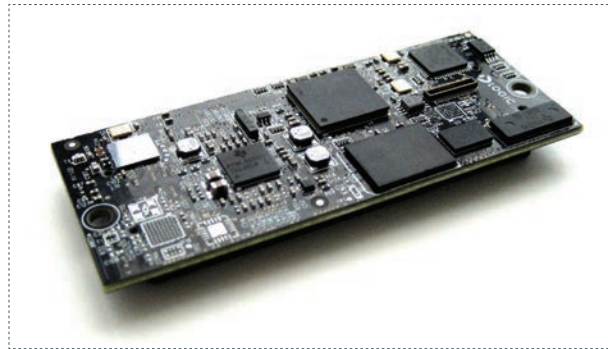
OMAP3530  
OMAP3503

The OMAP35x System on Module (SOM) is a compact, product-ready hardware and software solution that fast forwards embedded designs.

Based on the Texas Instruments (TI) OMAP 3 processor family and designed in the SOM-LV Type III form factor, the OMAP35x SOM-LV offers essential features for handheld and embedded networking applications. The OMAP35x SOM-LV features the superset OMAP3530 processor, but also supports the OMAP3503 processor.

The OMAP35x SOM-LV is an off-the-shelf solution that reduces development risks associated with the complex design and manufacturing details of the OMAP 3 processor. The standard SOM-LV form factor allows developers to reuse existing baseboard designs when upgrading to new OMAP processors, which extends roadmap possibilities for end-products.

The OMAP35x SOM-LV is ideal for applications in the medical, point-of-sale, industrial, and security markets.



OMAP35x SOM-LV

From patient monitoring and medical imaging, to card payment terminals and bar code readers, to CCTV cameras and intruder alarms, the OMAP35x SOM-LV allows for powerful versatility and long-life products.

By starting with the corresponding Zoom™ OMAP35x Development Kit, engineers can write application software on the same hardware that will be used in the final product.

**OMAP35x SOM-LV :: HIGHLIGHTS:**

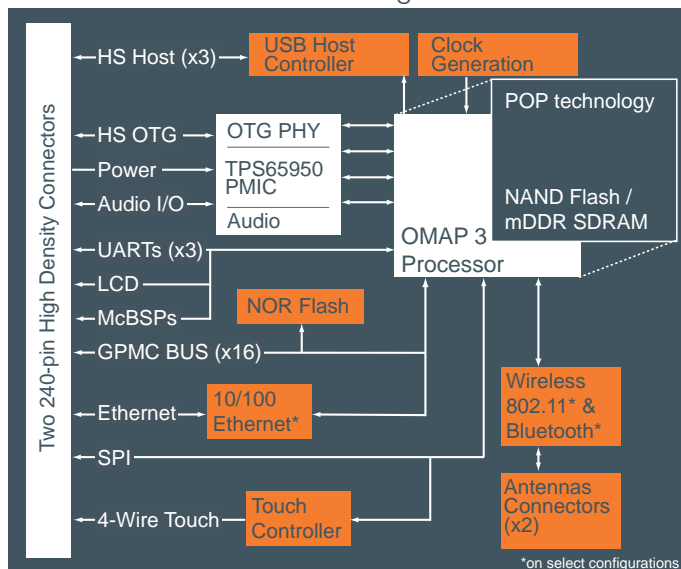
- + Product-ready System on Module with a TI OMAP 35x processor running up to 600 MHz
- + Compact form factor—SOM-LV Type III (31.2 x 76.5 x 7.4 mm)
- + Long product lifecycle
- + Microsoft Windows® Embedded CE 6.0 Board Support Package (BSP)
- + Open source Linux™ BSP
- + Extended temp (-20°C to 70°C)  
Industrial temp (-40°C to 85°C)  
Commercial temp in kit (0°C to 70°C)
- + RoHS compliant

**ZOOM OMAP35x DEVELOPMENT KIT**

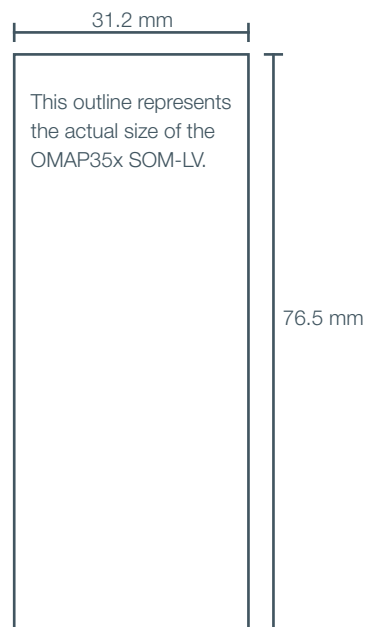
**:: FEATURES:**

- + Application baseboard
- + OMAP35x SOM-LV
- + 4.3" WQVGA LCD with 4-wire touchscreen
- + Necessary accessories to immediately get up and running
- + See the Zoom OMAP35x Development Kit Product Brief for more information

## OMAP35x SOM-LV Block Diagram



NOTE: Block diagram is for reference purposes only; it is not drawn to scale.



## Product Features

### Processor

+TI OMAP 3 processor running up to 600 MHz

### Memory

+Mobile DDR / NAND flash (PoP technology)  
128 MB / 256 MB (kit SOM)  
256 MB / 512 MB (standard SOMs)

### Display

+Programmable color LCD controller supports up to a 24 bpp TFT interface  
+Hardware supports XGA 1024x768 at 24-bit color

### Touchscreen

+Integrated 4-wire touchscreen controller (TSC2004)

### Network Support

+10/100 Base-T Ethernet controller  
+802.11b/g wireless Ethernet  
+Bluetooth 2.0 + EDR

### Audio

+I2S compliant audio codec (16-bit stereo DAC, 13-bit ADC)

### PC Card Expansion

+CompactFlash Type I card (memory-mode only)  
+MMC/SD card support

### USB

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

### Serial Ports

+Three external UARTs

### GPIO

+Programmable I/O depending on peripheral requirements

### Software

+LogicLoader™ (bootloader/monitor)  
+Windows® Embedded CE 6.0 BSP  
+Open source Linux™ BSP

### Mechanical

+SOM-LV Type III form factor  
+31.2 mm wide x 76.5 mm long x 7.4 mm high

### RoHS Compliant

## OMAP35x SOM-LV Ordering Information

Model Number <sup>1</sup>	mDDR (MB)	NAND Flash (MB)	NOR Flash (MB)	Wired Ethernet	802.11b/g Ethernet	Bluetooth	Temp. (°C)
SOMOMAP3503-11-1782GFIR <sup>2</sup>	256	512	8	Y	N	N	-40°–85°
SOMOMAP3530-11-1782IFXR	256	512	8	Y	Y	Y	-20°–70°
SOMOMAP3530-11-1782JFIR	256	512	8	Y	N	Y	-40°–85°

NOTES: 1. Custom configurations are available by special order. Please contact Logic PD Sales for details.  
2. Does not include touch controller.

## Zoom™ OMAP35x Development Kit Ordering Information

Model Number	SOM-LV Configuration
TMDSMEVM3530-L	SOMOMAP3530-11-1672IFCR

NOTE: Zoom OMAP35x Development Kits are available through Logic PD and TI distributors.



411 N. Washington Ave. Suite 400 Minneapolis, MN 55401  
T : 612.672.9495 F : 612.672.9489 I : www.logicpd.com  
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