Welcome to E-XFL.COM

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,

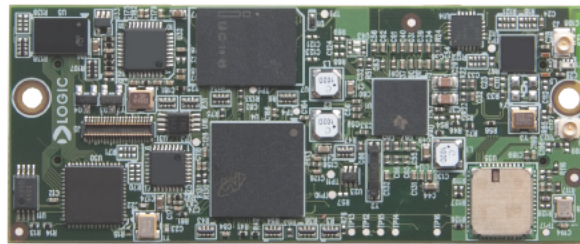| Details	
Product Status	Obsolete
Module/Board Type	MPU Core
Core Processor	DM3730
Co-Processor	-
Speed	1GHz
Flash Size	512MB (NAND), 16MB (NOR)
RAM Size	256MB
Connector Type	-
Size / Dimension	3" x 1.22" (76.2mm x 31mm)
Operating Temperature	0°C ~ 70°C
Purchase URL	https://www.e-xfl.com/product-detail/logic-pd/somdm3730-11-2783ifcr

DM3730 / AM3703 SOM-LV
System on Module

Boasts speeds of up to 1GHz and contains both on-board Wi-Fi (802.11 b/g/n) and Bluetooth 2.1 + EDR technology wireless radios and a 10/100 Ethernet controller with optional DSP functionality

The Logic PD DM3730 SOM-LV presents a high-performance, full-featured System on Module (SOM) with all the necessary connectivity interfaces essential for today's market-changing products.

Based on Texas Instruments' DaVinci™ DM3730 digital media processor, the DM3730 SOM-LV boasts PC-like speeds up to 1 GHz and contains on-board Wi-Fi (802.11b/g/n), Bluetooth 2.1 + EDR technology wireless radios, and a 10/100 Ethernet controller.

The DM3730 SOM-LV is available in several standard configurations, including TI's Sitara™ AM3703 ARM microprocessor. By remaining footprint compatible with Logic PD's existing OMAP35x SOM-LV product line, the DM3730 SOM-LV extends the roadmaps of existing products and provides an upgrade path from today's products to future technologies.

By starting with the corresponding Zoom™ DM3730 Development Kit, engineers can write application software on the same hardware that will be used in the final product.

DM3730 / AM3703 SOM-LV

The DM3730 SOM-LV is ideal for applications in the medical, point-of-sale, industrial, and security markets. From patient monitoring and medical imaging, to card payment terminals and bar code readers, to CCTV cameras and intruder alarms, the DM3730 SOM-LV allows for powerful versatility and long-life products.
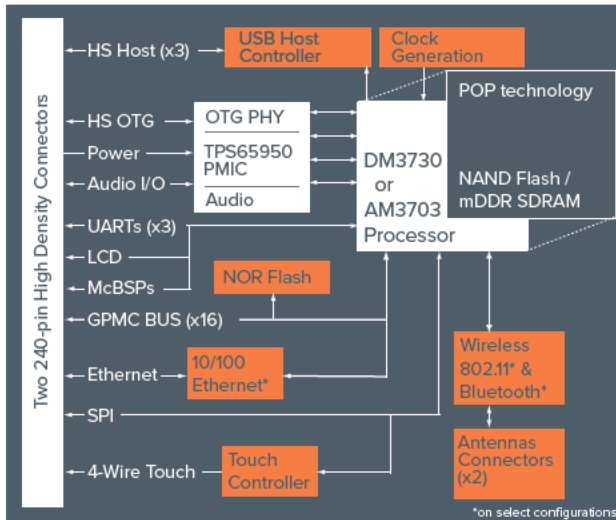
DM3730 / AM3703 SOM-LV :: HIGHLIGHTS:

+ Product-ready System on Module with a TI DM3730 or AM3703 ARM® Cortex™-A8 processor running up to 1 GHz
+ 802.11b/g/n and Bluetooth 2.1 + EDR radios
+ 10/100 Ethernet controller
+ Android, Linux™, and Windows® Embedded CE Board Support Packages (BSPs)
+ Commercial temp (0˚C to 70˚C) Extended temp (-20˚C to 70˚C) Industrial temp (-40˚C to 85˚C)
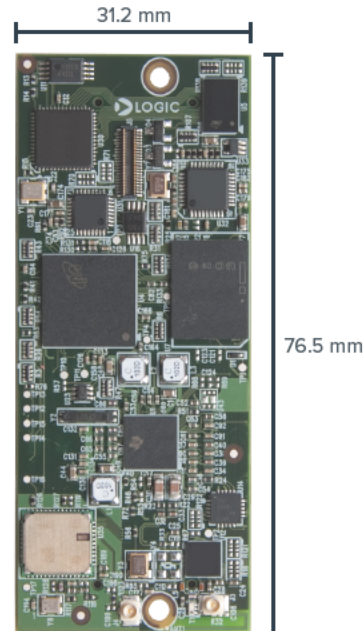+ Compact form factor—SOM-LV Type III (31.2 x 76.5 x 7.4 mm)
+ Long product lifecycle

ZOOM DEVELOPMENT KIT :: FEATURES:

+ Application baseboard
+ DM3730 SOM-LV
+ 4.3" WQVGA LCD with 4-wire touchscreen
+ Wattson™ power measurement application
+ Necessary accessories to immediately get up and running
+ See the *Zoom DM3730 SOM-LV Development Kit Product Brief* for more information

DM3730 SOM-LV Block Diagram

- HS Host (x3) → USB Host Controller
- Clock Generation
- HS OTG → OTG PHY
- Power → TPS65950 PMIC
- Audio I/O → Audio
- POP technology
- DM3730 or AM3703 Processor
- NAND Flash / mDDR SDRAM
- UARTs (x3)
- LCD
- McBSPs → NOR Flash
- GPMC BUS (x16)
- Ethernet → 10/100 Ethernet*
- Wireless 802.11* & Bluetooth*
- SPI
- 4-Wire Touch → Touch Controller
- Antennas Connectors (x2)

Two 240-pin High Density Connectors

*on select configurations

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

31.2 mm

76.5 mm

TOP VIEW :: ACTUAL SIZE

DM3730 / AM3703 SOM-LV Ordering Information

Model Number	Speed (MHz)	mDDR/ NAND Flash (MB)	NOR Flash (MB)	10/100 Ethernet	802.11b/g/n Ethernet	Bluetooth 2.1 + EDR	Temp. (°C)	DSP
SOMDM3730-11-2783IFCR	1000	256/512	16	Y	Y	Y	0°–70°	Y
SOMDM3730-11-1783IFXR	800	256/512	16	Y	Y	Y	-20°–70°	Y
SOMDM3730-11-1783JFIR	800	256/512	16	Y	N	Y	-40°–85°	Y

Zoom™ DM3730 SOM-LV Development Kit Ordering Information

Model Number	SOM-LV Configuration	
SDK-DM3730-10-256512R	SOMDM3730-10-2782IFCR	

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Product Features

Processor
+ TI DaVinci™ DM3730 or Sitara™ AM3703 ARM® Cortex™-A8 core running up to 1 GHz
+ TMS320C64x DSP core running up to 800 MHz (DM3730 only)
+ POWER SGX™ graphics accelerator (DM3730 only)

Memory
+ Mobile DDR / NAND flash (PoP technology) 256 MB / 512 MB
+ NOR flash 16 MB

Display
+ Programmable color LCD controller supports up to a 24 bpp TFT interface
+ Hardware supports XGA 1024 x 768 at 24-bit color

User Interface
+ Integrated 4-wire touchscreen controller
+ 8 x 8 keypad signals

Network Support
+ 10/100 Base-T Ethernet controller
+ 802.11b/g/n wireless Ethernet
+ Bluetooth 2.1 + 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
+ Three USB 2.0 high-speed host interface
+ One USB 2.0 high-speed On-the-Go interface

Serial I/O
+ Three external UARTs

GPIO
+ Programmable I/O depending on peripheral requirements
+ General purpose memory controller (GPMC) interface

Debug
+ JTAG & ETM support

Software
+ LogicLoader™ (bootloader/monitor)
+ Android, Linux™, Windows® Embedded CE BSPs

Mechanical
+ 31.2 mm wide x 76.5 mm long x 7.4 mm high

RoHS Compliant