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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	MCU Core
Core Processor	PXA270
Co-Processor	-
Speed	416MHz
Flash Size	64MB
RAM Size	64MB
Connector Type	SO-DIMM-144
Size / Dimension	2.37" x 2.67" (60.2mm x 67.8mm)
Operating Temperature	-40°C ~ 85°C
Purchase URL	<a href="https://www.e-xfl.com/product-detail/logic-pd/cengpxa270-416-10-550hir">https://www.e-xfl.com/product-detail/logic-pd/cengpxa270-416-10-550hir</a>

**PRODUCT BRIEF:**

Logic :: Marvell

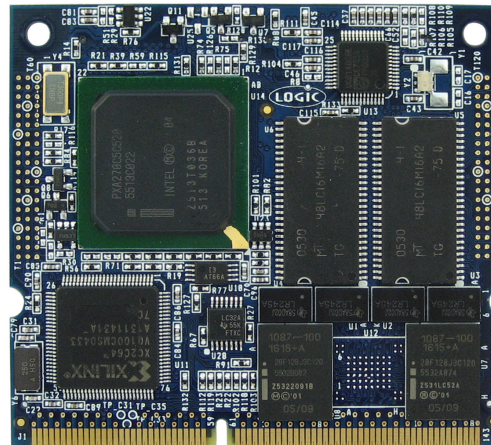
## PXA270 CARD ENGINE System on Module

The PXA270 Card Engine is a compact, product-ready hardware and software solution that fast forwards your embedded product design.

The PXA270 Card Engine is a complete System on Module (SOM) that offers essential features for handheld and embedded networking applications. Use of custom baseboards makes the Card Engine the ideal foundation for OEMs developing handheld and compact products. The Card Engine provides a common reference pin-out on its expansion connectors, which enables easy scalability to next generation microprocessor Card Engines when new functionality or performance is required.

Application development is performed right on the product-ready PXA270 Card Engine and software Board Support Packages (BSPs), which enables you to seamlessly transfer your application code and hardware into production.

The PXA270 Card Engine is ideal for applications in the medical, point-of-sale, industrial, and security markets. From patient



PXA270 CARD ENGINE

monitoring and medical imaging, to card payment terminals and bar code readers, to CCTV cameras and intruder alarms, the PXA270 Card Engine allows for powerful versatility and long-life products.

**PXA270 CARD ENGINE :: HIGHLIGHTS:**

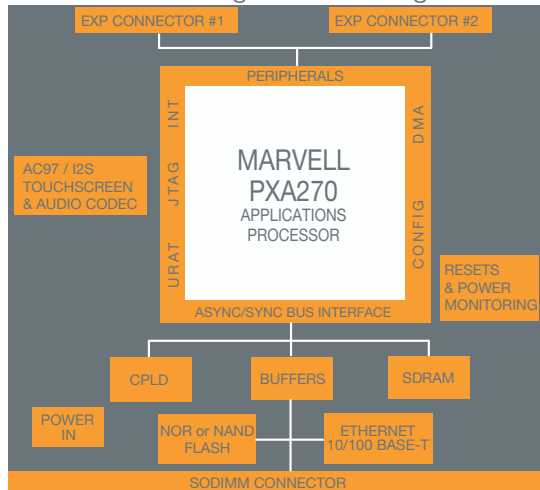
- + Product-ready System on Module with the Marvell PXA270 Applications Processor running at 312, 416, or 520 MHz
- + Compact form factor 60.2 mm x 67.8 mm x 4.4 mm
- + Long product lifecycle
- + 0 °C to 70 °C (commercial temp) or -40 °C to 85 °C (industrial temp)
- + RoHS compliant

**PXA270 ZOOM™ SDK :: FEATURES:**

- + Application baseboard
- + PXA270 Card Engine (CENGPXA270-520-10-504HCR)
- + Necessary accessories to immediately get up and running
- + Kit available from Logic (SDK-PXA270-520-10-6432R)
- + See Zoom™ SDK product brief for more information



## PXA270 Card Engine Block Diagram



## PXA270 Card Engine Ordering Information

Logic Model Number	Speed (MHz)	SDRAM (MB)	NAND Flash (MB)	NOR Flash (MB)	Touch	Audio	Ethernet	Temp (°C)
CENGPXA270-312-10-550ECR	312	64	64	0	Y	Y	–	0 – 70
CENGPXA270-416-10-550EIR	416	64	64	0	Y	Y	–	-40 – 85
CENGPXA270-416-10-550HIR	416	64	64	0	Y	Y	Y	-40 – 85
CENGPXA270-520-10-504HCR	520	64	0	32	Y	Y	Y	0 – 70
CENGPXA270-520-10-550HCR	520	64	64	0	Y	Y	Y	0 – 70

## PXA270 ZOOM™ SDK Ordering Information

Logic Model Number	SOM Configuration	Recommended Resale
SDK-PXA270-520-10-6432R	CENGPXA270-520-10-504HCR	\$499

### LOGIC WEBSITE :: DESIGN RESOURCES:

- +Logic Technical Support : <http://www.logicpd.com/support/>
- +Technical Discussion Group : <http://www.logicpd.com/support/tdg/>
- +Frequently Asked Questions (FAQ) : <http://www.logicpd.com/support/faq/>
- +For more information contact Logic Sales : [product.sales@logicpd.com](mailto:product.sales@logicpd.com)



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## Product Features

### Processor

- +Marvell PXA270 Applications Processor running at 312, 416, or 520 MHz

### SDRAM Memory

- +64 MB SDRAM standard

### Flash Memory

- +Choice of 64 MB NAND or 32 MB NOR

### Display

- +Programmable color LCD controller
- +Built-in driver supports up to 800x600 with 16-bit LCD interface

### Touch Screen

- +Integrated 4-wire touch screen controller

### Network Support

- +10/100 Base-T Ethernet controller for application/debug (SMSC LAN 91C111)

### Audio

- +AC97 audio codec

### PC Card Expansion

- +CompactFlash Type I card (memory-mapped mode only)
- +Smart Card, MMC/SD, dual PCMCIA interfaces

### USB

- +USB 2.0 full-speed host and device interface

### Serial Ports

- +Three 16C550 compatible UARTs, two I2C

### IrDA

- +SIR supports up to 115.2 Kbps, multiplexed IrDA/Bluetooth

### GPIO

- +Programmable I/O depending on peripheral requirements

### Software

- +LogicLoader™ (bootloader/monitor)
- +Windows Embedded CE 5.0 BSP

### Mechanical

- +60.2 mm wide x 67.8 mm long x 4.4 mm high

### RoHS Compliant