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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 Core
Core Processor	PowerQUICC, MPC8360
Co-Processor	-
Speed	400MHz
Flash Size	64MB (NAND), 8MB (NOR)
RAM Size	128KB
Connector Type	-
Size / Dimension	3.74" x 3.74" (95mm x 95mm)
Operating Temperature	0°C ~ 70°C
Purchase URL	https://www.e-xfl.com/product-detail/logic-pd/commpc8360-10-1652lcr

PRODUCT BRIEF:

Logic :: Freescale

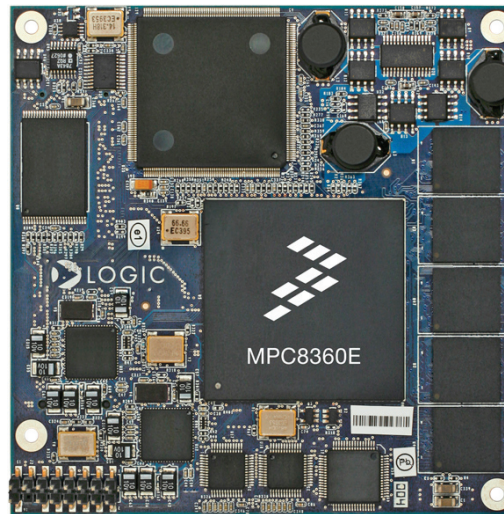
MPC8360 COM Express System on Module

The MPC8360 COM Express System on Module (SOM) is a compact, product-ready hardware and software solution that fast forwards embedded designs.

The MPC8360 SOM adheres to the COM Express Compact form factor and is based on the Type III pin-out specification. This combination offers the essential features for industrial, networking, and medical applications. Using a SOM allows engineers to design a custom baseboard that meets their specific needs and is compatible with other Logic SOMs. This compatibility makes it easy for developers to upgrade their product for greater functionality and performance—while still using their original baseboard design.

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

The MPC8360 PowerQUICC™ processor from Freescale Semiconductor provides both control and communications processing in a single chip, making it a cost-effective solution for any product requiring deterministic industrial networking protocols.



MPC8360 COM Express SOM

Designing a product around Logic's SOM allows developers to easily combine their core technologies with the high performance of the MPC8360 PowerQUICC™ processor.

MPC8360 COM EXPRESS :: HIGHLIGHTS:

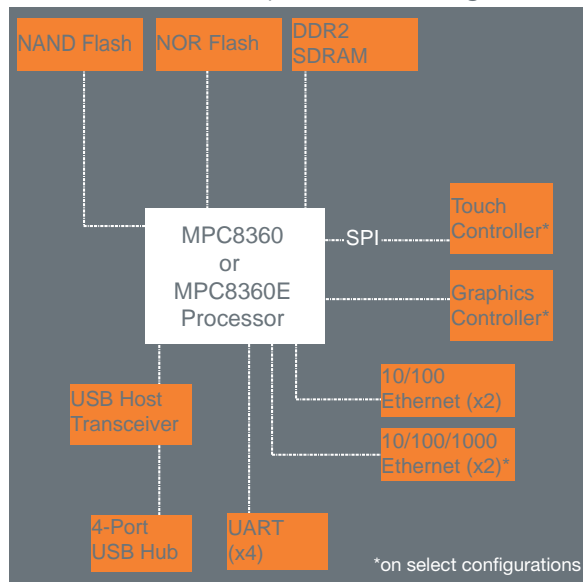
- + Product-ready SOM with the Freescale PowerQUICC™ MPC8360 processor running at 400 MHz or MPC8360E processor running at 667 MHz
- + COM Express Compact form factor 95 mm x 95 mm x 14.5 mm
- + Long product life-cycle
- + U-Boot bootloader installed in flash
- + Linux Board Support Packages (BSPs)
- + 0 °C to 70 °C (commercial temp) or -40 °C to 85 °C (industrial temp)
- + RoHS compliant

ZOOM™ PowerQUICC™ KIT :: FEATURES:

- + Application baseboard
- + MPC8360 COM Express SOM (COMMPC8360E-10-2752FCR)
- + Production-ready QUICCEngine™ micro-code for PROFIBUS, IEEE(R) 1588, and Ethernet PowerLink available from third-parties
- + Necessary accessories to immediately get up and running
- + Kit available from Freescale (MPC8360E-RDK)
- + See Zoom™ PowerQUICC™ Development Kit product brief for more information



MPC8360 COM Express Block Diagram



MPC8360 COM Express Ordering Information

Model Number	Speed (MHz)	SDRAM (MB)	NAND Flash (MB)	NOR Flash (MB)	Graphics/Touch	Ethernet	Temperature
COMMPC8360-10-1652LCR	400	128	64	8	N	10/100	0 °C to 70 °C
COMMPC8360E-10-2752FCR	667	256	64	8	Y	10/100/1000	0 °C to 70 °C

+Contact Logic for availability of industrial temp configurations.

ZOOM™ PowerQUICC™ Development Kit Ordering Information

Model Number	COM Express Configuration	Recommended Resale
MPC8360E-RDK	COMMPC8360E-10-2752FCR	\$999

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



embedded product solutions

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Product Features

Processor

- +Freescale PowerQUICC™ MPC8360 processor running at 400 MHz or MPC8360E processor running at 667 MHz

SDRAM Memory

- +DDR2; 128, 256, 512 MB, or 1 GB
- +ECC support

Flash Memory

- +NOR flash; 8 or 16 MB (8 MB standard)
- +NAND flash; 64 or 128 MB (64 MB standard)

Display

- +Programmable color graphics controller (Fujitsu MB86277)
- +Built-in driver supports up to 1024 x 768 with LVDS interface
- +LVDS can be converted to 18-bit LCD on baseboard

Touch Screen

- +Integrated 4-wire touch screen controller

Network Support

- +Two 10/100 Base-T Ethernet controllers for application/debug
- +Two 10/100/1000 Base-T Ethernet controllers for application/debug

PC Card Expansion

- +32-bit PCI connection

USB

- +Four USB 2.0 full-speed host interfaces

Serial Ports

- +Four 16C550 compatible UARTs

GPIO

- +Programmable I/O depending on peripheral requirements

Software

- +U-Boot bootloader
- +Linux BSP

Mechanical

- +COM Express Compact form factor
95 mm wide x 95 mm long x 14.5 mm high

RoHS Compliant