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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        | ColdFire V4e, MCF5485   |
| Co-Processor          | -   |
| Speed                 | 200MHz  |
| Flash Size            | 16MB (NOR), 2MB (Boot)  |
| RAM Size              | 64MB  |
| Connector Type        | -   |
| Size / Dimension      | 3.7" x 4.5" (95mm x 114mm)  |
| Operating Temperature | -40°C ~ 85°C  |
| Purchase URL          | <a href="https://www.e-xfl.com/product-detail/logic-pd/m5485bfee-e">https://www.e-xfl.com/product-detail/logic-pd/m5485bfee-e</a> |

**PRODUCT BRIEF:**

Logic :: Freescale

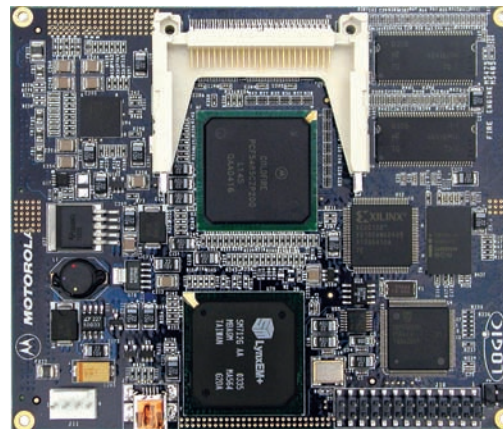
## MCF548x FIRE ENGINE System on Module

**The MCF548x Fire Engine is a compact, product-ready hardware and software solution that fast forwards your embedded product design.**

The ColdFire MCF5484 and MCF5485 processors are ideally suited for embedded industrial applications requiring simultaneous control, connectivity, and security. The Fire Engine modules based on these processors are complete System on Modules (SOMs) offering essential features for embedded 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™ LITEKIT or EVB Development Kit, developers can write application software on the same hardware that will be used in the final product.

The MCF5484 and MCF5485 ColdFire processors from Freescale Semiconductor provide a broad range of peripheral support,



**MCF5485 FIRE ENGINE SYSTEM ON MODULE**

making them ideal processors for industrial and embedded applications.

Designing a product around Logic's SOM allows developers to easily combine their core technologies with the high performance of the MCF5484 or MCF5485 ColdFire processor.

**MCF548x FIRE ENGINE :: HIGHLIGHTS:**

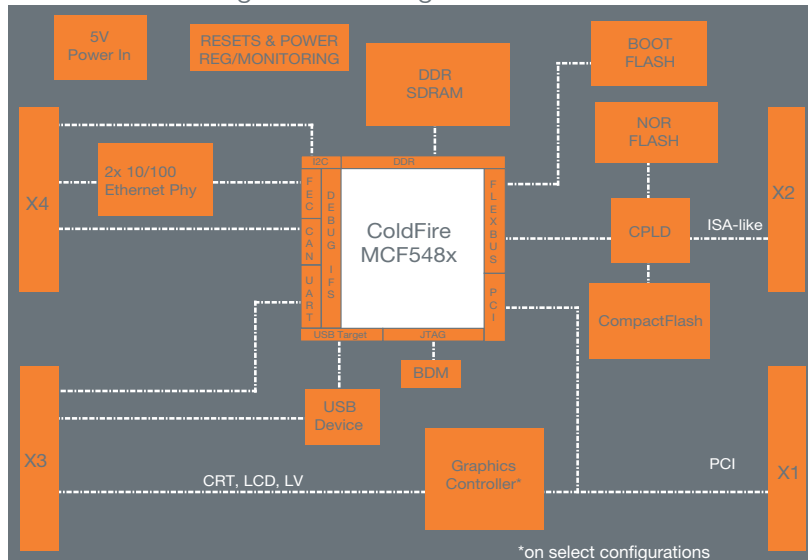
- + Product-ready System on Module with the Freescale MCF5484 or MCF5485 ColdFire microprocessor running up to 200 MHz
- + SOM-ETX form factor 114 mm x 95 mm x 13.8 mm
- + Long product life-cycle
- + 0 °C to 70 °C (commercial temp)
- + RoHS compliant

**ZOOM™ COLDFIRE LITEKIT and EVB :: FEATURES:**

- + Application baseboard
- + MCF548x Fire Engine (M5484GFEE or M5485HFEE)
- + Necessary accessories to immediately get up and running
- + Kit available from Freescale (M5484LITEKITE or M5485EVBE)
- + See Zoom™ ColdFire LITEKIT and EVB product briefs for more information



## MCF548x Fire Engine Block Diagram



## MCF548x Fire Engine Ordering Information

| Freescalé PN | Speed (MHz) | SDRAM (MB) | Boot Flash (MB) | NOR Flash (MB) | Graphics | Audio | Ethernet |
|--------------|-------------|------------|-----------------|----------------|----------|-------|----------|
| M5484GFEE    | up to 200   | 64         | 4               | 0              | —        | Y     | Y        |
| M5485AFEE    | up to 200   | 64         | 2               | 0              | —        | Y     | Y        |
| M5485BFEE    | up to 200   | 64         | 2               | 16             | —        | Y     | Y        |
| M5485HFEE    | up to 200   | 64         | 2               | 16             | Y        | Y     | Y        |

## ZOOM™ ColdFire LITEKIT and EVB Ordering Information

| Freescalé PN  | SOM Configuration | Recommended Resale |
|---------------|-------------------|--------------------|
| M5484LITEKITE | M5484GFEE         | \$350              |
| M5485EVBE     | M5485HFEE         | \$850              |

### 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

- + Freescalé MCF5484 or MCF5485 ColdFire V4e microprocessor running up to 200 MHz

### SDRAM Memory

- + 64 MB DDR SDRAM standard

### Flash Memory

- + Boot flash: 2 or 4 MB
- + NOR flash: 0 or 16 MB

### Display

- + Programmable color LCD controller
- + Built-in driver supports up to 1024x768 with 16-bit LCD interface

### Network Support

- + Dual 10/100 Base-T Ethernet controller for application/debug

### Hardware Encryption Engine

- + MCF5485 only

### PC Card Expansion

- + CompactFlash Type I card (memory-mapped mode only) supported through the CPLD
- + Two PCI 2.2 slots

### USB

- + One USB 2.0 high-speed device interface

### PSC Ports

- + Four PSC UARTs
- + Configurable as UART, USART, modem, codec, or IrDA

### CAN

- + Two CAN 2.0B interfaces

### PWM

- + Four channels

### GPIO

- + Programmable IO depending on peripheral requirements

### Software

- + LogicLoader™ (bootloader/monitor)
- + Freescalé dBug ROM monitor
- + Other third-party options

### Mechanical

- + 95 mm wide x 114 mm long x 13.8 mm high

### RoHS Compliant