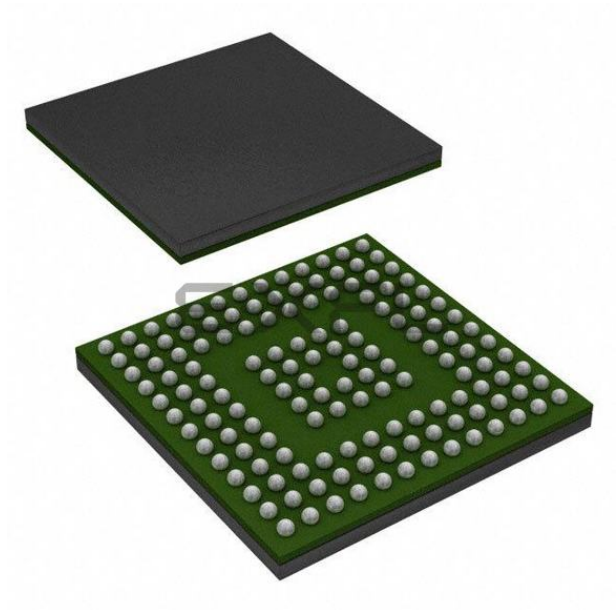


Welcome to E-XFL.COM

Embedded - Microcontrollers - Application Specific: Tailored Solutions for Precision and Performance

Embedded - Microcontrollers - Application Specific represents a category of microcontrollers designed with unique features and capabilities tailored to specific application needs. Unlike general-purpose microcontrollers, application-specific microcontrollers are optimized for particular tasks, offering enhanced performance, efficiency, and functionality to meet the demands of specialized applications.

What Are Embedded - Microcontrollers - Application Specific?

Application-specific microcontrollers are engineered to

Details	
Product Status	Active
Applications	Keyboard and Embedded Controller
Core Processor	MIPS32® M14K™
Program Memory Type	External Program Memory
Controller Series	-
RAM Size	192KB
Interface	I²C, LPC, SMBus, SPI, UART
Number of I/O	108
Voltage - Supply	1.71V ~ 3.465V
Operating Temperature	0°C ~ 70°C
Mounting Type	Surface Mount
Package / Case	144-WFBGA
Supplier Device Package	144-WFBGA (9x9)
Purchase URL	https://www.e-xfl.com/product-detail/microchip-technology/mec1428-sz-c1

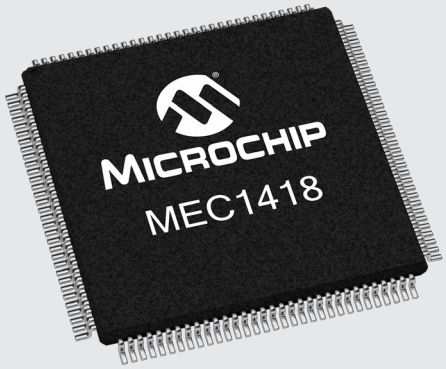
MEC14XX Family

Low-Power Embedded Controllers for Computing Applications

Modernize Your Computing Platforms

As Intel® Processors fully transition towards the more flexible and efficient eSPI host interface, computing products must progress along with it. The MEC14XX family of devices provides low-power, highly configurable embedded controllers for an effortless transition.

Microchip offers a flexible array of solutions for all mobile platforms including notebooks, tablets, SBCs and industrial controllers. All MEC14XX devices are pin compatible with each other to provide easy migration from LPC-based to eSPI-based designs.



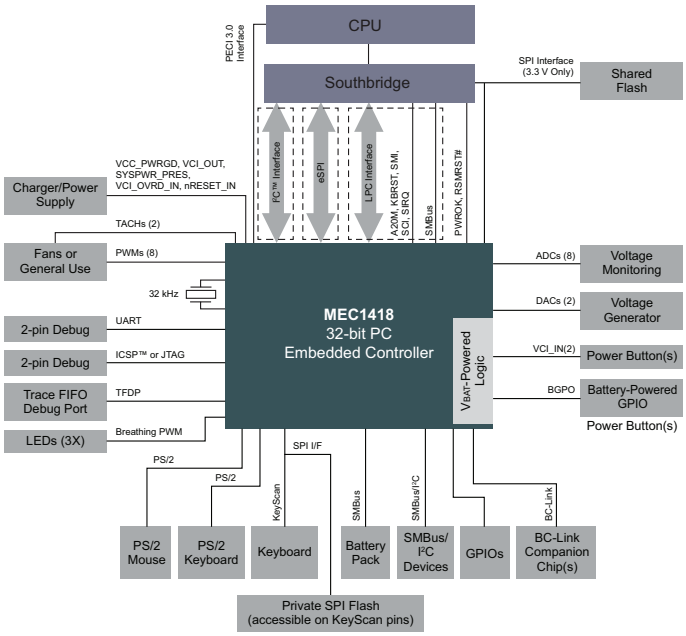
Key Features

- MIPS32 M14K microcontroller core
- Fully supported by MPLAB Microchip development tools
- 192 KB of SRAM
- eSPI (MEC1418 and MEC1428), LPC, PECI, PS2 and I²C interface
- Flexible Support of 1.8V and 3.3V I/O
- Host interface inflection from LPC to eSPI
- Secure Boot ROM with CRC 32 and AES 128
- Master and slave attached Flash available

Microchip's eSPI Advantage

- Pioneered eSPI system with industry partners
- Validated with both Intel and AMD platforms
- Fully supports all of eSPI channels

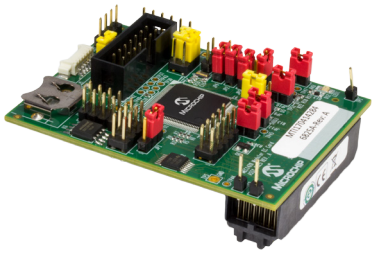
System Diagram



MICROCHIP

Development Tools

The MEC14XX family is supported by Microchip's award winning development tools including the MPLAB® XC32 Compiler and MPLAB REAL ICE™ In-Circuit Emulator, the MPLAB ICD 3 In-Circuit Debugger, and the PICkit™ 3 Programmer/Debugger. The MEC1418 and MEC1428 also have demo boards with various features that illustrate the functionality of the embedded controllers. The demo boards can be found at www.microchipdirect.com/EVB-MEC1418MECC and www.microchipdirect.com/EVB-MEC1428MECC respectively.



MEC14XX Products

Product	Host Interface	SRAM Memory	Keyboard Matrix Scan Controller	SMBus 2.0 Ports	I²C Ports/ Controllers	PS/2Controllers	GPIOs	SPI Interfaces	SPI Flash Support	DACs	ADCs	PWMs	TACHs	UART	Operating Temperature	Package
MEC1408	LPC, I²C	192 KB	18 x 8	6	5/3	2	106	3	3.3V	2	8	8	2	Full	0°C to 70°C	128-VTQFP 144-WFBGA
MEC1418	eSPI, LPC, I²C	192 KB	18 x 8	6	5/3	2	106	3	3.3V	2	8	8	2	Full	0°C to 70°C –40°C to 85°C	128-VTQFP 144-WFBGA
MEC1428	eSPI, LPC, I²C	192 KB	18 x 8	7	6/5	2	108	3	1.8V 3.3V	0	8	8	4	Full	0°C to 70°C –40°C to 85°C	128-WFBGA 128-VTQFP 144-WFBGA

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