



**THE DATASHEET OF  
MEC1428-SZ-C1-TR**



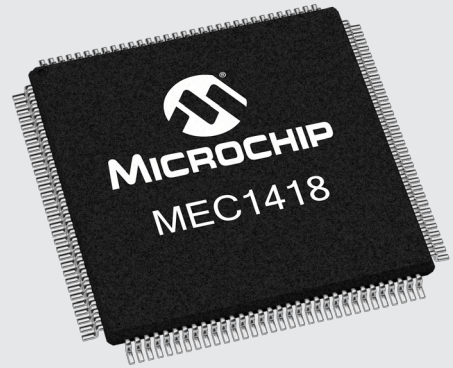
# MEC14XX Family

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

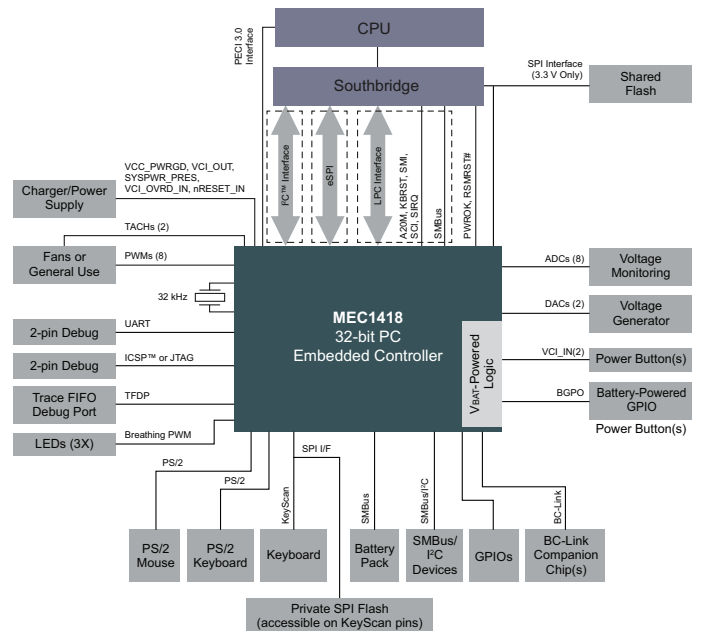
- MIPS32 M14K microcontroller core
- Fully supported by MPLAB Microchip development tools
- 192 KB of SRAM
- eSPI (MEC1418 and MEC1428), LPC, PECEI, PS2 and I<sup>2</sup>C interface
- Flexible Support of 1.8V and 3.3V I/O
- Host interface inflection from LPC to eSPI
- Secure Boot ROM with CRC 32 and 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



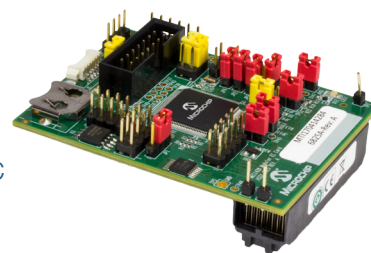
## System Diagram





## 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](http://www.microchipdirect.com/EVB-MEC1418MECC) and [www.microchipdirect.com/EVB-MEC1428MECC](http://www.microchipdirect.com/EVB-MEC1428MECC) respectively.



## MEC14XX Products

Product	Host Interface	SRAM Memory	Keyboard Matrix Scan Controller	SMBus 2.0 Ports	I <sup>2</sup> C Ports/Controllers	PS/2 Controllers	GPIOs	SPI Interfaces	SPI Flash Support	DACs	ADCs	PWMs	TACHs	UART	Operating Temperature	Package
MEC1408	LPC, I <sup>2</sup> C	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, I <sup>2</sup> C	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, I <sup>2</sup> C	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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