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
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.microchiptool.com/EVB-0000251MECC and www.microchiptool.com/EVB-0000252MECC respectively.

MEC14XX Products

<table>
<thead>
<tr>
<th>Product</th>
<th>Host Interface</th>
<th>SRAM Memory</th>
<th>Keyboard/Matrix Scan Controller</th>
<th>SMBus 2.0 Ports</th>
<th>I²C Ports/Controllers</th>
<th>SPI Interfaces</th>
<th>SPI Flash Support</th>
<th>DACs</th>
<th>ADCs</th>
<th>PWMs</th>
<th>TACHs</th>
<th>UART</th>
<th>Operating Temperature</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEC1408</td>
<td>LPC, I²C</td>
<td>192 KB</td>
<td>18 x 8</td>
<td>6</td>
<td>5/3</td>
<td>2</td>
<td>106</td>
<td>3</td>
<td>2</td>
<td>8</td>
<td>2</td>
<td>Full</td>
<td>0°C to 70°C</td>
<td>128-VTOFP 144-WFBGA</td>
</tr>
<tr>
<td>MEC1418</td>
<td>eSPI, LPC, I²C</td>
<td>192 KB</td>
<td>18 x 8</td>
<td>6</td>
<td>5/3</td>
<td>2</td>
<td>106</td>
<td>3</td>
<td>2</td>
<td>8</td>
<td>2</td>
<td>Full</td>
<td>0°C to 70°C</td>
<td>128-VTOFP 144-WFBGA</td>
</tr>
<tr>
<td>MEC1428</td>
<td>eSPI, LPC, I²C</td>
<td>192 KB</td>
<td>18 x 8</td>
<td>7</td>
<td>6/5</td>
<td>2</td>
<td>108</td>
<td>3</td>
<td>1.8V</td>
<td>3.3V</td>
<td>0</td>
<td>8</td>
<td>8</td>
<td>4</td>
</tr>
</tbody>
</table>

Easy Migration from LPC to eSPI

The MEC14XX family offers an easy migration from LPC to eSPI.