



## Intel® 6300ESB I/O Controller Hub for Embedded Computing

### Product Overview

The Intel® 6300ESB I/O Controller Hub (ICH) supports development of next-generation solutions for the communications and general embedded market segments. It is designed for use with the Intel® E7520 Memory Controller Hub (MCH), the Intel® 875P Memory Controller Hub (MCH) and the Intel® 855GME Graphics Memory Controller Hub (GMCH), providing board designers with a variety of platform options to address price, performance and packaging needs. The Intel 6300ESB ICH can be designed into platforms with processors ranging from the Intel® Pentium® M and Intel® Celeron® M processors to the Intel® Celeron®, Intel® Celeron® D, and Intel® Pentium® 4 processors, in socket 478 packaging, as well as the Intel® Xeon™ processor with 800 MHz system bus and the Low Voltage Intel® Xeon™ processor with 800 MHz system bus.

Intel has integrated features into the 6300ESB ICH that offer the performance, stability and reliability customers require for embedded computing applications. It builds upon the ICH5 design by improving bandwidth via PCI-X 64/66 and PCI 32/33 support. It also provides port 60/64 emulation, dual UARTs, a two-stage watchdog timer, and 37 GPIOs.

The Intel 6300ESB ICH and associated drivers help reduce support and validation costs, and offer a variety of sell-up opportunities while still providing flexibility and performance at value pricing.

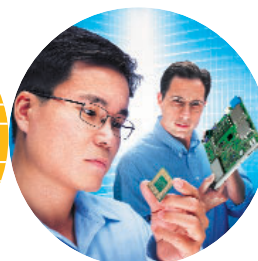


### Product Highlights

- Validated with the Intel E7520 MCH, Intel 875P MCH and 855GME GMCH. This flexibility allows the Intel 6300ESB ICH to be designed into systems that support the Pentium M and Celeron M processors, the Celeron, Celeron D, and Pentium 4 processors in socket 478 packaging, as well as the Intel Xeon processor with 800 MHz system bus and the Low Voltage Intel Xeon processor with 800 MHz system bus.
- PSB configurations available in 400 MHz, 533 MHz and 800 MHz
- Supports PCI-X 1.0 up to four masters
- Supports PCI 2.2 up to four masters
- Dual integrated UARTs for overall BOM cost savings
- Four USB 2.0 ports with one controller
- Support for two parallel ATA/100 and two serial ATA/150 ports, enabling very fast data and file transfer
- Port 60/64 emulation
- Two-stage watchdog timer
- 37 GPIOs including four High Drive GPIOs
- LPC interface for the Firmware Hub (FWH) eliminating need for a Super I/O component

Intel in  
Communications

Embedded Intel®  
Architecture

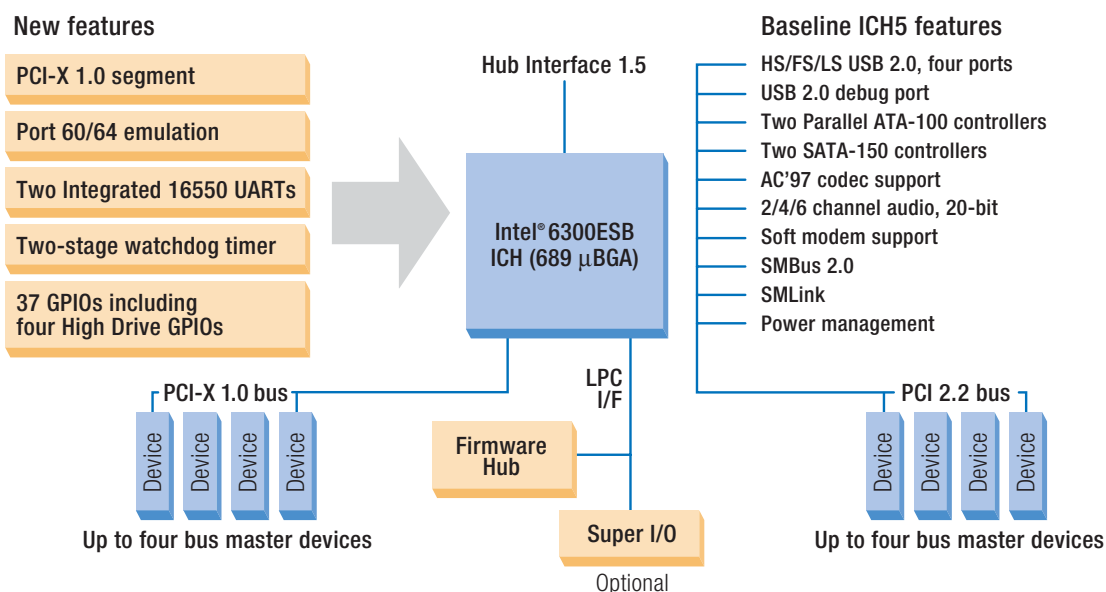


run  
Better, faster  
and further.

## Intel® 6300ESB I/O Controller Hub

Product	Product Code	Package	Features
Intel® 6300ESB I/O Controller Hub	FWE6300ESB	689 µBGA	<ul style="list-style-type: none"> <li>Direct connection to the GMCH via hub interface</li> <li>Designed for use with the Intel® E7520 MCH, Intel® 875P MCH and Intel® 855GME GMCH</li> <li>PCI-X 64/66 and PCI 32/33 support</li> <li>Dual integrated UARTs</li> <li>PATA/100 and SATA/150 support</li> <li>Four USB 2.0 ports</li> </ul>

## Intel® 6300ESB I/O Controller Hub Block Diagram



## Intel Access

Developer's Site:

[developer.intel.com](http://developer.intel.com)

Embedded Intel Architecture:

[developer.intel.com/design/intarch](http://developer.intel.com/design/intarch)

Intel® Technical Documentation Center:

[www.intel.com/go/techdoc](http://www.intel.com/go/techdoc)

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International locations please contact your local sales office.

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For more information, visit the Intel Web site at: [developer.intel.com](http://developer.intel.com)

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