



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® 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 processor to the Intel® Celeron® and Intel® Pentium® 4 processors, in socket 478 packaging.

Intel has integrated features into the 6300ESB ICH that offer the performance, stability and reliability customers require for embedded computing applications. It is a derivative of the Intel® 82801EB (ICH5) and 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 16500 compatible 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 875P MCH and 855GME GMCH. This flexibility allows the Intel 6300ESB ICH to be designed into systems that support the Pentium M processor, as well as the Celeron and Pentium 4 processors, in socket 478 packaging.
- PSB configurations available in 400 MHz, 533 MHz and 800 MHz
- Supports PCI-X 1.0 and PCI 2.2 with up to four bus masters
- Flexible memory support allows for 200, 266, 333 or 400 MHz DDR SDRAM to be designed in, enabling cost-effective, high-volume memory
- 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

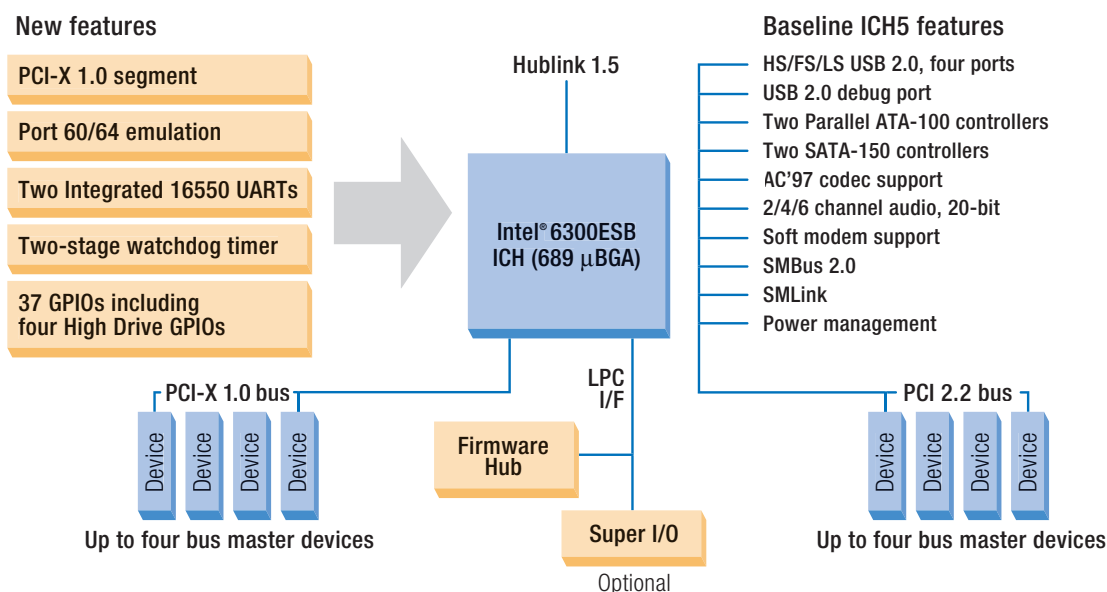


run
Better, faster
and further.

Intel® 6300ESB I/O Controller Hub

Product	Product Code	Package	Features
Intel® 6300ESB I/O Controller Hub	FWE6300ESB	689 µBGA	- Direct connection to the GMCH via Hublink 1.5 - Designed for use with the Intel® 875P MCH and Intel® 855GME GMCH - PCI-X 64/66 and PCI 32/33 support - Dual integrated UARTS - PATA/100 and SATA/150 support - Four USB 2.0 ports

Intel® 6300ESB I/O Controller Hub Block Diagram



Intel Access

Developer's Site:

developer.intel.com

Embedded Intel Architecture:

developer.intel.com/design/intarch

Intel® Technical Documentation Center:

www.intel.com/go/techdoc

(800) 548-4725 7 a.m. to 7 p.m. CST (U.S. and Canada)

International locations please contact your local sales office.

General Information Hotline:

(800) 628-8686 or (916) 356-3104 5 a.m. to 5 p.m. PST

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