



# Intel® 845E Chipset for Applied Computing

## Product Highlights

- The Intel® 845E chipset is designed, validated, and optimized for the Intel® Pentium® 4 processor and Intel® Pentium® 4 Processor – M with Intel® NetBurst™ microarchitecture
- 400MHz or 533MHz system bus delivers a high-bandwidth connection between the Intel Pentium 4 processor and the platform, providing 3x the bandwidth over platforms based on Intel® Pentium® III processors
- Advanced packaging technology and industry-leading electrical design innovations deliver long-term system reliability over wide operating conditions
- The AGP4X interface provides advanced graphics support, enabling over 1GB/s of graphics bandwidth
- Three USB controllers provide high-performance peripherals with 480Mbps of bandwidth, while enabling support for up to six USB 2.0 ports. This results in a significant increase over previous integrated 1-4 port hubs at 12Mbps
- The latest AC '97 implementation delivers 20-bit audio for enhanced sound quality and full surround sound capability. Integrated audio solutions continue to enjoy success as a very cost-effective, yet high-performance solution
- LAN Connect Interface (LCI) provides flexible network solutions such as 10/100Mbps Ethernet and 10/100Mbps Ethernet with LAN manageability
- The Intel® SingleDriver™ Technology supports all three network options, which simplifies network connectivity and eases deployment
- Dual Ultra ATA 100 controllers, coupled with the Intel® Application Accelerator – a performance software package – support faster IDE transfers to storage devices
- The Intel Application Accelerator software provides additional performance over native ATA drivers. The Intel Application Accelerator improves system performance by improving I/O transfer rates and enables faster O/S load time resulting in accelerated boot times
- Communication and Network Riser (CNR) offers flexibility in system configuration with a baseline feature set that can be upgraded with an audio card, modem card, or network card
- Embedded lifecycle support

## Intel 845E Chipset Overview

### Evolutionary Architecture

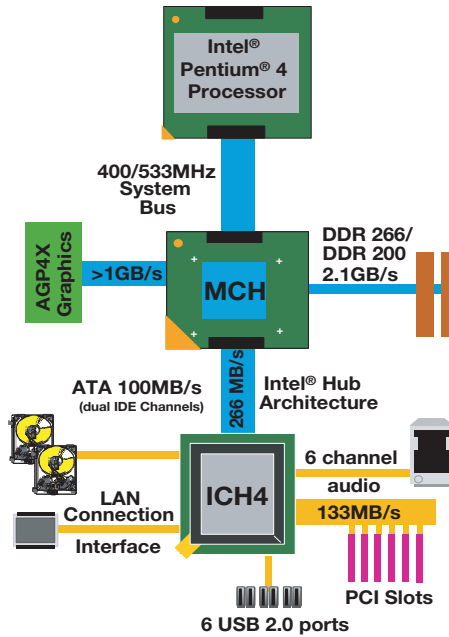
Intel 845E chipset-based platforms extend the Intel Pentium 4 processor and Intel Pentium 4 Processor – M capabilities with an excellent balance of price and performance for applied computing segments.

### The Intel 845E chipset consists of two controller hubs:

The 82845E Memory Controller Hub (MCH) supports a 400MHz or 533MHz system bus, DDR200/266 memory and the latest graphics devices through the 1.5V AGP4X interface. The 82801DB I/O Controller Hub (ICH4) makes a direct connection to the graphics and memory for faster access to peripherals. It provides the features and bandwidth required for applied computing-usage models.

### The Intel® Platform Advantage

Intel's platform architecture delivers the performance and high scalability required for today's cutting edge e-Business and e\_home applications. Intel's comprehensive efforts to enable the industry ensure fast deployment of next-generation platforms, maximizing competitive advantage. Our world-class platform validation creates a robust foundation for emerging applications, while minimizing deployment risks.



## Intel® 845E Chipset Linecard

Product	Product Code	Package	Features
82845E Memory Controller Hub (MCH)	RG82845E	593 FC-BGA	400MHz or 533MHz System Bus DDR200/266 Memory AGP4X interface enables over 1GB/s of graphics bandwidth
I/O Control Hub 4	FW82801DB	421 mBGA	Direct connection to MCH with Intel's accelerated hub architecture Supports 32-bit PCI IDE controllers with ATA 100 Six USB ports with USB 2.0 support AC '97 controller with 20-bit audio support Integrated LAN connect interface

## Intel Access

Developer's Site	<a href="http://developer.intel.com">developer.intel.com</a>
Embedded Intel® Architecture Chipsets	<a href="http://developer.intel.com/design/chipsets/embedded">developer.intel.com/design/chipsets/embedded</a>
Other Intel Support: Intel Literature Center	<a href="http://developer.intel.com/design/litcentr">developer.intel.com/design/litcentr</a> (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

Information in this document is provided in connection with Intel products. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Intel's Terms and Conditions of Sale for such products, Intel assumes no liability whatsoever, and Intel disclaims any express or implied warranty, relating to sale and/or use of Intel products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright or other intellectual property right. Intel products are not intended for use in medical, life saving, or life sustaining applications. Intel may make changes to specifications and product descriptions at any time, without notice.

Designers must not rely on the absence or characteristics of any features or instructions marked "reserved" or "unrefined." Intel reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them.

Intel, the Intel logo, Pentium, NetBurst and SingleDriver are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States or other countries.



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

**UNITED STATES AND CANADA**  
Intel Corporation  
Robert Noyce Bldg.  
2200 Mission College Blvd.  
P.O. Box 58119  
Santa Clara, CA 95052-8119  
USA

**EUROPE**  
Intel Corporation (UK) Ltd.  
Pipers Way  
Swindon  
Wiltshire SN3 1RJ  
UK

**ASIA-PACIFIC**  
Intel Semiconductor Ltd.  
32/F Two Pacific Place  
88 Queensway, Central  
Hong Kong, SAR

**JAPAN**  
Intel Kabushiki Kaisha  
P.O. Box 115 Tsukuba-gakuen  
5-6 Tokodai, Tsukuba-shi  
Ibaraki-ken 305  
Japan

**SOUTH AMERICA**  
Intel Semicondutores do Brazil  
Rue Florida, 1703-2 and CJ22  
CEP 04565-001 Sao Paulo-SP  
Brazil