



# Intel® 815/815E Chipset for Applied Computing

## Product Highlights

- Flexible processor support ranging from the Intel® Celeron® 300 MHz Ultra Low Power processor to the Intel® Pentium® III 700 MHz Low Power processor, and Intel Celeron processor at 566 MHz to the Pentium® III processor at 866 MHz and beyond with support for 66, 100, or 133 MHz Processor Side Bus (PSB) speeds
- Increased I/O bus bandwidth through the use of Intel® Hub Architecture which allows better concurrency for next-generation Applied Computing applications
- Support for 100 and 133 MHz SDRAM enabling cost effective high volume memory
- 512 MB maximum memory
- Low power sleep mode for energy savings
- Dual (815) or Quad (815E) USB ports
- Support for ATA/66 (815) or ATA/100 (815E)
- Integrated LAN Support (815E)
- Alert on LAN 1.0
- Intel 3D integrated graphics with Direct AGP expandability for vivid 2D and 3D graphics
- AGP4X upgradeable for increased graphics bandwidth allowing the highest possible graphics performance
- Add-in Graphics Performance Accelerator (GPA) card to provide up to a 30% boost for better 2D and 3D graphics performance over similar systems without a GPA card
- AC '97 Controller for better audio quality
- Digital Video Output which allows for connection of traditional TV or new digital flat-panel displays; compatible with the DVI specification
- Soft DVD MPEG-2 playback with HW motion compensation for life-like audio and video

## Product Description

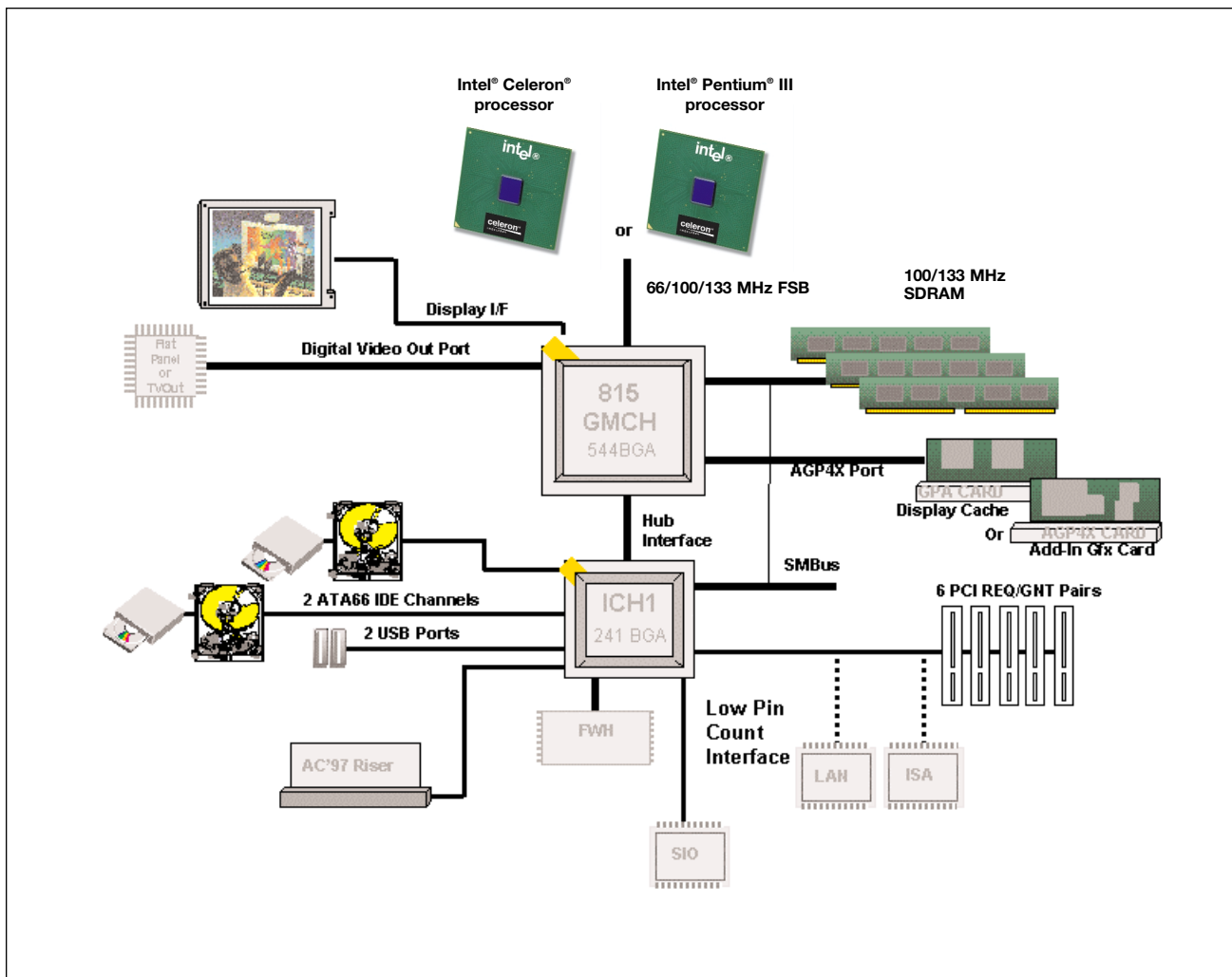
With Intel® 815 and 815E chipsets, Intel has introduced innovative technology to optimize scalability, flexibility, and stability of Applied Computing Platform solutions which utilize the Intel Pentium III and Celeron processors. The Intel 815 and 815E chipsets support both .13 micron and .18 micron process technology for the Pentium III and Celeron processors, 370-pin, in the FC-PGA and FC-PGA2 packages (Flip-Chip Pin Grid Array with integrated heat spreader). It also supports Intel Celeron Low Power and Ultra Low Power to Pentium III Low Power processors in the BGA2 package. The chipsets include a processor side bus that automatically scales from 66 to 133 MHz based on the processor used. These chipsets utilize a single driver featuring full backwards compatibility for increased quality and reliability. Intel's 3D with Direct AGP is easily upgraded by adding a Graphics Performance Accelerator (GPA) card, or an AGP4X card for maximum graphics and video performance.

Intel's smart graphics integration makes the Intel 815 chipset an intelligent solution for today's complex Applied Computing applications. Further flexibility can be achieved by taking advantage of the Communication and Network Riser (CNR) card option, which allows for audio, modem, and/or LAN configuration on a single base board design. The smart integration in the Intel 815 chipset design is extended in the Intel 815E with the addition of integrated LAN capability as well as four USB ports. By combining internal graphics, LAN, and support for four USB ports with the ability to take advantage of soft audio/modem technology, the Intel 815E chipset delivers an ideal solution for new innovative form factors.

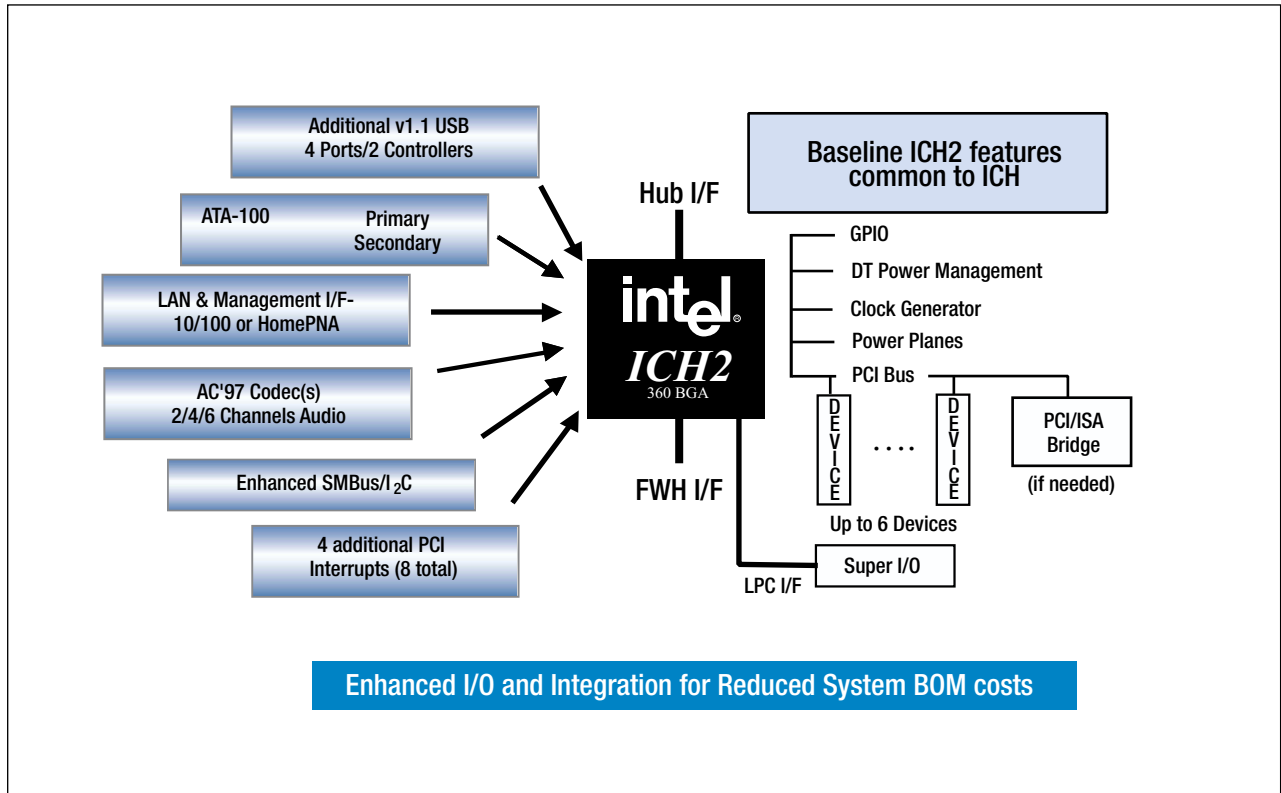
Built on next generation chipset technology, the Intel 815 and 815E chipsets offer the performance, stability, and reliability customers require for Applied Computing applications. The Intel 815 and 815E chipsets and drivers reduce support costs, validation costs, and offer a variety of sell-up opportunities while still providing flexibility and performance at value pricing.

## INTEL® 815 CHIPSET LINECARD

PRODUCT	PRODUCT CODE	PACKAGE	FEATURES
Graphics and AGP Memory Controller Hub (GMCH)	FW82815	544 BGA	<ul style="list-style-type: none"> <li>-Intel Accelerate Hub Architecture</li> <li>-Integrated scalable graphics</li> <li>-Intel 3D graphics with Direct AGP</li> <li>-Overall BOM cost savings</li> </ul>
I/O Control Hub (ICH)	FW82801AA	241 BGA	<ul style="list-style-type: none"> <li>-External AGP Port with the option for up to 4 MB of dedicated display cache video memory</li> <li>-Direct connection to the GMCH with Intel's accelerated hub architecture</li> <li>-Supports 32-bit PCI</li> <li>-IDE Controllers with ATA66</li> <li>-Dual USB ports</li> <li>-AC '97 controller</li> </ul>
I/O Control Hub 2 (ICH2)	FW82801BA	360 EBGA	<ul style="list-style-type: none"> <li>-Direct connection to the GMCH with Intel's accelerated hub architecture</li> <li>-Supports 32-bit PCI</li> <li>-IDE Controllers with ATA100</li> <li>-Four USB ports</li> <li>-AC '97 controller with 6 Channel Sound</li> <li>-Integrated LAN connect interface</li> </ul>



815 Chipset Block Diagram



Additional ICH2 Features

## Intel Access

Developer's Site	<a href="http://developer.intel.com">developer.intel.com</a>
Embedded Intel Architecture Home Page	<a href="http://developer.intel.com/design/intarch">developer.intel.com/design/intarch</a>
Intel Embedded 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

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**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