Intel® 815EP Chipset

Product Overview

With the Intel® 815EP chipset, Intel delivers an external graphics solution with all the performance, innovative features and proven reliability of the Intel® 815 chipset family. Pin-to-pin compatible with the Intel 815E chipset, the 815EP chipset is a highly scalable design for Intel® Pentium® III processor platforms.

The 815EP chipset is an ideal solution for power users who prefer to choose their own graphics. With support for an industry-wide range of external AGP 4X, 2X or 1X graphics cards, as well as PCI cards, the 815EP chipset forms a flexible platform for powerful multimedia performance.

- PC133 SDRAM increases peak memory bandwidth to 1GB/s over 800MB/s on PC100 SDRAM, and is available in a variety of memory configurations.

- AGP 4X provides the necessary graphics bandwidth to ensure the highest graphics performance and photo-realistic 3D. Support for AGP cards enables world-class multimedia solutions that satisfy a wide range of customers.

The smart integration in the Intel 815EP chipsets I/O Controller Hub (ICH2) features internal LAN capability and two USB controllers supporting four USB ports. With support for six channels of AC97 audio and the ability to make the most of soft audio/modem technology, the 815EP chipset delivers an ideal solution for innovative new form factors.

Further flexibility can be achieved by taking advantage of the Communication and Network Riser (CNR) card option that allows audio, modem, and/or LAN configuration on a single base board design. The integrated LAN capability utilizes Intel® SingleDriver™ technology, with full backward compatibility for increased quality and reliability.

Optimized Intel Hub Architecture

The 815EP chipset delivers a discrete graphics solution that enables easy upgrades to meet the performance and reliability requirements of the most demanding customers.

- The 82815EP Memory Controller Hub (MCH) provides the CPU interface supporting Intel® Pentium® III or Intel Celeron™ processors. The MCH also provides the PC133/100 SDRAM and AGP 4X interfaces. The AGP interface allows graphics controllers to access main memory at over 1 GB/s—twice that of previous AGP platforms.

- The enhanced 82801BA I/O Controller Hub (ICH2) delivers twice the I/O bandwidth over traditional bridge architecture and provides dedicated data paths to fully optimize the additional bandwidth.

- Two USB controllers double the bandwidth to 24Mbps across four ports, representing a significant increase over integrated 1-4 port hubs at 12Mbps.

- AC97 audio supports full surround sound with up to six channels and a soft modem implementation.

- The Integrated LAN Capability can be enabled for three distinct networking environments (1Mbps Home PNA, 10/100Mbps LAN and managed 10/100Mbps LAN). All three solutions utilize Intel SingleDriver technology, with a common set of drivers that simplify network complexity and increase ease of deployment.

- ATA100 Hard Disk Drive support stands ready for the latest storage technology while remaining compatible with today's most cost-effective and popular HDD solutions.

The 815EP chipset offers features that add value and are cost-effective, without compromising system responsiveness and performance.

Quality and Reliability

Built on Intel® Hub Architecture, the Intel 815EP chipset offers a discrete graphics solution that meets the needs of the most demanding customers. The Intel 815EP chipset and drivers reduce support and validation costs, offer a variety of sell-up opportunities, and provide flexibility and performance for a variety of user markets.

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Features	Benefits
■ Intel® Hub Architecture	■ Increased I/O bus bandwidth allows better concurrency for next-generation e-Business applications
■ Integrated LAN connect interface	■ Flexibility for multiple, cost-effective network solutions, from home PNA to 10/100 Mbps Ethernet with LAN manageability.
■ Intel® Pentium® III Processor and Intel® Celeron™ Processor support	■ Flexibility to support 66 MHz, 100 MHz, and 133 MHz configurations
■ SDRAM Support	■ Support for 100/133MHz SDRAM; a cost-effective, high-volume memory support
■ AGP4X Port	■ 2X increase in graphics bandwidth over AGP2X allows highest graphics performance
■ Communications and Network Riser (CNR) Support	■ Allows multiple configurations on a single card to extend USB, LAN, and audio for greater flexibility and ease of configuration
■ ATA100	■ Fastest data/file transfer
■ AC97 Controller	■ Better audio quality, with up to six channels and surround sound capability
■ Quad USB Ports	■ Two controllers for four ports, doubling the bandwidth at 24 Mbps
■ Low power sleep mode	■ Energy savings
■ Single driver for LAN	■ Single LAN driver across all Intel solutions, from home PNA to our PCI controllers
■ Alert on LAN* 1.0	■ Emits an alert in case of software failures or system intrusion, even when the O/S is not present or the system is suspended

Product	Package
82815 (GMCH)	544 Ball Grid Array (BGA)
82801BA (ICH2)	360 Enhanced Ball Grid Array (EBGA)

Intel Access

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Intel® Chipsets Home Page	http://developer.intel.com/design/chipsets/
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