

## Intel® Desktop Board D815EEA for Intel® Pentium® III and Intel® Celeron™ Processors

### Flexible Graphics and Leading-Edge Performance

The Intel® Desktop Board D815EEA combines versatility and performance in a single solution, with options to meet multiple price and performance points. Based on the new Intel® 815E chipset, the Desktop Board D815EEA supports Intel® Pentium® III processors with 100/133-MHz system bus speeds and Intel® Celeron™ processors at 66-MHz system bus. The Intel 815E chipset allows users to choose integrated Intel® 3D graphics, enhanced graphics performance with a Graphics Performance Accelerator (GPA) card or an upgrade to a high-performance AGP graphics card.



### Design Flexibility

The Desktop Board D815EEA is an all-encompassing product that allows system integrators ultimate configuration flexibility when combined with the optional on-board Creative Labs\* SoundBlaster\* PCI audio, the optional Intel® PRO/100 Network Connection (integrated LAN) or Communication and Networking Riser (CNR). Depending upon customer requirements, Intel Pentium III processors with 133-MHz and 100-MHz system bus and Intel Celeron processors with 66-MHz system bus can be used. The Intel 815E chipset also allows scalable graphics options for further system customization.

### Sophisticated Technology

Designed with cutting-edge technologies, the Desktop Board D815EEA's 133-MHz SDRAM has three DIMMs for a maximum of 512 MB memory. The optional Digital Video Interface (DVI) supports digital flat-panel displays, digital CRT or TV-out support. The Desktop Board D815EEA also offers a new, flexible and low-cost way to network. The Communication and Networking Riser enables efficient audio, modem, LAN and Home Phoneline Network Association (HPNA) support. The Desktop Board D815EEA also includes such innovations as Ultra ATA/100 disk support, easy-to-use USB expansion and Intel® Rapid BIOS Boot which speeds up the Power On Self Test (POST), enabling your system for operation much quicker. The Desktop Board D815EEA supports the full line of Intel desktop processors—from the performance of the Intel Pentium III processor to the value of the Intel Celeron processor. This full-featured ATX Desktop Board with five PCI slots, AGP and Instantly Available PC (Suspend-to-RAM) is a proven and reliable platform with the latest technological solutions.

### Enhanced Ease of Integration

System compatibility is important, but so is the time it takes to properly build a new PC. To help speed time-to-market, the boxed Intel Desktop Board D815EEA comes with such required system integration items as Ultra ATA/100, DMA/33 and floppy cables, I/O shield, product documentation and a CD-ROM containing the Intel® Express Software Suite, including Norton AntiVirus\* and Intel® Express Installer. This software is designed specifically for Intel Desktop Boards and to facilitate ease of integration. Every Intel Desktop Board comes with a three-year limited warranty and the comprehensive support that only Intel can provide.

## Features

## Benefits

<b>Support for Intel® Pentium® III and Intel® Celeron™ processors</b>	Pentium III processors and Celeron processors in the Flip Chip Pin Grid Array (FC-PGA) or PPGA package with 133-MHz, 100-MHz or 66-MHz system bus.
<b>Intel® 815E Chipset</b>	Latest Intel chipset provides flexibility to support all system bus designs with new performance-enhanced features. Delivers graphics scalability for multiple system price/performance points.
<b>Universal AGP 4X Connector</b>	Supports the latest graphics technology.
<b>Three 133-MHz SDRAM DIMM Sockets</b>	Supports a maximum 512 MB of 133-MHz SDRAM.
<b>Ultra ATA/100</b>	Faster disk I/O.
<b>Intel® Rapid BIOS Boot</b>	Reduced boot time enables faster system availability.
<b>Digital Video Output (DVO) Header</b>	Interface supports flat panel, digital CRT or TV-out cards.
<b>Five PCI slots</b>	Expansion slots for custom system configurations and future add-in card upgrades.
<b>Creative Labs* SoundBlaster* PCI 128 Audio</b>	Exceptional sound and support for downloadable wavetable and 3D positional audio.
<b>Four USB Ports</b>	Dual-stack rear connectors and header for two front-panel USB connectors.
<b>Communication and Networking Riser (CNR) Support (Optional)</b>	New technology that supports integrated LAN, HPNA, modem or audio cards for overall system cost savings and customization.
<b>Integrated Intel® PRO/100 Network Connection (integrated LAN; optional)</b>	On-board 10/100 Ethernet LAN connectivity.
<b>ATX Form Factor</b>	Proven form-factor standard for easy integration.
<b>Instantly Available PC (Suspend-to-RAM)</b>	Power-management mode to reduce PC power consumption. Allows PC to turn off and on quickly without needing to boot.
<b>Intel® Express Software Suite</b>	Software designed specifically for Intel® Desktop Boards and ease of integration. Suite includes: <ul style="list-style-type: none"><li>• Intel® Express Installer</li><li>• Norton AntiVirus*</li><li>• Software Drivers</li><li>• Product Guide</li></ul>
<b>Hardware Management ASIC</b>	Allows remote monitoring of system conditions for lower total cost of ownership.
<b>Three-year limited warranty</b>	Expanded investment protection.

## The boxed Intel® Desktop Board D815EEA includes:

- Intel® Desktop Board D815EEA with integrated Intel® 3D Graphics in the Intel® 815E chipset and Creative Labs\* SoundBlaster\* PCI 128 audio or Intel® PRO/100 Network Connection†
- ATX compliant I/O shield
- Cables: one Ultra ATA/100, one ultra DMA/33 and one floppy cable
- AGP Retention Mechanism (recommended for AGP 4X support)
- Quick Reference Guide

- Configuration label, stickers, back-panel label and a battery warning label
- CD-ROM with software drivers, warranty, Product Guide and value-added software applications

†Available options

# Intel® Desktop Board D815EEA Specifications

## Processor

**Processors Supported (via PGA370 connector)** Intel® Pentium® III processors with 133-MHz and 100-MHz system bus in the FC-PGA package, supporting speeds from 500-866 MHz

Intel® Celeron™ processors with 66-MHz system bus in the PPGA or FC-PGA package, supporting speeds from 500-600 MHz

## Chipset

**Intel® 815E chipset** Intel® 82815 Graphics and Memory Controller Hub (GMCH) with AHA (Accelerated Hub Architecture) bus  
Intel® 82801BA I/O Controller Hub (ICH2) with AHA bus  
Intel® 82802AB Firmware Hub (FWH)

## Graphics/Memory Controller Hub (GMCH)

**Accelerated Graphics** Integrated Intel® 3D Graphics with support for additional 4 MB of Digital Display cache memory with A IMM

Includes Digital Video Output header  
• Support for Digital Visual Interface (DVI) and TV output

Supports 1x, 2x and 4x AGP 2.0 compliant graphics cards add-in cards

## I/O Controller Hub (ICH2)

**ICH2 I/O Controller Hub** Ultra DMA/33  
Ultra ATA/66/100  
Six PCI request-grant pairs for support of six PCI Bus Masters

## I/O Features

Integrated Super I/O LPC bus controller  
Five PCI Local Bus slots  
Communication and Networking Riser (CNR; optional), shared with PCI slot 5  
Power Management; support for both ACPI 1.0 & APM 1.2

## USB

PC 99 and PC 99A Compliance  
Two USB controllers with 4 USB ports  
• Two-port stacked rear connector  
• header for cabling two ports to the front panel

## Firmware Hub

**System BIOS** 4-Mb Flash EEPROM with Intel/AMI\* BIOS featuring Plug and Play, IDE drive auto-configure, Advanced Power Management (APM) 1.2, ACPI 1.0, DMI 2.0, Multilingual support, hardware random number generator

## Intel® Rapid BIOS Boot

Optimized POST delivers faster access to PC from power-on

## System Memory

**Memory Capacity** Three 168-pin unbuffered DIMM sockets for 32 MB (min) to 512 MB (max) SDRAM

## Memory Type

PC100, 100-MHz non-ECC (all system bus speeds)  
PC133, 133-MHz non-ECC (133 MHz system bus only)

## Memory Voltage

3.3 V

## Audio

PCI audio supported by the Creative Labs\* ES1371 AC '97 Digital Controller with Crystal Semiconductor CS4297 (A) Stereo Audio Codec (option)  
ADI 1885 soft audio (option)

## LAN

Intel® PRO/100 Network Connection (integrated LAN; optional)  
RJ-45 connector with link and speed LEDs  
Auto-negotiation of 10BaseT and 100BaseTX

## Hardware Management Features

Voltage sense to detect out of range values  
Chassis intrusion detect connector  
Two fan sense inputs used to monitor fan activity

## Enhanced Diagnostics

Four dual-color LEDs on back panel for hardware diagnostic decoding during power on self test

## Wake-Up From Network

Wired for Management (WfM) 2.0 compliant  
Support for system wake up using an add-in network interface card with remote wake up capability, integrated 82562ET network adapter, or PCI

## Expansion Capabilities

5 PCI bus add-in card connectors (PCI) Local Bus Specification Revision 2.2  
One Communication and Networking Riser (CNR) connector shared with PCI slot 5 (optional)  
One universal AGP Port connector

## Jumpers and Front Panel Connectors

**Jumpers** 3-pin jumper block to set configuration mode for the BIOS Setup program  
CNR configuration jumper (optional)  
**Front Panel Connector** Reset, HD LED, Power LEDs, Power On/Off, Standby header, IR Port, Aux LED

## Mechanical

**Board Style** ATX mounting holes and external connector placement  
**Board Size** 8.2" x 12.0"

## Baseboard Power Requirements

<b>+3.3V</b>	0.37A w/o LAN; 0.39A w/LAN
<b>+5V</b>	0.14A w/o LAN; 0.12A w/LAN
<b>+12V</b>	0.13A w/o LAN; 0.14A w/LAN
<b>-12V</b>	0.01A w/o LAN; 0 w/LAN
<b>+5VSB</b>	0.72A w/o LAN; 0.72A w/LAN

## Environment

**Operating Temperature** 0° C to +55° C  
**Storage Temperature** -40° C to +70° C

## Regulations

**Safety Regulations** UL 1950 -- CSA 950-95, US and Canadian recognition component marks  
UL and Canada Classified to IEC 950  
**EMI/RFI reg:** Intended for use in systems meeting the following EMI/RFI regulations:  
FCC Class B (DoFC - Cover off testing)  
IC Class B  
EU Class B (Res, Com, Light Industry)  
Japan VCCI, Class B (ITE)

Power requirements vary with system configuration and use. Complies with US CRF via EN55022 + 6db in an open chassis and EU Directive 89/336/EEC via EN55022 and EN50082-1 in a representative chassis.

## Ordering Information

See Intel's web site at [www.intel.com](http://www.intel.com)

For the most current product information, visit Intel's Web site at: [program.intel.com/ibp/products/boards/d815eea/](http://program.intel.com/ibp/products/boards/d815eea/)



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The Intel® Desktop Board D815EEA may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

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