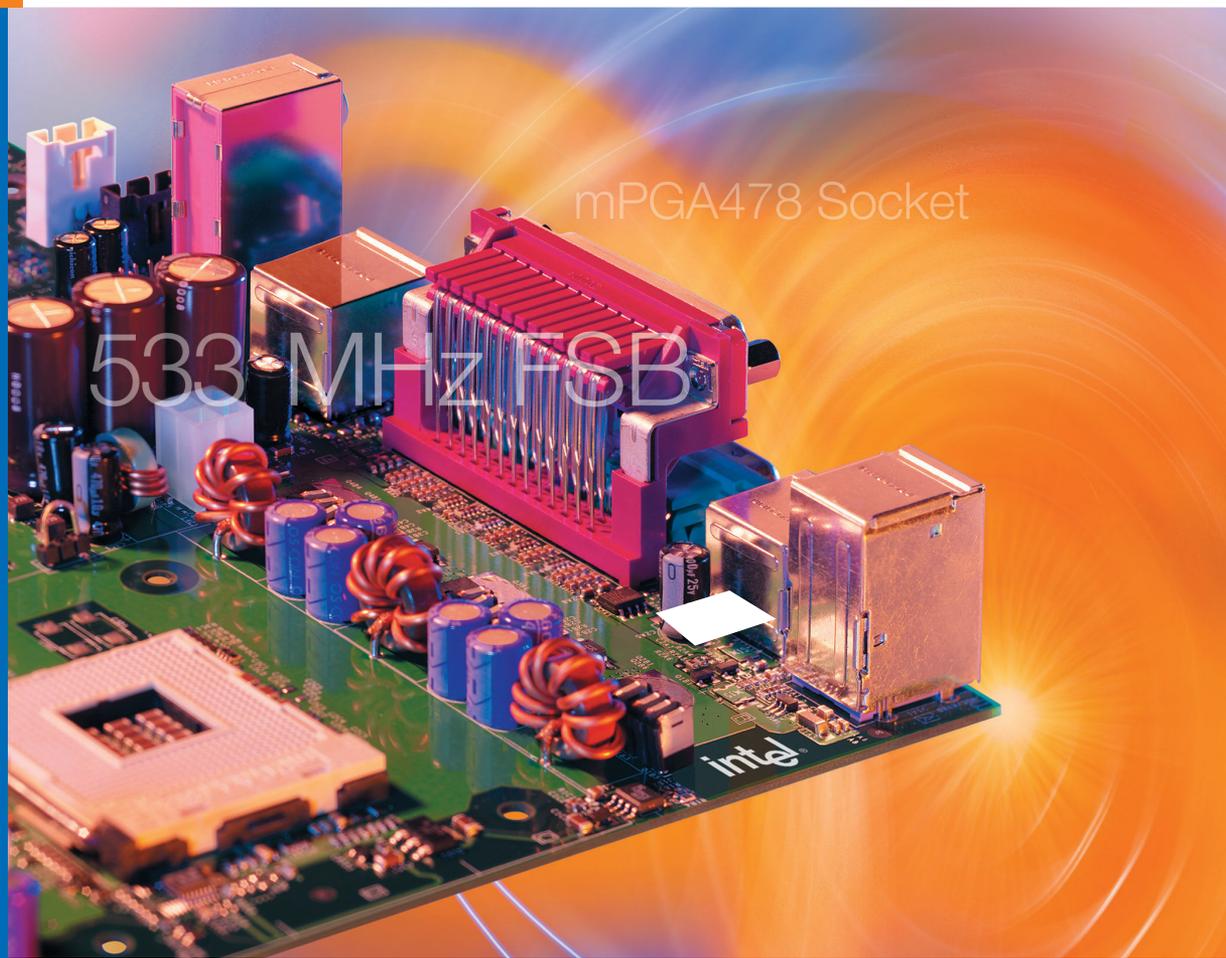


Intel® Desktop Boards D845GERG2 and D845GEBV2 for the Intel® Pentium® 4 Processor in the mPGA478-pin package



Advanced performance to optimize your experience

The Intel® Desktop Boards D845GERG2 and D845GEBV2 expand the portfolio of integrated graphics platforms for the Intel® Pentium® 4 processor. Featuring the Intel® 845GE chipset, these desktop boards deliver support for DDR 333 memory technology along with improved Intel® Extreme Graphics.

As an industry leader, Intel continues its tradition of delivering innovative desktop board technologies with Desktop Boards D845GERG2 and D845GEBV2.

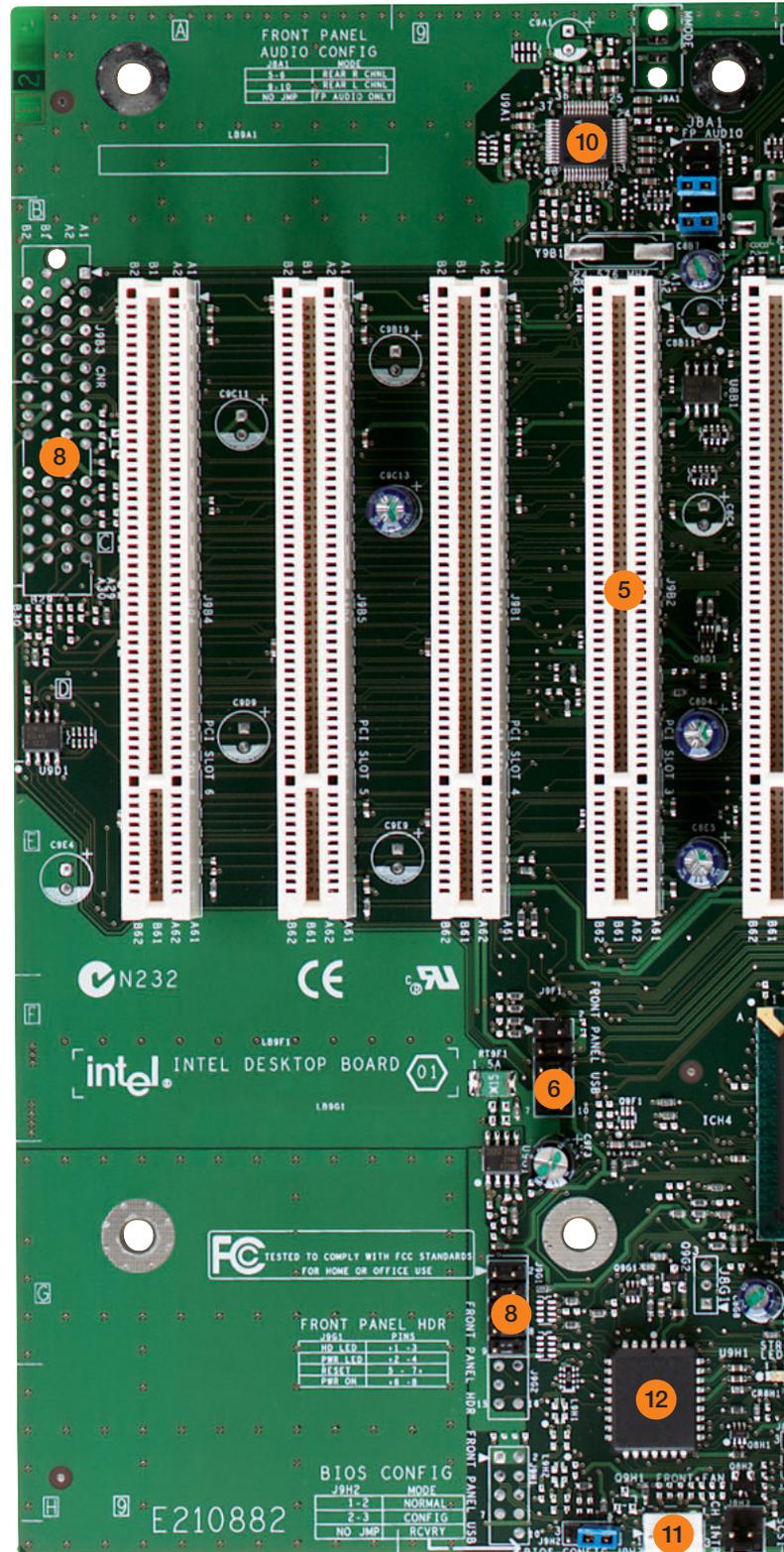
Platform features include:

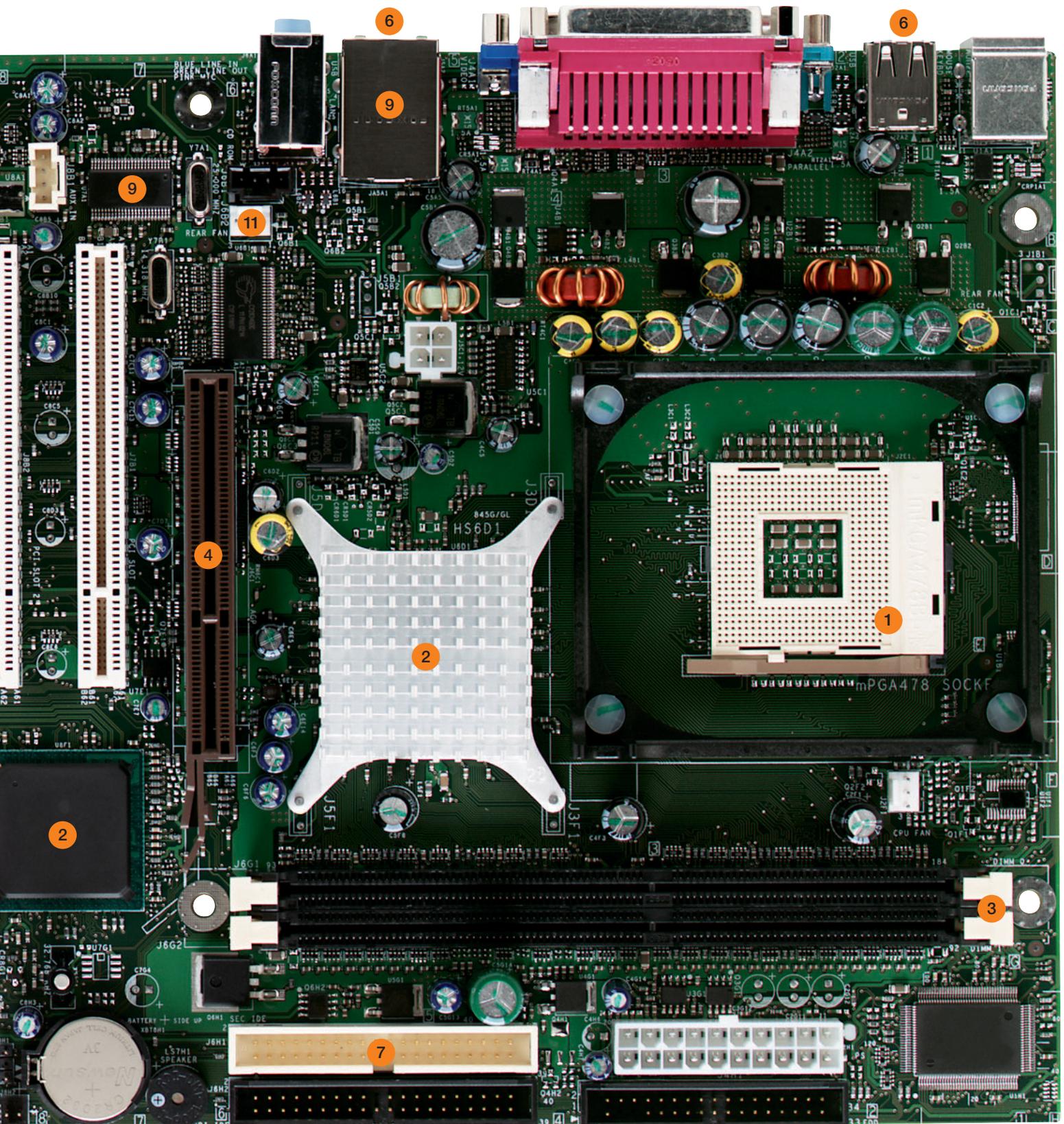
- Intel Extreme Graphics with up to 64MB dynamic memory and up to 266 MHz graphics core speed: improved graphics engine provides enhanced visual effects.
- Supports the Intel Pentium 4 processor in the mPGA478-pin package, including the 533 MHz system bus: greater bandwidth for high-performance processors.
- Designed to support up to 2GB¹ DDR333² SDRAM memory: supporting the latest double data rate memory technology.
- Intel® Precision Cooling Technology: Fan speeds adjust real time according to system temperatures to reduce unnecessary noise & energy consumption.
- Integrated Hi-Speed USB 2.0 technology:³ up to 40 times the performance of USB 1.1.
- Intel® Rapid BIOS Boot: accelerates Power on Self Test (POST) for fast system access.
- Instantly Available PC (suspend-to-RAM): enables advanced power saving features.

Intel® Desktop Boards D845GERG2 and D845GEBV2

Features & Benefits

- 1 **Support for the Intel® Pentium® 4 Processor with mPGA478 package:** Supports Pentium® 4 processors in the mPGA478-pin package and Intel® NetBurst™ microarchitecture, including 533 MHz and 400 MHz system bus
- 2 **Intel® 845GE chipset featuring Intel® Extreme Graphics with 64MB Dynamic Memory:** Improved low cost, high performance graphics solution
- 3 **Two DDR SDRAM DIMM sockets:** Designed to support up to 2GB¹ of double-data-rate SDRAM memory (DDR266 or DDR333²)
- 4 **AGP 4X/2X 1.5V connector:** Flexibility to upgrade via a high-end AGP graphics card
- 5 **Three PCI slots (Desktop Board D845GERG2) or six PCI slots (Desktop Board D845GEBV2):** Expansion slots for custom system configurations and future add-in card upgrades
- 6 **Six Hi-Speed USB 2.0 ports:** Two dual-stack rear connectors and header for two front panel USB connectors for up to 40 times the performance of USB 1.1
- 7 **Ultra ATA/100:** Enables fast IDE interface for transfers to storage devices
- 8 **Communication and Networking Riser (CNR) support (optional):** Plug and Play technology designed to support integrated LAN, HPNA, modem or audio cards for overall system cost savings and flexibility
- 9 **Integrated Intel® PRO/100 or PRO/1000 network connection (optional):** On-board 10/100 or 10/100/1000 Mbps Ethernet LAN connectivity
- 10 **AC'97 Audio with SoundMAX® Cadenza® with SPX® and stereo microphone inputs:** Exceptional audio performance and excellent value
- 11 **Intel® Precision Cooling Technology:** Advanced Management ASIC supports temperature-based fan speed control
- 12 **Intel® Rapid BIOS boot:** Reduced boot time enables fast system access





Analog Audio



Boxed Intel Desktop Boards D845GERG2 and D845GEBV2 include:

- Desktop Board
- Intel® Express Installer CD, including:
 - Norton Internet Security* 2002
 - Intel® Active Monitor
 - SoundMAX* Cadenza* with SPX*
 - Software drivers, with easy Web updates
 - RealOne* with DFX*
 - MacroMedia* Shockwave*
 - NTI CD-Maker*
 - Desktop Board three-year limited warranty⁴
 - Product Guide
- Floppy and IDE cables
- Board and back panel I/O layout stickers
- Quick Start Guide

Intel® Desktop Boards D845GERG2 and D845GEBV2 Technical Specifications

Processor

Processors Supported	<ul style="list-style-type: none">Intel® Pentium® 4 processors with Intel® NetBurst™ micro-architecture including a 533 MHz or 400 MHz system bus in the mPGA478-pin packageIntel® Celeron® processors including 400 MHz system bus in the mPGA478-pin package (via mPGA478 connector)
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Intel® 845GE Chipset	<ul style="list-style-type: none">Intel® 82845GE Graphics Memory Controller Hub (GMCH) with Accelerated Hub Architecture busIntel® 82801DB I/O Controller Hub (ICH4) with Accelerated Hub Architecture busIntel® 82802AB Firmware Hub (FWH)
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Graphics Memory Controller Hub (GMCH)	Designed to support up to 2GB ¹ (w/512Mb technology) of DDR333 SDRAM memory
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Intel® ICH4 I/O Controller Hub	<ul style="list-style-type: none">Ultra ATA/66/100Ultra DMA/33Six PCI request-grant pairs for support of six PCI bus masters
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I/O Features	<ul style="list-style-type: none">Integrated super I/O LPC bus controllerSix (Intel® Desktop Board D845GEBV2) or three (Intel® Desktop Board D845GERG2) PCI local bus slotsCommunication and Networking Riser (CNR) (optional), shared with PCI slotPower management support for ACPI 1.0b Designed for PC2001
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USB 2.0	<p>Integrated Intel® ICH4 controllers:</p> <ul style="list-style-type: none">Four back panel ports (two dual stack)Two front panel ports (header requiring cable to front panel)
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Firmware Hub

System BIOS	<ul style="list-style-type: none">4 Mb Flash EEPROM with Intel/AMI* BIOS featuring Plug and Play, IDE drive auto-configureAdvanced configuration and power interface V1.0b, DMI 2.0, multi-lingual support
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Intel® Rapid BIOS Boot	Optimized POST for faster access to PC from power-on
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System Memory

Memory Capacity	Two 184-pin DIMM connectors. Designed to support up to 2GB ¹ (w/512Mb technology) of DDR333 SDRAM memory
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Memory Type	<ul style="list-style-type: none">Double Data Rate (DDR) PC333 or PC266 SDRAMNon-ECC
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Memory Voltage	2.5V
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Hardware Management Features

- System chassis fan speed control
- Voltage and temperature sense
- Fan-sensor inputs used to monitor fan activity

Wake-up From Network

- Wired for Management (WfM) 2.0 compatible
- Support for system wake-up using an add-in network interface card with remote wake-up capability or integrated LAN

Expansion Capabilities

- Three (Desktop Board D845GERG2) or six (Desktop Board D845GEBV2) PCI bus add-in card connectors
- Optional Communication and Networking Riser (CNR) connector shared with PCI slot 3 (Desktop Board D845GERG2) or PCI slot 6 (Desktop Board D845GEBV2)
- One 1.5V 4X AGP connector

Jumpers and Front Panel Connectors

Jumpers/Headers	<ul style="list-style-type: none">Single configuration jumper designJumper access for BIOS configuration modeFront panel USB headerFront panel audio header
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Front Panel Connector	Reset, HD LED, Power LEDs, power on/off, standby header
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Mechanical

Board Style	<ul style="list-style-type: none">Desktop Board D845GERG2 – microATX 1.0 compliant board sizeDesktop Board D845GEBV2 – ATX 2.03 compliant board size
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Board Size	<ul style="list-style-type: none">Desktop Board D845GERG2 – 9.6" x 8.2"Desktop Board D845GEBV2 – 12.0" x 8.2"
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Baseboard Power

Requirements	<ul style="list-style-type: none">Desktop Board D845GERG2 – ATX12V or SFX12VDesktop Board D845GEBV2 – ATX12V
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Environment

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

Safety Regulations	
<i>U.S. and Canada</i>	<ul style="list-style-type: none">UL 1950 – CSA 950-95U.S. and Canadian recognition component marks
<i>Europe</i>	UL classified to IEC 950

EMI/RFI regulations (Intended for use in systems meeting the following:)

<i>U.S.</i>	FCC Class B (DofC - Cover off testing)
<i>Canada</i>	IC Class B
<i>Europe</i>	EU Class B (Res, Com, Light Industry)
<i>Japan</i>	VCCI, Class B (ITE)

Power requirements vary. Complies with US CRF via EN55022 + 6db in system configurations with an open chassis and EU Directive 89/336/EEC and use via EN55022 and EN55082-1 in a representative chassis.

Ordering Information: See Intel's Web site at www.intel.com
For the most current product information available,
visit Intel's Web site at developer.intel.com/design/motherbd/



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Intel® Desktop Boards D845GERG2 and D845GEBV2 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.

- Designed to support up to 2GB DDR333 SDRAM memory using 512Mb technology. Currently validated to 1.0GB using 256Mb technology. Visit <http://developer.intel.com/support/motherboards/desktop/> for latest validated memory support.
- The system must be running a 533 MHz FSB processor in order to run DDR memory at 333 MHz.
- Not supported on all operating systems. See product guide for details.
- Three-year limited warranty applies to boxed Intel® Desktop Boards only.

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