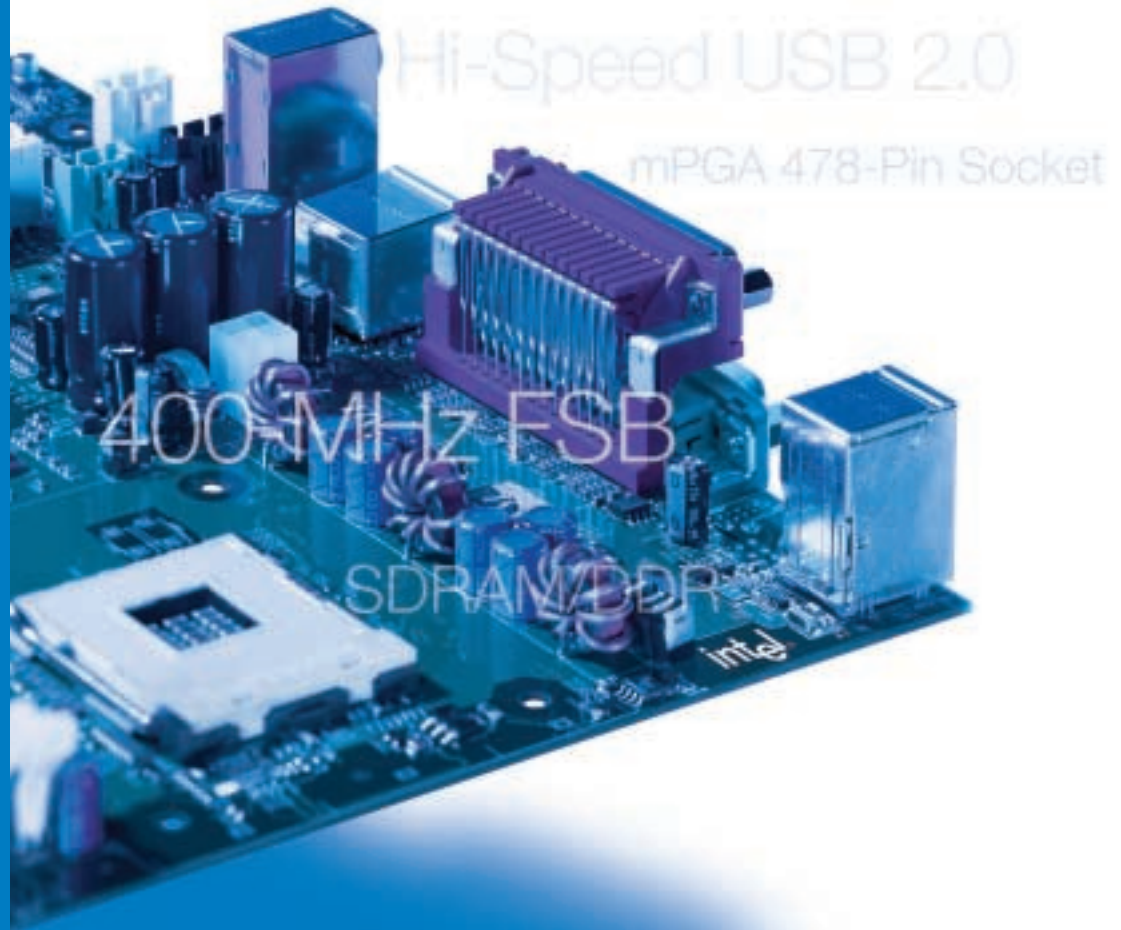




# Intel® Desktop Boards D845GLAD and D845GLLY

for Intel® Celeron® processors in the mPGA478-pin packages

Intel® Extreme Graphics



Product  
Brief

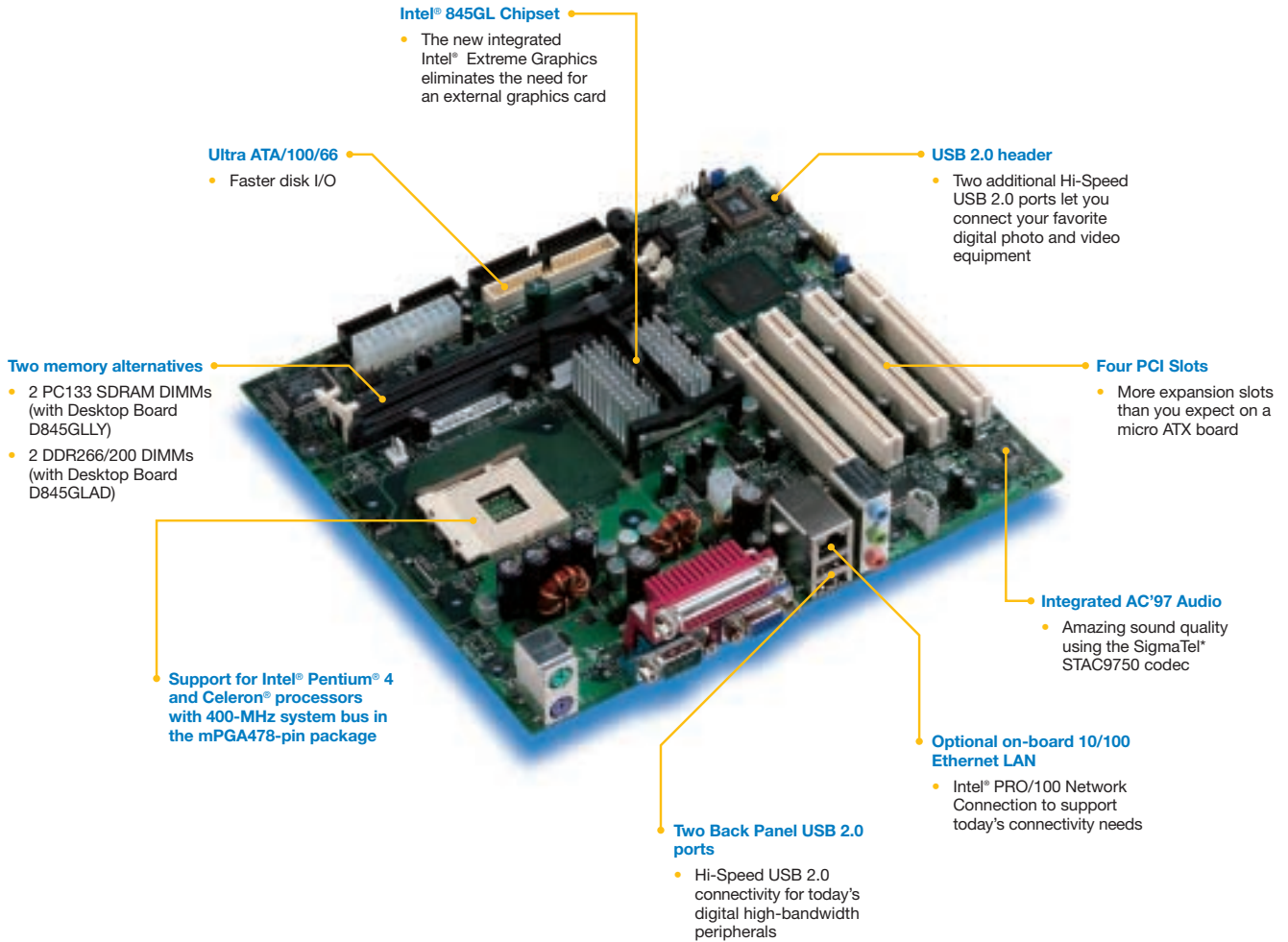
## Delivering Essential Features and Leading Technologies

The Intel® Desktop Boards D845GLAD and D845GLLY deliver integrated graphics solutions with essential features that support Intel® Pentium® 4 and Intel® Celeron® processors with 400-MHz system bus in the mPGA478-pin package. Featuring the Intel® 845GL chipset with support for up to 2GB\*\* of DDR266\*\* or PC133\*\* SDRAM memory, these boards deliver remarkable value and flexibility with four PCI slots, Hi-Speed USB 2.0\*\*\* and optional integrated LAN.

In line with Intel's reputation for proven reliability and leading technology, Intel® Desktop Boards D845GLAD and D845GLLY undergo extensive compatibility testing and deliver exciting new features such as Hi-Speed USB 2.0\*\*\* and integrated Intel® Extreme Graphics.

### Low Cost Solution

Desktop Boards D845GLAD and D845GLLY were designed with a high level of integration to minimize overall system cost. The new integrated Intel® Extreme Graphics and the SigmaTel® AC'97 Audio solution eliminate the need for costly discrete Video and Audio PCI cards by delivering high quality video and audio solutions. With 4 PCI slots these boards offer remarkable flexibility and the advantage of the lower system costs associated with microATX solutions.



## Snap integration

Like all Intel platform solutions, Desktop Boards D845GLAD and D845GLLY offer several features that ensure compatibility and ease of integration to save you time and money. As part of a full suite of software for simplified and efficient integration, Intel® Express Installer 3.0 offers a simple interface for drivers and software installation. Built-in security features make it easy and safe to update the BIOS. Boxed Intel® desktop boards also come with a limited three-year warranty and world-class support that is unmatched in the industry.

## Rock Solid Product

To ensure that Intel® Desktop Boards D845GLAD and D845GLLY function reliably in your systems, we perform extensive compatibility testing. Each Intel® desktop board is subjected to over 500 tests on approximately 330 commercially available hardware, software, and network products. Furthermore, each board undergoes substantial memory validation and BIOS functionality testing.



## Boxed Intel® Desktop Boards D845GLAD and D845GLLY Solution includes:

- Desktop Board
- ATX compliant I/O shield
- Integrated processor thermal solution retention mechanism
- Floppy and IDE cables
- Board and back panel I/O layout stickers
- Quick Start Guide
- Intel® Express Installer CD, including:
  - Norton\* Internet Security\*
  - RealOne\* with DFX
  - NTI\* CD-Maker\*
  - Macromedia\* Shockwave\*
  - Software Drivers
  - Product Guide
  - Desktop Board Three-year Limited Warranty



## Features

**Supports the Intel® Pentium® 4 and Celeron® processors with 400-MHz system bus in the mPGA478-pin package**

**Intel® 845GL chipset with Intel® Extreme Graphics**

**Intel® Rapid BIOS Boot**

**Two SDRAM DIMM sockets (Desktop Board D845GLLY), or two DDR DIMM sockets (Desktop Board D845GLAD)**

**Four PCI slots**

**Four Hi-Speed USB 2.0 ports\*\*\***

**Integrated Intel® PRO/100 network connector (optional)**

**SigmaTel\* AC'97 Audio with Software Equalizer**

**Instantly Available PC (Suspend-to-RAM)**

**Three-year limited warranty**

## Benefits

Flexible support for the Intel® Celeron® processor transition to the mPGA478-pin package.

Provides low cost, high quality integrated graphics without the added cost of discrete graphics solutions.

Reduced boot time enables faster system access

Designed to support up to 2GB\*\* of PC133 SDRAM memory or up to 2GB of DDR266/200 SDRAM memory\*\*

Additional flexibility for custom system configurations and future add-in card upgrades

One dual stack rear connector and header for front panel USB connector provide Hi-Speed USB 2.0 connections for today's high performance peripherals

On-board 10/100Mbps Ethernet LAN connectivity

High Performance 20-bit audio solution that enables fine tuning of audio sound to improve sound quality especially on inexpensive speaker systems

Power management mode reduces PC power consumption and provides immediate PC access using advanced wake-up logic

Expanded investment protection for boxed Intel® desktop boards

# Intel® Desktop Boards D845GLAD and D845GLLY Technical Specifications

## Processor

**Processors Supported (via mPGA478-pin socket)** Intel® Pentium® 4 and Celeron® processors with Intel® NetBurst™ microarchitecture including a 400-MHz system bus in the mPGA478-pin package and supporting frequencies starting at 1.40 GHz

**Intel® 845GL Chipset** Intel® 845GL Graphics Memory Controller Hub (GMCH) with Accelerated Hub Architecture bus  
Intel® 82801DB I/O Controller Hub (ICH4) with Accelerated Hub Architecture bus  
Intel® 82802AB Firmware Hub (FWH)

**Graphics Memory Controller Hub (GMCH)** Designed to support up to 2GB\*\* (w/512Mb technology) of either DDR266/200 SDRAM memory (Desktop Board D845GLAD) or PC133 SDRAM (Desktop Board D845GLLY)

**ICH4 I/O Controller Hub** Ultra ATA/66/100  
Ultra DMA/33  
Allows support of four PCI bus masters

**I/O Features** Integrated super I/O LPC bus controller  
Four PCI local bus slots  
Power management support for ACPI 1.0  
PC 2001 compliance

**USB 2.0\*\*\***

- Two back panel ports (one dual stack)
- Two front panel ports (header requiring cable to front panel)

## Firmware Hub

**System BIOS** 4-Mb Flash EEPROM with Intel/AMI® BIOS featuring plug-and-play, IDE drive auto-configure  
Advanced configuration and power interface V1.0b, DMI 2.0, multilingual support

**Intel® Rapid BIOS Boot** Optimized POST for faster access to PC from power-on

**Audio Solution** Sigmatel® STAC9750 AC'97 compliant integrated audio solution

## System Memory

**Memory Capacity** Two 184-pin DIMM connectors supporting up to two double-sided DIMMS (Desktop Board D845GLAD)

Two 168-pin SDRAM connectors supporting up to two double sided DIMMS (Desktop Board D845GLLY)

**Memory Type** DDR266 SDRAM or DDR200 SDRAM (Desktop Board D845GLAD)  
PC133 SDRAM (Desktop Board D845GLLY)

**Memory Voltage** 2.5V DDR memory (Desktop Board D845GLAD)  
3.3V SDRAM memory (Desktop Board D845GLLY)

## 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 PCI

## Expansion Capabilities

Four PCI bus add-in card connectors

## Jumpers and Front Panel Connectors

**Jumpers** Single configuration jumper design  
Jumper access for BIOS configuration mode  
Single Front panel USB wake configuration jumper  
Jumper allows user to enable ACPI wake from front panel USB devices

**Front Panel Connector** Reset, HD LED, Power LEDs, power on/off, standby header

## Mechanical

**Board Style** µATX 1.0 compliant board size

**Board Size** 9.2" x 8.2"

## Baseboard Power

**Requirements** ATX12V or SFX12V

## Environment

**Operating Temperature** 0° C to +55° C

**Storage Temperature** -40° C to +70° C

## Regulations

### Safety Regulations

U.S. and Canada UL 1950—CSA 950-95  
U.S. and Canadian recognition component marks  
Europe UL classified to IEC 950

### EMI/RFI regulations: *Intended for use in systems meeting the following*

#### EMI/RFI regulations:

US FCC Class B (DofC—Cover off testing)  
Canada IC Class B  
Europe EU Class B (Res, Com, Light Industry)  
Japan 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 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 available, visit Intel's Web site at:**  
**[www.intel.com/reseller](http://www.intel.com/reseller) or [developer.intel.com/design/motherbd/](http://developer.intel.com/design/motherbd/)**

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All products, dates and figures specified are preliminary based on current expectations, provided for planning purposes only, and are subject to change without notice. Availability in different channels may vary.

The Intel® Desktop Boards D845GLLY and D845GLAD 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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\* Other names and brands may be claimed as the property of others.

\*\* Intel® Desktop Board D845GLAD supports DDR SDRAM memory and Intel® Desktop Board D845GLLY supports PC133 SDRAM memory. Currently validated to 1.0GB using 256Mb technology. For latest validated memory support, visit <http://developer.intel.com/support/motherboards/desktop/>

\*\*\* Not supported on all operating systems. See product guide for details.

