

Intel® Desktop Boards D845EBT Technical Specifications

Processor

Processors Supported Intel® Pentium® 4 processors with Intel® NetBurst® microarchitecture including 533 or 400 MHz system bus in the mPGA478-pin package
Intel® Celeron® processors including 400 MHz system bus in the mPGA478-pin package

Chipset

Intel® 845E Chipset Intel® 82845E Memory Controller Hub (MCH) with Accelerated Hub Architecture bus
Intel® 82801DB I/O Controller Hub (ICH4) with Accelerated Hub Architecture bus

Memory Controller Hub (MCH) Designed to support up to 2GB** (with 512Mb technology) of DDR266 or DDR200 SDRAM memory

Intel® ICH4 I/O Controller Hub Ultra ATA/66/100
Ultra DMA/33

Six PCI request-grant pairs for support of six PCI bus masters

External Interfaces

I/O and Expansion Capabilities Integrated super I/O LPC bus controller
Five PCI bus add-in card connectors (PCI local bus Specification Revision 2.2)
One Communication and Networking Riser (CNR) connector
One 1.5V 4X/2X AGP port connector
Power management support for ACPI 1.0
PC 01, PC 99, and PC 99A compliance

Six USB 2.0 Ports*** Integrated Intel ICH4 controller
- Four back-panel ports (two dual stacks)
- Two front panel ports (header requiring cable to front panel)

Three IEEE-1394a Ports Integrated Agere® FW323 controller
- One back-panel port
- Two front panel ports (header requiring cable to front panel)

IDE RAID (ATA-100) Integrated Promise Technologies® PDC20267 controller
- Two dedicated IDE connectors
- Support for RAID 0,1,0+1

Firmware Hub

System BIOS 4Mb 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

System Memory

Memory Capacity Two 184-pin DIMM connectors supporting up to two double-sided DIMMS

Memory Type Double Data Rate (DDR266 or DDR200) SDRAM in 64Mb, 128Mb, 256Mb and 512Mb technologies

Memory Voltage 2.5V

Hardware Management and Control Features

Voltage and temperature sense
Fan-sensor inputs used to monitor fan activity
Configurable automatic closed-loop fan control

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 or PCI

Jumpers and Front Panel Connectors

Jumpers Single configuration jumper design
Jumper access for BIOS configuration mode

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

Mechanical

Board Style ATX 2.03 compliant
Board Size 12.0" x 8.2" (300mm x 206mm)

Power Requirements ATX12V

Environment

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

Regulations

Safety Regulations
U.S. and Canada UL 1950 and 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:

U.S. 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

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



Intel® Desktop Board D845EBT for the Intel® Pentium® 4 Processor

Intel® Desktop Board D845EBT is the optimal board for building a high performance feature-rich enthusiast PC at a mainstream price point. Desktop Board D845EBT delivers great features for gaming and media enthusiasts:

Surround Sound Audio

Featuring SoundMAX® Cadenza*

- Premium audio performance
- Complete analog and digital I/O for high fidelity speakers or home theater

IDE RAID 0, 1, 0+1

- Transfer media and other files quickly with striping onto two or four hard drives
- Protect data with mirroring onto two or four drives
- Gain both speed and data protection with striping and mirroring onto four drives

Stereo Microphone for Voice Recognition

Featuring SoundMAX Cadenza with PureAudio*

- Effective voice recognition even in noisy environments
- Great performance for Internet telephony, command-and-control, and dictation

USB 2.0 and IEEE-1394a Ports

- Connectivity for a full range of consumer electronics



With the latest technologies and high quality integrated components, Desktop Board D845EBT enables system builders to realize significant cost savings without sacrificing performance. The features of this new board support an optimal user experience in a broad range of usage models for today's enthusiasts:

- **Gaming:** Optimal gaming experience with surround sound, RAID performance boost, stereo microphone input for Voice over IP (VoIP), and USB 2.0 for the latest game controllers.
- **Digital music and video:** Enhance music and movies with surround sound, and optimize file transfer with RAID while building media libraries or editing video. Connect camcorders with USB 2.0 or IEEE-1394a.
- **Digital photography:** Download photos quickly with either USB 2.0 or IEEE-1394a and save them quickly using RAID.
- **Online communication:** Realize the true benefits of Internet telephony with stereo microphone input and SoundMAX Cadenza software.

Combined with the performance of the Intel® Pentium® 4 processor and the Intel® 845E chipset with DDR support, Desktop Board D845EBT is an exceptional platform for building an exciting, feature-rich PC.

Light-Augmented Desktop Board D845EBT Includes:

- **Desktop Board**, including:
 - Pre-installed retention mechanism for processor thermal solution
 - AGP connector with integrated retention mechanism
- **ATX-compliant I/O shield**
- **Board and back-panel I/O layout stickers**
- **One-year limited warranty**

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**Designed to support up to 2GB DDR266 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.

***USB 2.0 ports are fully backwards compatible with USB 1.1 devices. Drivers for USB 2.0 are available for Windows® 2000 and Windows XP® operating systems; devices used on systems with other operating systems will operate at USB 1.1 speeds.

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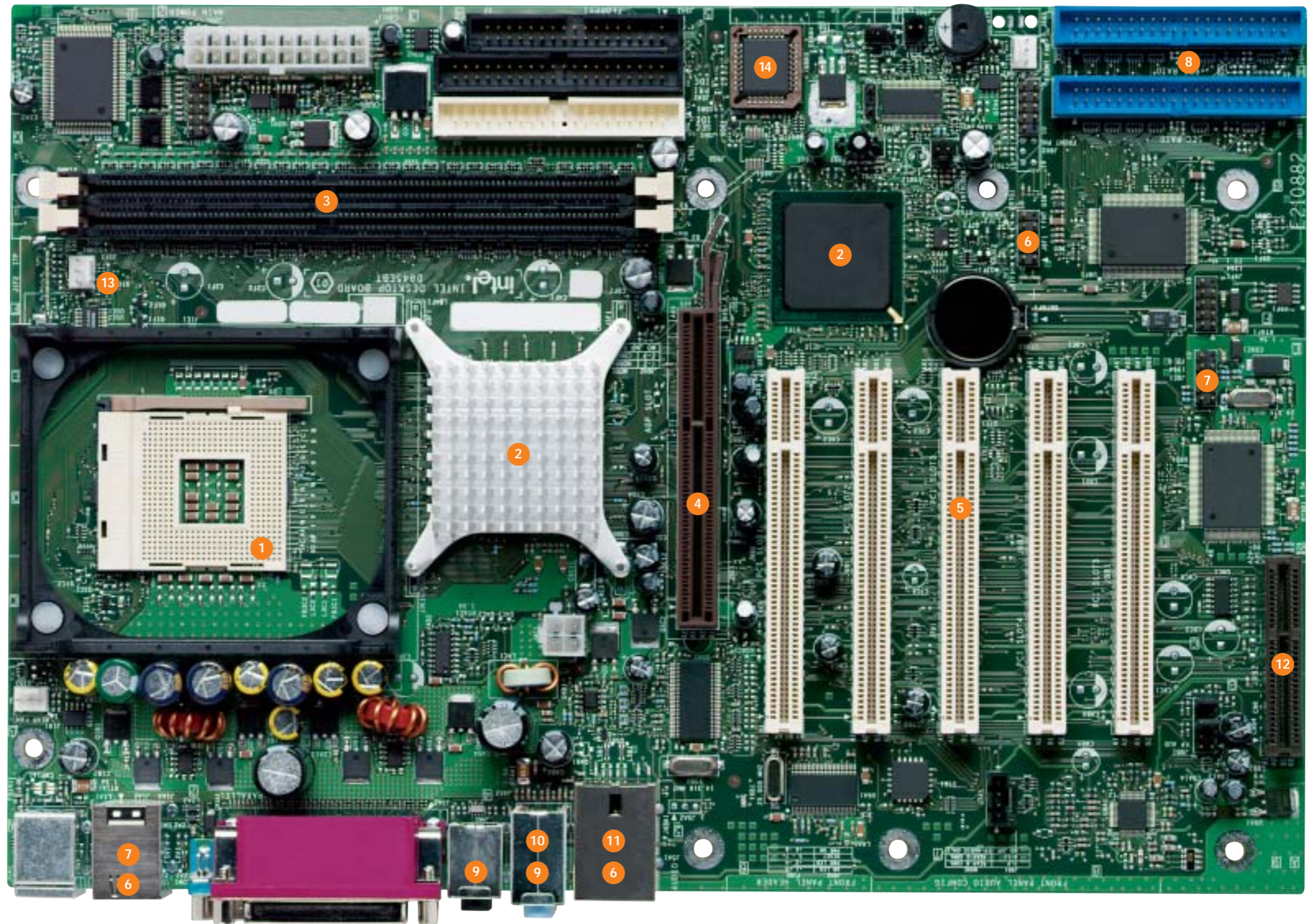
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Intel® Desktop Board D845EBT

Features & Benefits

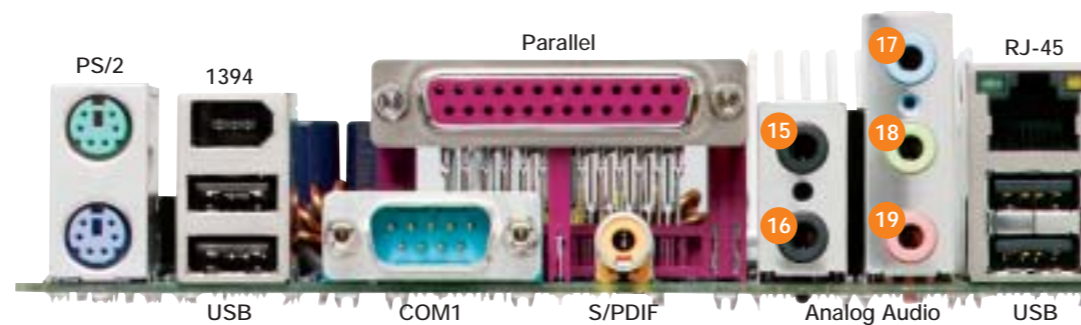
- 1 Support for the Intel® Pentium® 4 Processor with 533 or 400 MHz system bus: Supports Pentium 4 processors in the mPGA478-pin package and Intel® NetBurst™ microarchitecture
- 2 Intel® 845E Chipset featuring support for six USB 2.0 ports: Advances beyond the Intel® 845 chipset with support for 533 MHz system bus and six USB 2.0 ports
- 3 Two DIMM Sockets for DDR266 SDRAM: Designed to support up to 2GB** of DDR266 SDRAM memory
- 4 AGP 4X Connector: Support for the latest graphics technology
- 5 Five PCI Slots: Expansion slots for custom system configurations and future add-in card upgrades
- 6 Six USB 2.0 Ports: Two dual-port rear connectors and header for two front panel ports
- 7 Three IEEE-1394a Ports: One rear connector and header for two front panel ports
- 8 Two RAID IDE Connectors with Support for RAID 0,1,0+1: Gain both speed and data protection with striping and/or mirroring
- 9 Surround Sound Audio Including SoundMAX® Cadenza® with SPX®: Full-featured performance audio without an expensive add-in card
- 10 Voice Recognition with Stereo Microphone Input: Effective voice recognition for VoIP and command and control of desktop applications
- 11 Intel® PRO/100 network Connection: On-board 10/100 Mbps Ethernet LAN connectivity utilizing Intel® 82562ET LAN
- 12 Communication and Networking Riser (CNR) Support: Plug and Play technology ideal for adding a low-cost modem card
- 13 Quiet Cooling with Fan Control: Advanced management ASIC supports temperature-based fan control and enables remote system monitoring
- 14 Intel® Rapid BIOS Boot: Reduced boot time enables faster system access



The Intel Desktop Board D845EBT

Also Features:

- Instantly available PC (suspend-to-RAM): Reduced PC power consumption and provides immediate PC access using advanced wake-up logic
- One-year limited warranty: Expanded investment protection



I/O Back Panel

Featuring Integrated Surround Sound Audio Connectors

- 15 Rear R-L
- 16 Center-LFE
- 17 Line In
- 18 Front R-L
- 19 Stereo Mic