



# Delivering the next generation of desktop PC technology

PRODUCT BRIEF



**Intel® Desktop Board D875PBZ for the Intel® Pentium® 4 processor**



# Intel® Desktop Board D875PBZ



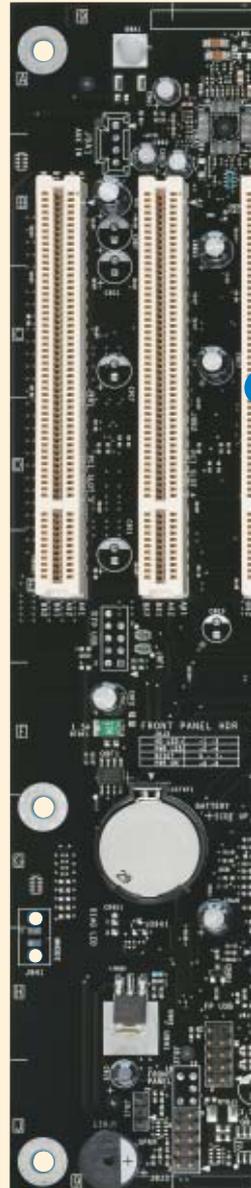
## Intel's Highest Performance Desktop Platform

The all-new Intel® Desktop Board D875PBZ harnesses the advanced computing power of the latest Intel® Pentium® 4 processors supporting Hyper-Threading Technology<sup>1</sup>. Designed for the Intel® 875P chipset, the Desktop Board D875PBZ with Intel® RAID Technology<sup>2</sup> support brings new levels of performance to the desktop by combining support for an 800-MHz system bus with dual-channel DDR400<sup>3</sup> and native Serial-ATA 150 with Intel® RAID Technology<sup>2</sup> support. Intel® Performance Acceleration Technology (Intel® PAT) helps further accelerates performance by reducing memory latencies. These exciting new features provide excellent system efficiency and raw speed for even the most demanding software applications.

A next-generation desktop board today.

## FEATURES AND BENEFITS

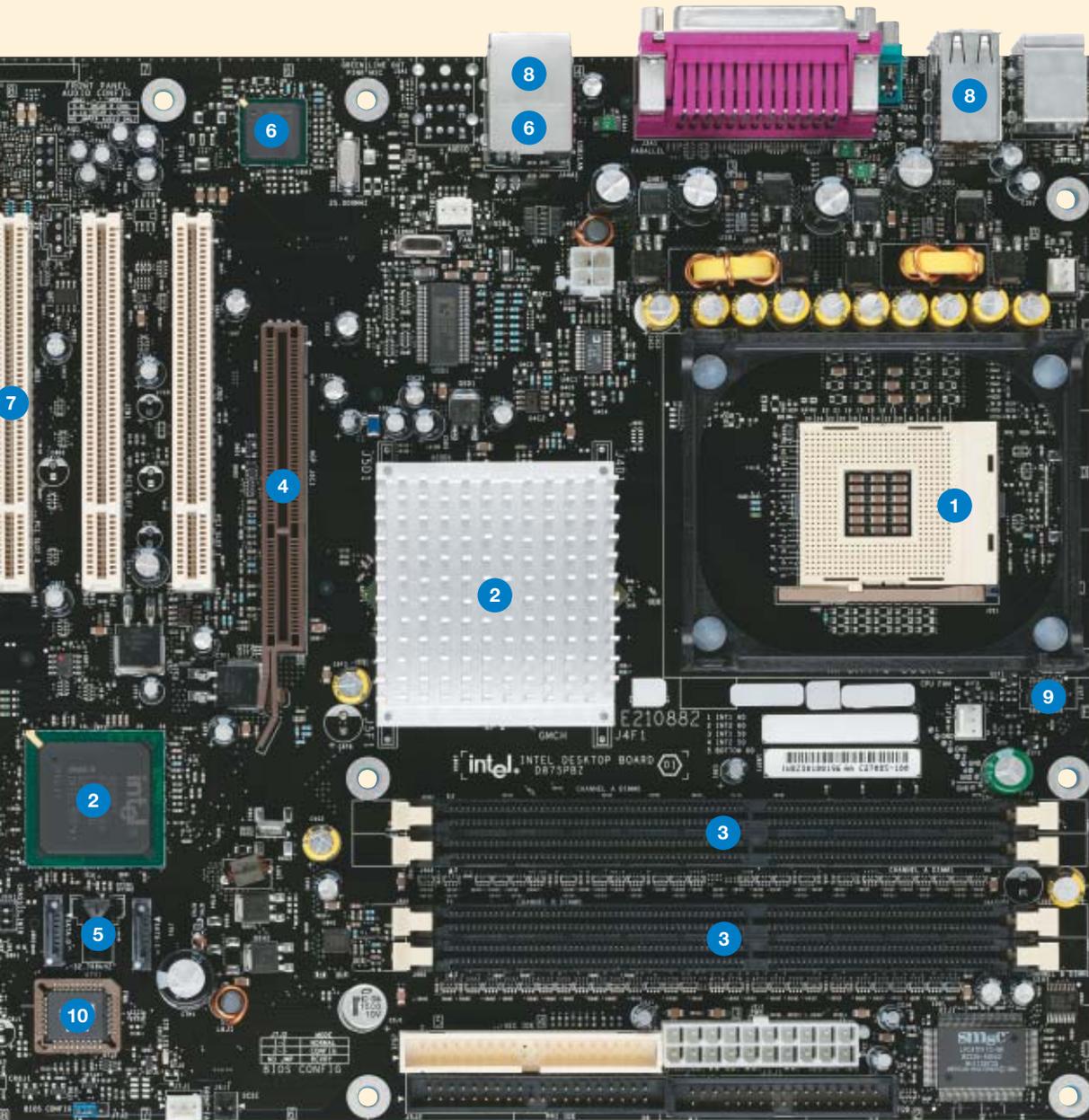
- 1 Support for the Intel® Pentium® 4 processor supporting Hyper-Threading Technology<sup>1</sup> and 800-MHz system bus in the mPGA478-pin package.** Also supports the Intel Pentium 4 processor with 533-MHz system bus in the mPGA478 package.
- 2 Intel® 875P Chipset featuring Intel® Performance Acceleration Technology (Intel® PAT) to boost overall system performance by reducing memory latencies.**
- 3 Dual-Channel DDR400<sup>3</sup> SDRAM support:** Four DIMM sockets designed to support up to 4 GB<sup>4</sup> of DDR400<sup>3</sup> SDRAM memory (also supports DDR333<sup>5</sup>). Flexible support for either single or dual-channel operation.
- 4 AGP 8X/4X graphics interface:** For high-end AGP graphics cards.
- 5 Serial-ATA 150 (1.5 Gb/s) featuring Intel® RAID Technology<sup>2</sup> and Ultra ATA/100 connectors:** Flexible support of new generation SATA150 (2 ports) and current generation ATA (2 channels) storage devices. Also includes Intel® RAID Technology<sup>2</sup> for support of up to 300 MB/s of maximum bandwidth on RAID 0 configurations with Serial-ATA HDDs.
- 6 Integrated Intel® PRO/1000 CT Desktop Connection LAN:** Onboard Gigabit Ethernet LAN connectivity using the Communication Streaming Architecture (CSA) interface.
- 7 Five PCI slots:** Expansion slots for custom system configurations and future add-in card upgrades.
- 8 Eight Hi-Speed USB 2.0 ports:** Six rear ports and header for two front-panel USB ports.
- 9 Intel® Precision Cooling Technology:** Advanced management ASIC supports temperature-based fan control. Fan speeds adjust real time according to system temperatures to help reduce unnecessary noise and energy consumption.
- 10 Intel® Rapid BIOS Boot:** Accelerates Power on Self Test (POST) for faster system access.
- 11 Not pictured:** Instantly Available PC (suspend-to-RAM): enables advanced power savings.



PS/2



USB 2.0



PARALLEL

RJ-45



COM1

USB 2.0

**BOXED INTEL® DESKTOP BOARD D875PBZ SOLUTION INCLUDES:**

- Intel® Desktop Board
- ATX-compliant I/O shield
- Floppy, SATA and IDE Cables
- Board and back-panel I/O layout stickers
- QuickStart Guide
- Desktop Board three-year limited warranty
- Intel® Express Installer CD, including:
  - Norton® Internet Security\*
  - Intel® Active Monitor
  - RestoreIT!® Lite
  - Diskeeper® Lite
  - RealONE® Player
  - NTI® CD-Maker\*
  - Software Drivers, with easy Web updates
  - Product Guide

## Intel® Desktop Board D875PBZ

### Processor

<b>Processors Supported</b>	<ul style="list-style-type: none"> <li>Intel® Pentium® 4 processors supporting Hyper-Threading Technology<sup>1</sup> with 800-MHz or 533-MHz system bus in the mPGA478-pin package</li> <li>Intel Pentium 4 processors with 533 MHz in the mPGA478-pin package</li> </ul>
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### Chipset

<b>Intel® 875P Chipset</b>	<ul style="list-style-type: none"> <li>Intel® 82875P Memory Controller Hub (MCH) with Accelerated Hub Architecture bus</li> <li>Intel® 82801ER I/O Controller Hub with Accelerated Hub Architecture bus</li> <li>Intel® 82802AC Firmware Hub (FWH)</li> </ul>
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<b>Memory Controller Hub (MCH)</b>	<ul style="list-style-type: none"> <li>Designed to support up to 4 GB<sup>2</sup> of system memory using DDR400/333<sup>3</sup> SDRAM memory</li> </ul>
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<b>Intel® ICH5R I/O Controller Hub</b>	<ul style="list-style-type: none"> <li>2 Serial-ATA 150 ports with Intel® RAID 0 support</li> <li>Ultra ATA 100/66</li> </ul>
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<b>I/O Features</b>	<ul style="list-style-type: none"> <li>Integrated super I/O LPC bus controller</li> <li>Five PCI local bus slots</li> <li>Power management support for ACPI 1.0b</li> <li>Designed for PC2001</li> </ul>
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<b>USB 2.0</b>	<ul style="list-style-type: none"> <li>Integrated Intel ICH5R controllers:</li> <li>Six back-panel ports (one quad and one dual stack)</li> <li>Two front-panel ports (via header requiring cabling to front panel)</li> </ul>
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### Firmware Hub

<b>System BIOS</b>	<ul style="list-style-type: none"> <li>8-Mb Flash EEPROM with Intel/AMI* BIOS featuring Plug and Play, IDE drive auto-configure</li> <li>Advanced configuration and power interface V1.0b, DMI 2.0, multi-lingual support</li> </ul>
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<b>Intel® Rapid BIOS Boot</b>	<ul style="list-style-type: none"> <li>Accelerated POST for faster access to PC from power-on</li> </ul>
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### System Memory

<b>Memory Capacity</b>	<ul style="list-style-type: none"> <li>Four 184-pin DIMM connectors supporting up to four double-sided DIMMs</li> </ul>
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<b>Memory Types</b>	<ul style="list-style-type: none"> <li>DDR400 SDRAM Memory (when used with Intel® processor with 800-MHz system bus)</li> <li>DDR333 SDRAM Memory (when used with Intel processor with 800-MHz or 533-MHz system bus)</li> <li>ECC or Non-ECC RAM</li> </ul>
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<b>Memory Modes</b>	<ul style="list-style-type: none"> <li>Dual- and single-channel operation support</li> </ul>
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<b>Memory Voltage</b>	<ul style="list-style-type: none"> <li>2.5V</li> </ul>
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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

- Five PCI bus add-in card connectors
- One universal 1.5V or 0.8V AGP 3.0 connector supporting up to AGP8X

### Jumpers and Front-Panel Connectors

<b>Jumpers</b>	<ul style="list-style-type: none"> <li>Single configuration jumper design</li> <li>Jumper access for BIOS configuration mode</li> </ul>
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<b>Front-Panel Connectors</b>	<ul style="list-style-type: none"> <li>Reset, HD LED, Power LEDs, power on/off, standby header</li> <li>Two front-panel USB headers</li> <li>Front-panel audio header</li> </ul>
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### Mechanical

<b>Board Style</b>	ATX 2.03-compliant
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<b>Board Size</b>	11.5" x 9.6"
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### Power Requirements

	ATX12V
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### Environment

<b>Operating Temperature</b>	0° C to +55° C
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<b>Storage Temperature</b>	-40° C to +70° C
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### Regulations

<b>Safety Regulations</b>	
<i>U.S. and Canada</i>	UL 1950, 3rd ed.— CAN/CSA C22.2 No. 950-95 w/U.S. and Canadian recognized component marks
<i>Europe</i>	Nemko certified to EN 60950
<i>International</i>	Nemko certified to IEC 60950 (CB report w/CB certificate)

### EMC Regulations (tested in representative chassis)

<i>U.S.</i>	FCC Part 15, Class B
<i>U.S.</i>	FCC Part 15, Class B open chassis (cover off) testing
<i>Canada</i>	ICES-003, Class B
<i>Europe</i>	EMC directive 89/336/EEC; EN 55022:1998 Class B; EN 55024:1998
<i>Australia/New Zealand</i>	AS/NZS 3548, Class B
<i>Taiwan</i>	CNS 13438, Class B
<i>International</i>	CISPR 22:1997, Class B

Power requirements vary. Complies with U.S. CRF via EN55022 + 6 db 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: [developer.intel.com/design/motherbd/](http://developer.intel.com/design/motherbd/)

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Intel® Desktop Board D875PBZ 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. 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. Intel, Pentium and the Intel logo are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

\*Other names and brands may be claimed as the property of others.

<sup>1</sup> Hyper-Threading requires a computer system with an Intel® Pentium® 4 processor supporting this technology, a chipset and BIOS that utilize this technology, and an operating system that includes optimizations for this technology. Performance will vary depending on the specific hardware and software you use. See [www.intel.com/info/hyperthreading](http://www.intel.com/info/hyperthreading) for information.

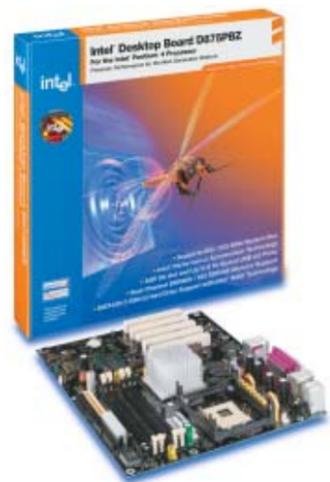
<sup>2</sup> May not support all operating systems, Windows® XP driver included.

<sup>3</sup> DDR400 memory only supported in combination with Intel® Pentium® 4 processor with 800-MHz system bus.

<sup>4</sup> Desktop Board D875PBZ is designed to support up to 4 GB total system memory using DIMMs based on 512-Mbit technology, but this technology has not been validated on these Intel® desktop boards. For more information about the latest list of tested memory, refer to the Intel World Wide Web site at: <http://support.intel.com/support/motherboards/desktop/>

<sup>5</sup> When using an 800-MHz FSB CPU, DDR333 memory is clocked at 320 MHz. This minimizes system latencies to optimize system performance.





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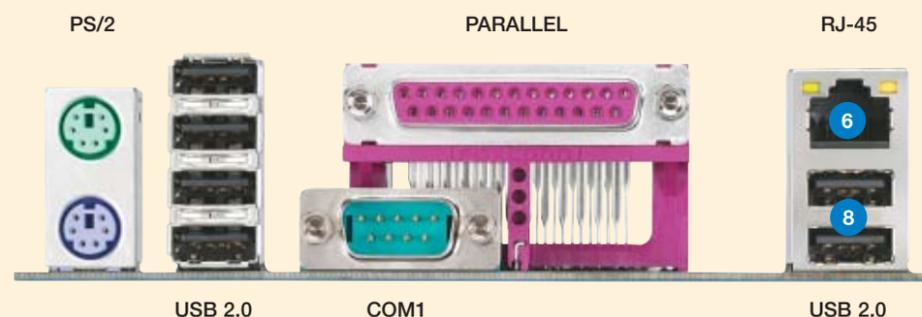
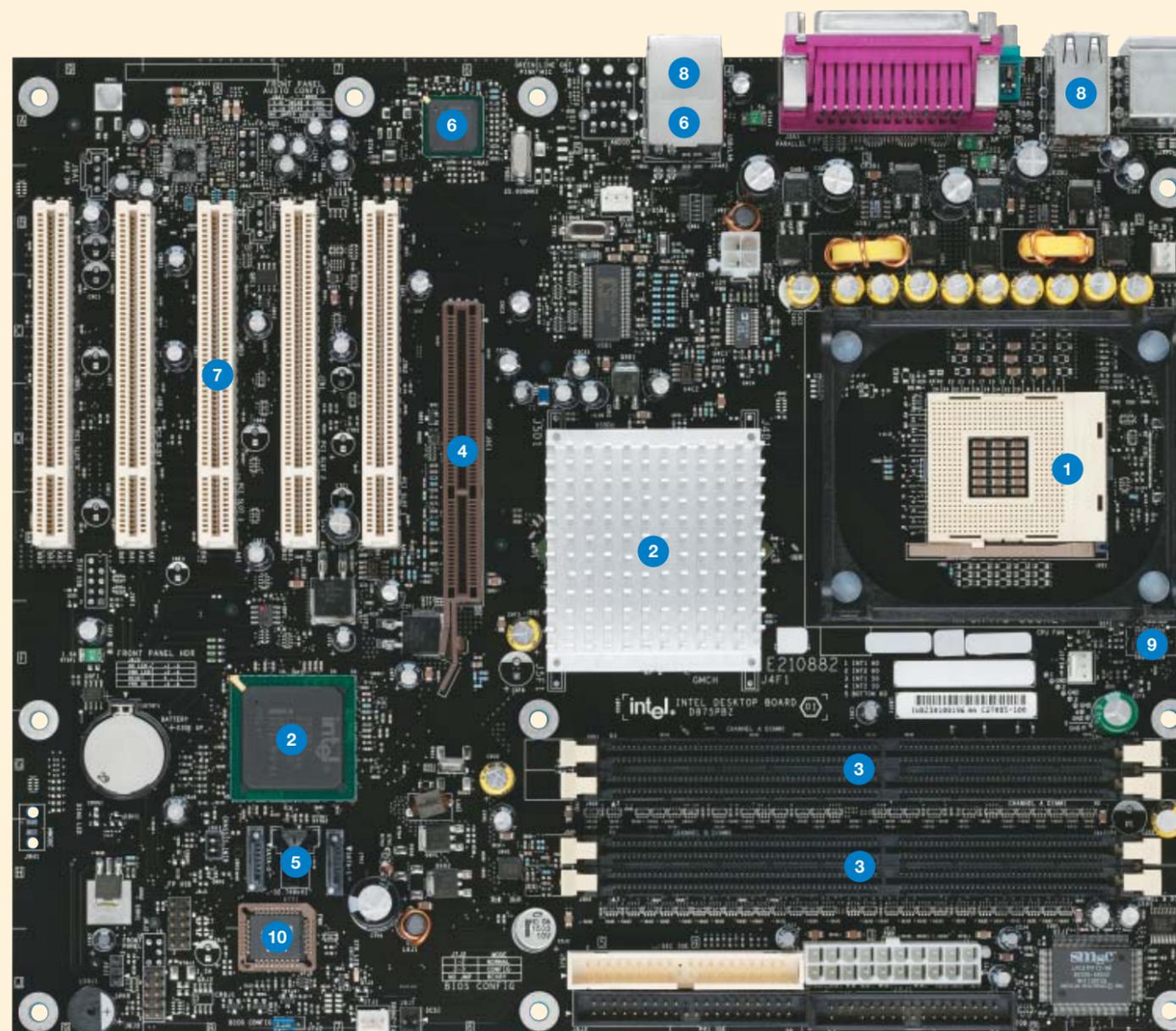
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