



ATX Form Factor

## Intel® Desktop Boards DG43NB and DP43TF Classic Series

Based on the latest Intel® G43 and P43 Express Chipsets

Experience the latest Intel® Desktop Board DG43NB and Intel® Desktop Board DP43TF—the ideal mainstream platforms for digital home entertainment and home application users. These boards deliver reliability, affordability, and versatility to meet a variety of digital needs. They are coupled with the power of the Intel® Core™2 Quad\*\* and Intel® Core™2 Duo processors that allow you to experience digital exhilaration. The new Intel DG43NB Desktop Board also brings in a new generation of graphics capabilities including the Intel® Graphics Media Accelerator X4500 with Intel® Clear Video Technology that enables you to experience enhanced HD video playback. Premium features such as the rich sound quality of Intel® High Definition Audio with 5.1 surround sound, an Intel® PRO 10/100/1000 Network Connection, and IEEE 1394a are also supported by both boards to deliver a greater digital entertainment experience. Intel Desktop Board DG43NB and Intel Desktop Board DP43TF are both Microsoft\* Windows Vista\* Premium WHQL certified.



# Intel® Desktop Boards DG43NB and DP43TF

Be ravished by your new digital experience as you benefit from the host of software included with the Intel® Desktop Boards DG43NB and DP43TF.



## The boxed Intel® Desktop Boards DG43NB and DP43TF solutions include:

- ATX 2.2 compliant I/O shield
- SATA and ATA 100/66 cables
- Board and back panel I/O layout stickers
- Quick reference guide
- Intel® Express Installer driver and software DVD
- Microsoft® Windows Vista® Premium WHQL certified

## Software Included:

- Intel® Integrator Assistant (Internet Download)
- Acronis® True Image OEM
- Diskeeper® Home Edition
- DivX® for Windows®
- Laplink® PCmover® Express
- Norton Internet Security®
- Skype®
- TypePad®
- WildTangent®
- Kaspersky® Anti-Virus (Russian)
- Kingsoft® Antivirus (Chinese)
- Kingsoft® Powerword® (Chinese)

## Features and Benefits

# Intel® Desktop Boards DG43NB and DP43TF

### 1 Support for the Intel® Core™2 Quad\*\* and Intel® Core™2 Duo processors:

Features quad-core and dual-core processing with 1333 / 1066 / 800 MHz system bus in the LGA775 package.

### 2 Intel® G43 Express Chipset featuring Intel® Graphics Media Accelerator X4500 (DG43NB) or Intel® P43 Express Chipset (DP43TF)

**3 Dual-Channel DDR2 800 / 667 memory support:** Two DIMM sockets (DG43NB), designed to support up to 4 GB<sup>1</sup> and four DIMM sockets (DP43TF), designed to support up to 8 GB<sup>1</sup> of DDR2 800 / 667 SDRAM memory, delivering greater platform performance and flexible memory support.

**4 PCI Express\* 2.0 x16 graphics connector:** Delivers up to 16 GB/s bandwidth, double that of PCI Express\* 1.0.

**5 Six Serial ATA ports (3.0 Gb/s):** Facilitates high-speed storage and data transfers at up to 3.0 Gb/s for each of six ports.

**6 Intel® 82567V Gigabit Ethernet Controller:** Features onboard 10/100/1000 Mb/s Ethernet LAN connectivity.

**7 Intel® High Definition Audio with 5.1 surround sound:** Enables high-quality integrated audio that rivals the performance of high-end discrete audio solutions.

**8 Three PCI connectors:** Provides expansion slots for custom system configurations and future add-in card upgrades.

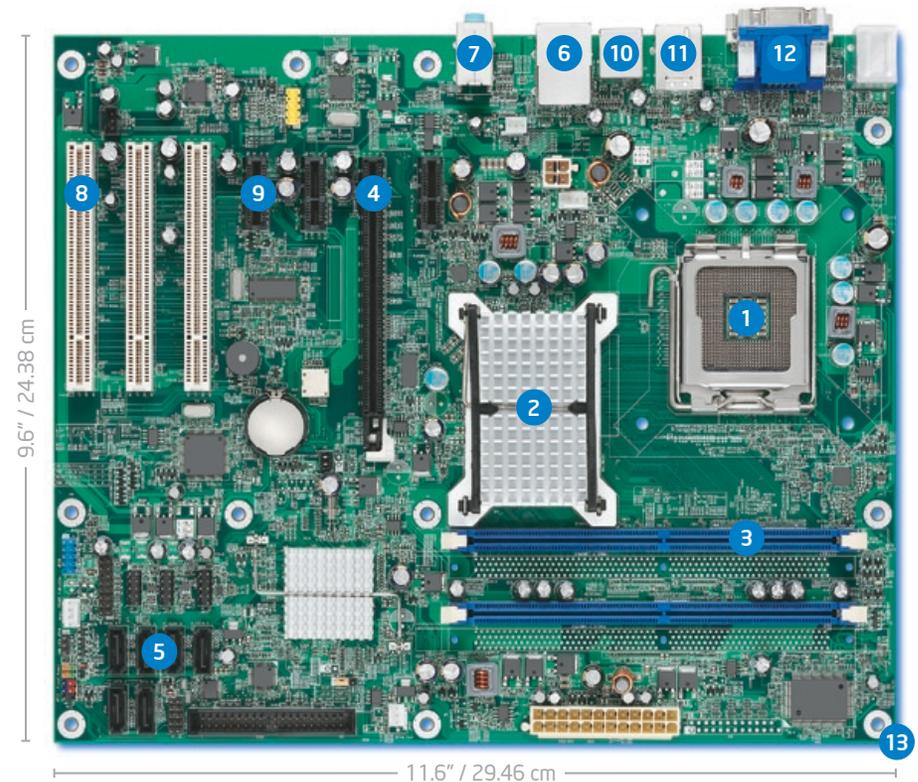
**9 Three PCI Express x1 connectors:** Designed for bandwidth-intensive applications, PCI Express x1 I/O offers up to 3.5 times the bandwidth over traditional PCI architecture.

**10 Twelve Hi-Speed USB 2.0 ports:** Provides six back panel ports and an additional six USB ports via three internal headers.

**11 Two IEEE 1394a ports:** One external port and one via internal header.

**12 VGA + DVI-D graphics ports (DG43NB only)**

**13 ATX form factor**



DG43NB board shown

## Technical Specifications

### Processor

#### Processor Support

- Intel® Core™2 Quad\*\* processor in the LGA775 package
- Intel® Core™2 Duo processor in the LGA775 package
- Intel® Pentium® Dual-Core processor in the LGA775 package
- Intel® Celeron® Dual-Core processor in the LGA775 package
- Intel® Celeron® processor 400 sequence in the LGA775 package
- Supports Intel® 64 Architecture<sup>2</sup>

### Chipset

#### Intel® G43 Express Chipset (DG43NB)

#### or Intel® P43 Express Chipset (DP43TF)

- Intel® 82G43 Graphics and Memory Controller Hub (GMCH) (DG43NB)  
Intel® 82P43 Memory Controller Hub (MCH) (DP43TF)
- Intel® 82801JB I/O Controller Hub (ICH10)

#### Graphics Memory Controller Hub (GMCH) or Memory Controller Hub (MCH)

- Designed to support up to 4 GB<sup>1</sup> (DG43NB) and 8 GB<sup>1</sup> (DP43TF) of system memory using DDR2 800 / 667 SDRAM memory
- Intel® Fast Memory Access
- Intel® Graphics Media Accelerator X4500 with Intel® Clear Video Technology (DG43NB)

#### Intel® I/O Controller Hub (ICH)

- Six SATA (3.0 Gb/s) ports
- Intel® PRO 10/100/1000 network connection
- Twelve Hi-Speed USB 2.0 ports (six back panel ports and an additional six USB ports via three internal headers)

### System BIOS

- 32 Mb Flash EEPROM with Intel® Platform Innovation Framework for EFI Plug and Play, IDE drive auto-configure
- Advanced configuration and power interface V1.0b, DMI 2.0, multilingual support
- Serial Peripheral Interface (SPI) Flash

#### Intel® Rapid BIOS Boot

- Optimized POST for faster access to PC from power-on

### System Memory

#### Memory Capacity

- Two 240-pin DIMM connectors supporting up to two double-sided DIMMs (DG43NB)
- Four 240-pin DIMM connectors supporting up to four double-sided DIMMs (DP43TF)

#### Memory Types

- DDR2 800 / 667 SDRAM memory support
- Non-ECC Memory

#### Memory Modes

- Dual- or single-channel operation support

#### Memory Voltage

- 1.8 V

### Hardware Management Features

- Processor fan speed control
- System chassis fan speed control
- Voltage and temperature sensing
- Fan sensor inputs used to monitor fan activity
- Power management support for ACPI 1.0b

#### High-Performance Intel® 82567V Gigabit Network Connections

- High quality and reliability with Intel's world-class manufacturing and validation

### Expansion Capabilities

- Three PCI bus add-in card connectors
- Three PCI Express\* x1 bus add-in card connectors
- One PCI Express 2.0 x16 graphics connector
- Ultra ATA 100 / 66 devices

### Jumpers and Front-Panel Connectors

#### Jumpers

- Single configuration jumper design
- Jumper access for BIOS maintenance mode

#### Front-Panel Connectors

- Reset, HDD LED, Power LEDs, power on/off
- Three front-panel Hi-Speed USB 2.0 headers
- One 1394a header
- Front-panel audio header
- One serial header

### Mechanical

#### Board Style

- ATX 2.2-compliant

#### Board Size

- 11.6" x 9.6" (29.46 cm x 24.38 cm)

#### Baseboard Power Requirements

- ATX12V

### Environment

#### Operating Temperature

- 0° C to +55° C

#### Storage Temperature

- 20° C to +70° C

### Regulations and Safety Standards

#### United States and Canada

CSA/UL 60950-1, First Edition  
(Binational Standard)

#### Europe

(Low Voltage Directive 2006/95/EC)  
EN 60950-1:2006

#### International

IEC 60950-1:2001, First Edition

### EMC Regulations

#### (tested in representative chassis) United States

FCC 47 CFR Part 15, Subpart B

#### Canada

ICES-003 Class B

#### Europe

(EMC Directive 2004/108/EC)

EN 55022:2006 and EN 55024:1998

#### Australia/New Zealand

EN 55022:2006 Class B

#### Japan

VCCI V-3/04.04, V-4/03.04, Class B

#### South Korea

KN-22:2005 and KN-24:2005

#### Taiwan

CNS 13438:2006 Class B

#### International

CISPR 22:2005 +A1:2005 +A2:2006 Class B

### Environmental Compliance

#### Europe

Europe RoHS (Directive 2002/95/EC)

#### China

China RoHS (MII Order # 39)



**Lead-Free:** The symbol is used to identify electrical and electronic assemblies and components in which the lead (Pb) concentration level in any of the raw materials and the end product is not greater than 0.1% by weight (1000 ppm). This symbol is also used to indicate conformance to lead-free requirements and definitions adopted under the European Union's Restriction on Hazardous Substances (RoHS) directive, 2002/95/EC.

**Ordering Information: See the Intel Web site at [www.intel.com](http://www.intel.com). For the most current product information, visit [developer.intel.com/design/motherbd/](http://developer.intel.com/design/motherbd/)**

<sup>1</sup> System resources and hardware (such as PCI and PCI Express\*) require physical memory address locations that can reduce available addressable system memory. This could result in a reduction of as much as 1 GB or more of physical addressable memory being available to the operating system and applications, depending on the system configuration and operating system.

<sup>2</sup> 64-bit computing on Intel® architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. See <http://developer.intel.com/technology/intel64/index.htm> for more information.

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\*\* Supports 95 W Thermal Design Power, Intel® Core™2 Quad Processors with 1333 / 1066 MHz System Bus. For information, visit [processormatch.intel.com](http://processormatch.intel.com)

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