intel® Leap ahead™

MicroATX Form Factor

Intel® Desktop Board DG45ID Media Series

Enjoy a new home entertainment experience

The ideal mainstream platform for home applications.

Your ideal home entertainment system is finally here.

Come experience the next level of home entertainment brought to you by the Intel® Desktop Board DG45ID. With a wide range of the latest Intel® 45nm processor support, including the new Intel® Core™2 Quad** and Intel® Core™2 Duo processors, this board brings the best-in-class home entertainment experience to your living room.

Flexibility that suits your needs

The Intel® Desktop Board DG45ID is built to support a range of processors, including the Intel Core 2 Quad** and Intel Core 2 Duo processors. If you are running applications with high memory needs, this solution delivers up to 8 GB[1] support for DDR2 800 / 667 SDRAM memory.

In addition to delivering outstanding performance and stability, the integrated graphics and connectors meet a variety of digital needs.

- Experience the maximum performance of integrated graphics capabilities with Intel® Graphics Media Accelerator X4500HD and Intel® Clear Video Technology.

- Supports hardware decode for Blu-ray* playback in MPEG2, VC-1, and H.264 formats with full framerate playback at 40 Mb/s.
- Play full 1080p high-definition content and allow the Intel® G45 Express Chipset to run the high-definition decode acceleration without burdening the processor.
- Supports DirectX* 10, which enhances your gaming experience.
- Enjoy the rich sound quality of Intel® High Definition Audio with 7.1 surround sound and Dolby* Home Theater.
- Five onboard SATA connectors with RAID capability that gives you data protection.
- One eSATA back port allows flexible storage expansion.
- Download your favorite moments directly from your digital camcorder to your computer via the IEEE 1394a port.
- Up to twelve USB ports support all your computer peripherals.
- Enjoy great network connectivity with the integrated Intel® PRO 10/100/1000 Network Connection.
- Microsoft* Windows Vista* Premium WHQL certified.

Intel® Desktop Board DG45ID

Be ravished by your new home entertainment experience as you benefit from the host of software included with the Intel® Desktop Board DG45ID.

- Tune in and catch up on local shows wherever you are with CyberLink* Live Premium.

- Enjoy a rich home theater surround sound experience with Dolby* Home Theater.

The boxed Intel® Desktop Board DG45ID solution includes:
- ATX 2.2 compliant I/O shield
- SATA cables
- Board and back panel I/O layout stickers
- Quick reference guide
- Intel® Express Installer driver and software DVD
- Floppy for Intel® Matrix Storage Technology RAID Driver
- Microsoft* Windows Vista* Premium WHQL certified

Software Included:
- Intel® Integrator Assistant (Internet Download)
- Acronis* True Image 11 Home
- CyberLink* Live Premium
- Diskeeper* Home Edition
- DivX* Pro for Windows*
- Dolby* Control Center
- Laplink* PCmover* Express
- Norton Antivirus*
- Skype*
- TypePad*
- Kaspersky* Anti-Virus (Russian)
- Kingsoft* Antivirus (Chinese)
- Kingsoft* Powerword* (Chinese)

Intel® Desktop Board DG45ID

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® G45 Express Chipset: Offers the next level of integrated graphics performance with Intel® Graphics Media Accelerator X4500HD (Intel® GMA X4500HD) with Intel® Clear Video Technology.

3 Dual-Channel DDR2 800 / 667 memory support: Four DIMM sockets, designed to support up to 8 GB[1] 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 per port, double that of PCI Express 1.0.

5 Five Serial ATA ports (3.0 Gb/s) with RAID capability: Facilitates high-speed storage and data transfers at up to 3.0 Gb/s with data protection features.

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

7 Intel® High Definition Audio with 7.1 surround sound: Enables high-quality integrated audio coupled with Dolby* Control Center interface.

8 PCI connector: Provides expansion slot for custom system configurations and future add-in card upgrades.

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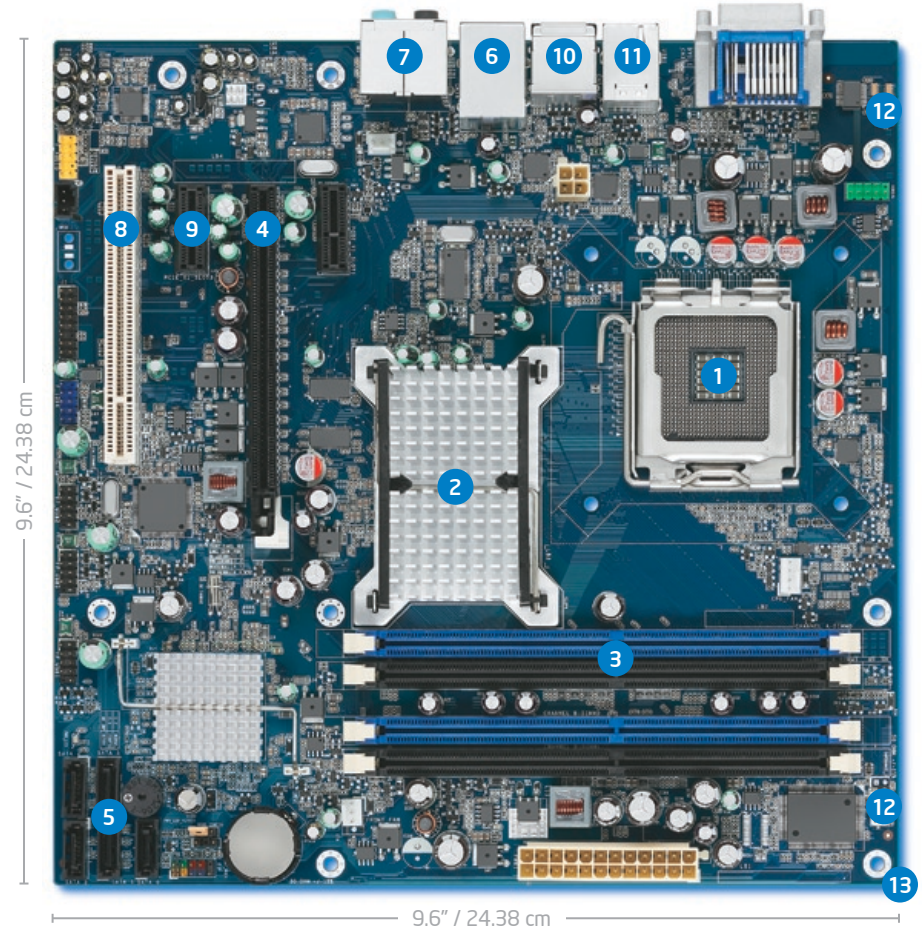
11 Two IEEE 1394a ports: One external port and one via internal header.

12 Consumer infrared receiver and transmitter: Supports receiving, learning, and emitting capabilities, controls up to two additional CE devices with your PC, and eliminates the need for a USB CIR dongle.

13 MicroATX form factor

9.6" / 24.38 cm

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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[2]

Chipset

Intel® G45 Express Chipset
- Intel® 82G45 Graphics and Memory Controller Hub (GMCH)
- Intel® 82801HR ICH10R I/O Controller Hub
- Designed to support up to 8 GB[1] of system memory using DDR2 800 / 667 SDRAM memory
- Intel® Fast Memory Access
- Intel® Graphics Media Accelerator X4500HD with Intel® Clear Video Technology

Intel® I/O Controller Hub
- Five SATA ports (3.0 Gb/s) and one eSATA port
- Intel® PRO 10/100/1000 Network Connection
- Twelve Hi-Speed USB 2.0 ports (six back panel ports and an additional four USB ports via two 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

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

System Memory

Memory Capacity
- Four 240-pin DIMM connectors supporting up to four double-sided DIMMs

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

Memory Modes
- Dual- or single-channel operation support

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® 82567LF Gigabit Network Connections
- High quality and reliability with Intel's world-class manufacturing and validation

Expansion Capabilities
- One PCI bus add-in card connector
- Two PCI Express* x1 bus add-in card connectors
- One PCI Express 2.0 x16 graphics connector

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

Consumer Infrared Receiver and Transmitter headers
- 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
- 9.6" x 9.6" (24.38 cm x 24.38 cm)

Baseboard Power Requirements
- ATX12V

Environment

Operating Temperature
- 0° C to +55° C

Storage Temperature
- -40° 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. For the most current product information, visit developer.intel.com/design/motherbd/

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[1] 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.

[2] 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.

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