

MicroATX Form Factor

Intel® Desktop Board DG41RQ Essential Series

More than just a basic technology solution for your daily computing needs

The new Intel® Desktop Board DG41RQ is designed for the user who wants to experience reliability and performance for their everyday computing. This board supports the latest Intel® 45nm Intel® Core™2 Quad** and Intel® Core™2 Duo processors, as well as Intel® Pentium and Intel® Celeron processors in the LGA775 package. It is also designed to deliver up to 8 GB¹ support for DDR2 800 / 667 MHz SDRAM memory for enhanced performance.

This Essential Series desktop board also offers the latest generation of integrated graphics capabilities: the Intel® Graphics Media Accelerator X4500 with Intel® Clear Video Technology and DirectX* 10 support that will enhance your mainstream gaming experience.

The Intel Desktop Board DG41RQ is not only equipped with essential components but also comes with premium features for users to enrich their multimedia experience. The Intel Desktop Board DG41RQ offers legacy features such as PS/2 connection ports, PCI slots, a parallel port header, and a serial port header, coupled with premium features such as the rich sound quality of the Intel® High Definition Audio with 5.1-channel surround sound, integrated 10/100/1000 network connection, and PCI Express* x16 discrete graphics slot.



Intel® Desktop Board DG41RQ



The boxed Intel® Desktop Board DG41RQ solution includes:

- 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® Basic WHQL certified

The software included with the Intel® Desktop Board DG41RQ will thrill you with a new digital experience that benefits your everyday computing.

CAPABILITY

SOFTWARE INCLUDED:

Productivity

- Intel® Integrator Assistant (Internet Download)
- Diskeeper® Home Edition
- Laplink® PCmover® Express
- Skype®
- TypePad®
- Kingsoft® Powerword® (Chinese)

Data Protection

- Intel® Platform Administration Technology
- Acronis® True Image OEM

Entertainment

- DivX® for Windows®
- WildTangent®

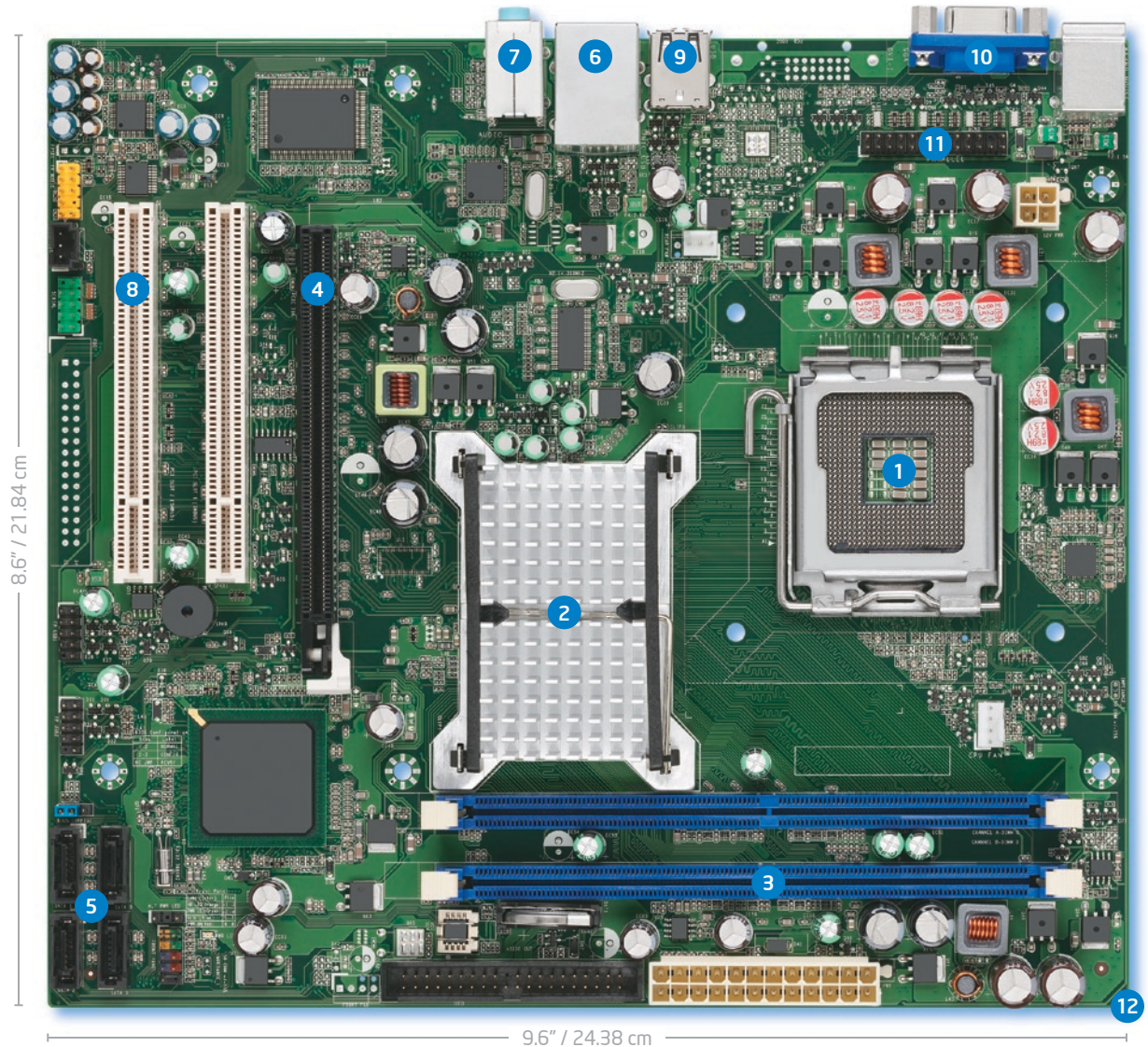
Antivirus

- Norton Internet Security®
- Kaspersky® Anti-Virus (Russian)
- Kingsoft® Antivirus (Chinese)

Features and Benefits

Intel® Desktop Board DG41RQ

- 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® G41 Express Chipset featuring Intel® Graphics Media Accelerator X4500**
- 3 Dual-Channel DDR2 800 / 667 memory support:** Two DIMM sockets, designed to support up to 8 GB¹ of DDR2 800 / 667 SDRAM memory, delivering greater platform performance and flexible memory support.
- 4 PCI Express* x16 graphics connector:** Delivers up to 8 GB/s bandwidth.
- 5 Four Serial ATA ports (3.0 Gb/s):** Facilitates high-speed storage and data transfers at up to 3.0 Gb/s for each of four ports.
- 6 Integrated 10/100/1000 Network Connection:** 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 Two PCI connectors:** Provides expansion slots for custom system configurations and future add-in card upgrades.
- 9 Eight Hi-Speed USB 2.0 ports:** Provides four back panel ports and an additional four USB ports via two internal headers.
- 10 VGA port**
- 11 Parallel port header:** Legacy device compatibility.
- 12 MicroATX form factor**



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® processor in the LGA775 package
- Intel® Celeron® processor in the LGA775 package
- Supports Intel® 64 Architecture²

Chipset

Intel® G41 Express Chipset

- Intel® 82G41 Graphics and Memory Controller Hub (GMCH)
- Intel® 82801GB I/O Controller Hub (ICH7)

Graphics Memory Controller Hub (GMCH)

- Designed to support up to 8 GB¹ of system memory using DDR2 800 / 667 SDRAM memory
- Intel® Fast Memory Access
- Intel® Graphics Media Accelerator X4500 with Intel® Clear Video Technology

Intel® I/O Controller Hub (ICH)

- Four SATA (3.0 Gb/s) ports
- Integrated 10/100/1000 network connection
- Eight Hi-Speed USB 2.0 ports (four back panel ports and an additional four USB ports via two internal headers)

System BIOS

- 8 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

System Memory

Memory Capacity

- Two 240-pin DIMM connectors supporting up to two double-sided DIMMs

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

Expansion Capabilities

- Two PCI bus add-in card connectors
- One PCI Express* x16 graphics connector
- Parallel ATA 100 / 66 devices

Headers

- One serial port header
- One parallel port header

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
- Two front-panel Hi-Speed USB 2.0 headers
- Front-panel audio header

Mechanical

Board Style

- ATX 2.2-compliant

Board Size

- 9.6" x 8.6" (24.38 cm x 21.84 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. For the most current product information, visit developer.intel.com/design/motherbd/

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.

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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

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