



MicroATX Form Factor

Intel® Desktop Board DG31GL Essential Series

Essential technology for your everyday computing needs

Delivering Value and Quality

The Intel® Desktop Board DG31GL Essential Series delivers a flexible graphics solution with support for the Intel® Core™2 Quad, Intel® Core™2 Duo, Intel® Pentium® Dual-Core, and Intel® Celeron® processors in the LGA775 package. Designed with a focus on minimizing overall platform cost, this desktop board features the Intel® G31 chipset with integrated Intel® Graphics Media Accelerator 3100. Other features of this desktop board include support for up to 4 GB¹ of dual-channel DDR2 800 / 667 SDRAM memory, an onboard Intel® PRO 10/100 LAN Network Connection, and 4-channel high definition audio. As you have come to expect, this product delivers the stability and reliability associated with all Intel® desktop boards.



Intel® Desktop Board DG31GL



The boxed Intel® Desktop Board DG31GL solution includes:

- ATX 2.2 Compliant I/O Shield
- Floppy, SATA, and ATA 100/66 Cables
- Board and Back Panel I/O Layout Stickers
- Quick Reference Guide
- Intel® Express Installer Driver and Software CD
- Windows Vista* Basic WHQL certified

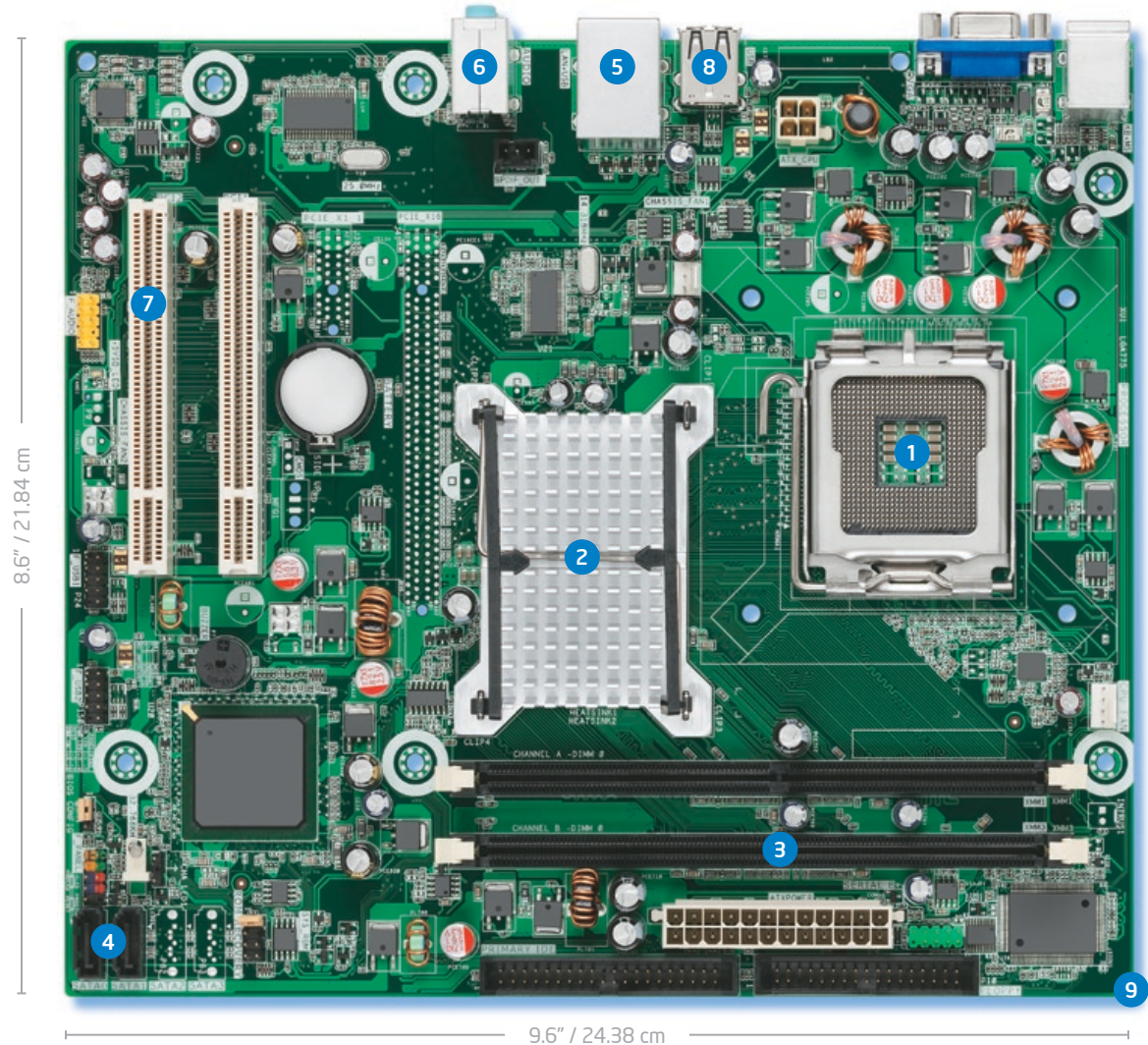
Software Included:

- Diskeeper* Home Edition
- Norton Internet Security*
- Skype*
- Typepad*
- Kaspersky* Anti-Virus (*Russian*)
- Kingsoft* Antivirus (*Chinese*)

Features and Benefits

Intel® Desktop Board DG31 GL

- 1 Support for the Intel® Core™2 Quad, Intel® Core™2 Duo, Intel® Pentium® Dual-Core, and Intel® Celeron® processors in the LGA775 package:** Features support for quad-core processing and 1333 / 1066 / 800 MHz system bus.
- 2 Intel® G31 chipset featuring Intel® Graphics Media Accelerator 3100:** Low-cost, performance graphics solution.
- 3 Dual-Channel DDR2 800 / 667 SDRAM support:** Two DIMM sockets designed to support up to 4 GB¹ of DDR2 800 / 667 SDRAM memory. Flexible support for either single- or dual-channel operation.
- 4 Two SATA ports:** Facilitates high-speed storage and data transfers at up to 3.0 Gb/s for each of two ports.
- 5 Integrated Intel® PRO 10/100 Network Connection:** Onboard 10/100 Mb/s Ethernet LAN connectivity.
- 6 Intel® High Definition Audio:** Integrated 4-channel audio providing audio performance at an excellent value.
- 7 Two PCI slots:** Two expansion slots for custom system configurations and future add-in card upgrades.
- 8 Support up to 8 Hi-Speed USB 2.0 ports:** Four back panel ports and two front panel headers supporting four additional USB 2.0 ports.
- 9 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® Dual-Core processor in the LGA775 package
- Intel® Celeron® processor in the LGA775 package
- Supports Intel® 64 Architecture²

Intel® G31 Express Chipset

- Intel® G31 Express Chipset Graphics and Memory Controller Hub
- Intel® 82801GB I/O Controller Hub (ICH7)
- Serial Peripheral Interface (SPI) Flash or Firmware Hub (FWH)

Memory Controller Hub (MCH)

- Designed to support up to 4 GB of system memory using DDR2 800 / 667 SDRAM memory

Intel® ICH7 I/O Controller Hub

- One Ultra ATA 100/66 Connector for two devices
- One Floppy Connector
- Two SATA (3.0 Gb/s) ports
- Intel® PRO 10/100 Network Connection
- Two PCI local bus slots

Integrated Intel® ICH7 controllers

- Four back-panel ports (two dual stack)
- Four additional ports (via two headers)

Firmware Hub

System BIOS

- 4 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

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-channel operation support

Memory Voltage

- 1.8V

Hardware Management

- 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 2.0

Expansion Capabilities

- Two PCI bus add-in card connectors

Jumpers and Front-Panel Connectors

Jumpers

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

Front-Panel Connectors

- Reset, HD LED, Power LEDs, power on/off
- One alternate power LED header (1x3)
- 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

- 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/

For ENERGY STAR^{*} recommended configurations, visit www.intel.com/go/energystar

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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