

Intel® Desktop Board DQ87PG

4th Generation Intel® Core™ vPro™ Processor support

Intel® Active Management Technology 9.0

Triple-Independent Display support



PRODUCT BRIEF

Ultimate Business Solution

Built for business, Intel® Desktop Board DQ87PG supports 4th generation Intel® Core™ vPro™ processor to strengthens security and increases productivity across your business.

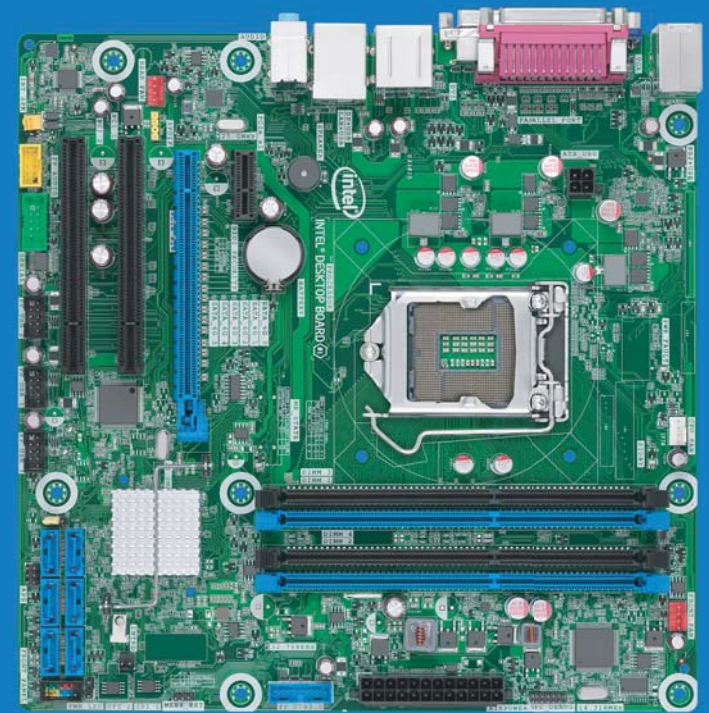
The board supports Intel® Active Management Technology (Intel® AMT) 9.0 and is equipped with Intel® Identity Protection Technology (Intel® IPT) as well as Intel® Anti-Theft Technology (Intel® AT). In addition to the standard connectivity features, DQ87PG includes offers great expandability options with USB 3.0, SATA 6.0 Gb/s and eSATA, and supports triple-independent display.

Built-in Security Means Business

The 4th generation Intel® Core™ vPro™ processor is designed to strengthen security and increase user productivity across the enterprise. You can work with confidence by protecting data around the clock with remote anti-theft capabilities and automatic encryption.

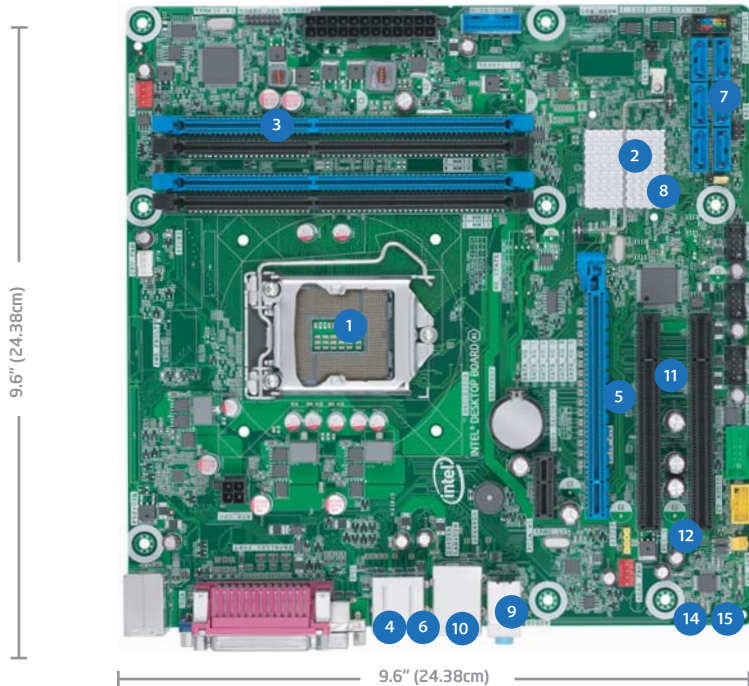
COMPLETE CONTROL = COMPLETE POWER

Control is all about the BIOS and only genuine Intel® Desktop Boards have the most advanced BIOS interface available today: Intel® Visual BIOS. Easily configure your system with a completely graphical interface to meet your specific computing needs. With new features like intelligent search, file explorer, profile management and favorites option, Intel Visual BIOS makes configuring your BIOS fast and simple.



Intel® Desktop Board DQ87PG

Features and Benefits



Executive Series

- 1 Supports the 4th Generation, Intel® Core™ vPro™ processors in the LGA 1150 package:** Features Intel® Turbo Boost Technology, Intel® Hyper-Threading Technology for exceptional performance and scalability, and 8 MB Shared Intel® Smart Cache, enabling dynamic and efficient allocation of cache.
- 2 Intel® Q87 Express Chipset:** Supports Intel® vPro™ Technology with Intel® Active Management Technology 9.0 Professional, Intel® Identity Protection and Intel® Anti-Theft Technology.
- 3 Four DIMM slots:** Support DDR3 1600/1333 MHz memory, delivering up to 32 GB /s memory bandwidth. 1.2V to 1.8V memory voltage control for maximum DIMM compatibility.
- 4 Six Super-Speed USB 3.0 ports (4 external, 2 via internal header), and Eight Hi-Speed USB 2.0 ports (2 external, 6 via internal headers).**
- 5 Two PCI support slots, one PCIe* x16 Gen 3, one PCIe x1 Gen 2x.**
- 6 One DisplayPort* connector, One DVI-D connector and One VGA connector:** Supports triple independent display.
- 7 Six SATA 6.0Gb/s ports.**
- 8 Intel® Smart Response and Intel® Rapid Start⁷ Technologies:** Provides SSD like performance with HDD capacity. Dramatically improves response time when a small capacity SSD is used in conjunction with a large HDD.
- 9 8-channel Intel® High Definition Audio⁶ with multi-streaming capability.**
- 10 Intel® Gigabit Ethernet LAN:** Features onboard 10 /100 /1000 Mb /s Ethernet LAN connectivity.
- 11 Legacy Support:** Two PCI slots, One PS/2 Port via back panel, One Parallel Port via back panel, One Serial Port via internal header.
- 12 100% Solid State Capacitors**
- 13 Intel® Express BIOS update support, Fast Boot BIOS:** Optimized POST for almost instant-on access to PC from power on.
- 14 uATX (9.6" x 9.6" (24.38 cm x 24.38 cm) Form Factor**
- 15 Lead-free:** Meets all worldwide regulatory requirements for lead-free manufacturing.

Intel® Desktop Board DQ87PG

Technical Specifications

PROCESSOR Processor Support

- Supports the 4th generation Intel® Core™ vPro⁵ processors and other Intel® processors in the LGA1150 package
- Intel® Turbo Boost Technology³
- Intel® Hyper-Threading Technology⁴
- Support Intel® 64 architecture²

CHIPSET

- Intel® Q87 Express Chipset
- Supports Intel® vPro™ Technology with Intel® Active Management Technology 9.0 Professional
- Supports Intel® Identity Protection and Intel® Anti-Theft Technology
- Intel® Rapid Storage Manager (Raid 0, 1, 5, 10) with Intel® Rapid Recover Technology
- Intel® Smart Response Technology

INTEL® PRO 10/100/1000 NETWORK CONNECTION

- Intel® Pro 10/100/1000 LAN on the back panel

USB PORTS

- Four Super-Speed USB 3.0 ports (blue) via back panel
- Two Super-Speed USB 3.0 ports via one internal header
- Two Hi-Speed USB 2.0 ports (black) via back panel
- Six Hi-Speed USB 2.0 ports via three internal headers

EXPANSION CAPABILITIES

- Two PCI support slots
- One PCIe x16 Gen 3
- One PCIe x1 Gen 2x
- One PS/2 Port via back panel
- One Parallel Port via back panel
- One Serial Port via internal header
- Six SATA 6.0Gb/s ports

GRAPHICS

- One PCI Express* 3.0 x16 connector
- One DisplayPort* connector via back panel
- One DVI-D connector via back panel
- One VGA connector via back panel
- Supports triple independent display

AUDIO

- 8-channel Intel® High Definition Audio⁶ codec
- 6-channel audio via back panel
- 2-channel audio via front panel
- Front panel mic/headphone via internal header
- One internal header for S/PDIF output

SYSTEM BIOS

- Intel® Visual Bios
- 64+32Mb dual Flash EEPROM with Intel® Platform Innovation Framework for EFI Plug and Play
- Advanced configuration and power interface V3.0b, SMBIOS2.5
- Intel® Express BIOS update support
- Fast Boot BIOS – Optimized POST for almost instant-on access to PC from power on

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 3.0b

SYSTEM MEMORY Memory Capacity

- Four 240-pin DIMM connectors supporting dual-channel memory. Two double-sided DIMMs per channel. Maximum system memory up to 32GB¹ using 8 GB double-sided DIMMS

Memory Types

- DDR3 1600/1333 SDRAM memory support
- Non-ECC memory

Memory Voltage

- 1.2V to 1.8V memory voltage control
- Support for Intel® Extreme Memory Profile (Intel® XMP)

JUMPERS AND FRONT PANEL CONNECTORS Jumpers

- Single configuration jumper design
- Jumper access for BIOS maintenance and security

Front Panel Connectors

- Reset, HDD LED, Power LED, Power on/off
- One front-panel Super-Speed USB 3.0 header (2 ports)
- Three front-panel High-Speed USB 2.0 headers (6 ports)
- Front-panel audio header

MECHANICAL Board Style

- uATX

Board Size

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

Baseboard Power Requirements

- ATX 12V

ENVIRONMENT Operating Temperature

- 0°C to +55°C

Storage Temperature

- -20°C to +70°C

COMPLIANCE WITH REGULATIONS AND STANDARDS Safety Regulations

UL/CSA 60950-1
EN 60950-1
IEC 60950-1

EMC Class B Regulations

CISPR 22
CISPR 24
FCC 47 CFR Part 15, Subpart B
ICES-003
EN 55022
EN 55024
EN 61000-3-2
EN 61000-3-3
IEC/EN 61000-4 Series
VCCI V-3
KN-22
KN-24
CNS 13438

Environmental Compliance

Europe RoHS
China RoHS

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.

3 Intel® Turbo Boost Technology requires a PC with a processor with Intel Turbo Boost Technology capability. Intel Turbo Boost Technology performance varies depending on hardware, software, and overall system configuration. Check with your PC manufacturer on whether your system delivers Intel Turbo Boost Technology. See www.intel.com/technology/turboboost for more information.

4 Intel® Hyper-Threading Technology requires a computer system with a processor supporting HT Technology and an HT Technology-enabled chipset, BIOS, and operating system. Performance will vary depending on the specific hardware and software you use. For more information including details on which processors support HT Technology, see www.intel.com/info/hyperthreading.

5 Intel® vPro™ Technology requires a computer system with a processor supporting Intel® vPro™ Technology and an Intel® vPro™ Technology-enabled chipset, BIOS, and LAN. Performance will vary depending on the specific hardware and software you use. For more information including details on which processors support Intel® vPro Technology, see www.intel.com/info/vpro.

6 Intel® High Definition Audio requires a system with an appropriate Intel® chipset and a motherboard with an appropriate codec and the necessary drivers installed. System sound quality will vary depending on actual implementation, controller, codec, drivers, and speakers. For more information about Intel® HD Audio, refer to www.intel.com/design/chipsets/hdaudio.htm.

7 BIOS update may be required to support Rapid Start Technology features. This Feature may not be available at initial launch of product.

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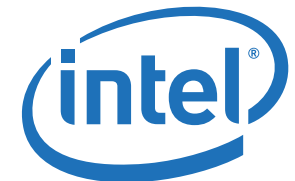
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