PRODUCT BRIEF
Intel® Desktop Board DZ68DB
Media Series

ATX Form Factor

Intel® Desktop Board DZ68DB Media Series

Supports the 2nd-generation Intel® Core™ processors in the LGA1155 package

The Intel® Desktop Board DZ68DB is based on the Intel® Z68 Express Chipset and supports the 2nd-generation Intel® Core™ processors, including the Intel® Core™ i7 and Intel® Core™ i5 processors and other Intel® processors in the LGA1155 package. The 2nd-generation Intel Core processors feature optimized Intel® Turbo Boost Technology[1] and enhanced Intel® Hyper-Threading Technology,[2] which provide smarter performance and a seamless visual experience.

Intel® Smart Response Technology

Unique to the Intel DZ68DB and the Z68 Express Chipset, Intel® Smart Response Technology provides a single drive volume that combines the high-performance benefits of Solid-State Drives with the large storage capacities of traditional hard drives to dramatically increase PC responsiveness and enable faster boot times.[3]

Intel® HD Graphics with Lucidlogix* Virtu* GPU Virtualization

The Intel Desktop Board DZ68DB is equipped with DVI-I, HDMI*, and DisplayPort* connectors and supports flexible dual independent display for processors with Intel® HD Graphics. Coupled with Intel HD Graphics, the Virtu* GPU Virtualization software allows the system to simultaneously take full advantage of both the low-power best-in-class media processing features of the 2nd-generation Intel Core processors and the 3D gaming performance of add-in graphics cards.

Premium features

The Intel Desktop Board DZ68DB offers premium features such as dual-channel DDR3 1333 MHz memory with four connectors (32 GB[4] max), Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10, Intel® High Definition Audio[5] with 7.1 surround sound and multi-streaming capability, and an integrated Intel® PRO 10/100/1000 Network Connection in a low-power design.

The Intel Desktop Board DZ68DB is designed with a wide range of 1.2 V to 1.8 V memory voltage control to maximize memory DIMM compatibility.

Two onboard SATA Revision 3.0 ports promise a new level of performance with 6.0 Gb/s link speed between storage devices and the host.

Two back panel SuperSpeed USB 3.0 ports address the needs of higher performance connections between the PC and increasingly sophisticated peripherals by offering a higher transferring rate of 5.0 Gb/s.

Legacy features such as a PCI connector provides backward compatibility for peripherals.

Intel® Desktop Board DZ68DB Media Series

Intel® Rapid Storage Technology

The Intel Desktop Board DZ68DB features Intel® Rapid Storage Technology and supports RAID 0, 1, 5, and 10. Intel Rapid Storage Technology provides new levels of protection, performance, and expandability for desktop platforms. Whether using one or multiple hard drives, users can take advantage of enhanced performance and lower power consumption. When using more than one drive, users have additional protection against data loss in the event of a hard drive failure.

The boxed Intel Desktop Board DZ68DB solution includes:

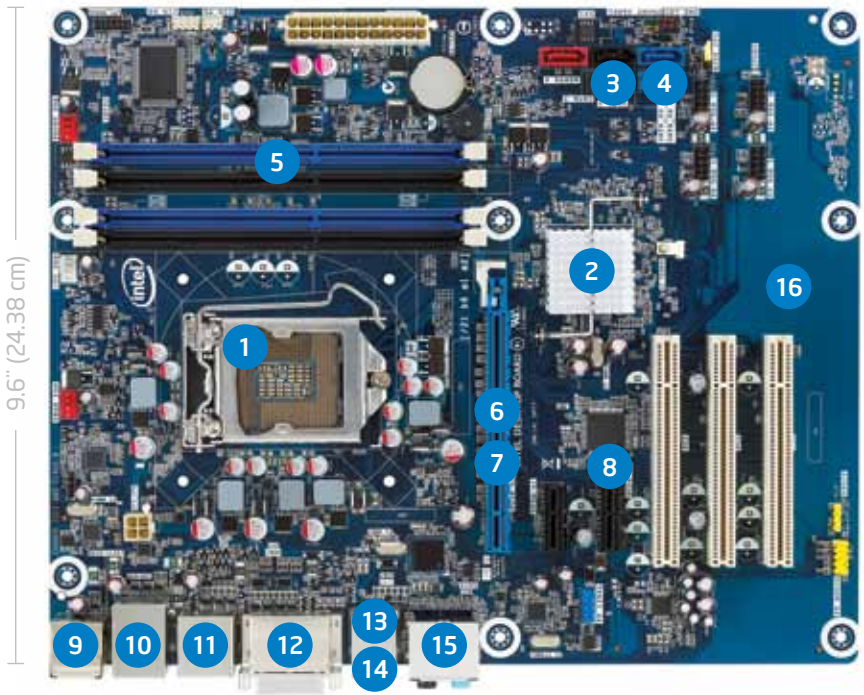
- ATX/MicroATX compliant I/O shield
- SATA cables
- Board and back panel I/O layout stickers
- Quick reference guide
- Intel® Express Installer driver and software DVD

Software Included:

Capability	Software Included
Utilities	▪ Intel® Core Utilities Bundle[6] ▪ Intel® Desktop Utilities
Productivity	▪ Laplink* PCmover Express*
Antivirus	▪ ESET* Smart Security 4 (45-day license)
GPU Virtualization	▪ Lucidlogix* Virtu* Software

Intel® Desktop Board DZ68DB Media Series
Features and Benefits

1. **Supports the 2nd-generation Intel® Core™ processors, including the Intel® Core™ i7 and Intel® Core™ i5 processors, and other Intel® processors in the LGA1155 package for exceptional performance.**
2. **Intel® Z68 Express Chipset PCH:** Intel® Smart Response Technology dramatically improves PC responsiveness by providing a single drive volume that combines the high-performance benefits of Solid-State Drives and the large storage capacities of hard drives.[3]
3. **Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10.**
4. **Two SATA 6.0 Gb/s ports and three SATA 3.0 Gb/s ports, with one port compatible with an eSATA extension.**
5. **Dual-channel DDR3 with four connectors for 1333/1066 MHz memory support (32 GB[4] max):** Supports 1.2 V to 1.8 V memory voltage control for maximum DIMM compatibility.
6. **PCI Express* 2.0 x16 graphics connector.**
7. **Virtu* GPU Virtualization Software:** Combines best-in-class media processing features of the 2nd generation Intel® Core™ processor with the 3D gaming performance of add-in graphics cards.
8. **Two PCI Express* x1 connectors and three PCI connector.**
9. **One eSATA 3.0 Gb/s port.**
10. **Integrated Intel® PRO 10/100/1000 Network Connection for high speed and low power consumption.**
11. **Fourteen Hi-Speed USB 2.0 ports:** Six back panel ports and eight additional ports via four internal headers.
12. **DVI-I + HDMI*+DisplayPort*:** Supports dual independent display and allows for the most flexible display output for Intel processors with Intel® HD Graphics.
13. **Two SuperSpeed USB 3.0 ports:** 5.0 Gb/s signaling rate for high-speed connections to peripherals.
14. **Two IEEE 1394a ports:** One back panel port and one via internal header.
15. **Ten-channel Intel® High Definition Audio[5] with multi-streaming capability:** Features five stack analog audio ports, one optical S/PDIF out port, internal S/PDIF header and front panel audio header.
16. **ATX Form Factor.**



Intel® Desktop Board DZ68DB Media Series
Technical Specifications

PROCESSOR
Processor Support
- Intel® Core™ i7 and Intel® Core™ i5 processors, and other Intel® processors in the LGA1155 package
- Supports Intel® 64 architecture[7]

CHIPSET
Intel® Z68 Express Chipset
- Intel® 82Z68 Platform Controller Hub (PCH)

PERIPHERAL CONNECTIVITY
- Two SATA 6.0 Gb/s ports
- Three SATA 3.0 Gb/s ports with one SATA port compatible with eSATA extension
- Two SuperSpeed USB 3.0 ports with 5.0 Gb/s link speed
- Fourteen Hi-Speed USB 2.0 ports (six back panel ports and eight additional ports via four internal headers)
- Two IEEE 1394a ports (one back panel port and one via internal header)

SYSTEM BIOS
- 32 MB 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

HARDWARE MANAGEMENT FEATURES
- Processor fan speed control
- Front and rear system chassis fan speed control
- Voltage and temperature sensing
- Fan sensor inputs used to monitor fan activity
- ACPI-compliant power management support

INTEL® PRO 10/100/1000 NETWORK CONNECTION
- Low-power design

EXPANSION CAPABILITIES
- One PCI Express* 2.0 x16 connector
- Two PCI Express* 2.0 x1 connectors
- Three PCI connectors

AUDIO
- 7.1 + 2 multi-streaming Intel® High Definition Audio[5]
- Five stack analog audio ports and one optical S/PDIF out port
- Internal S/PDIF header and front panel audio header

VIDEO
- DVI-I + HDMI*+DisplayPort*: support dual independent display for Intel® processors with Intel® HD Graphics

SYSTEM MEMORY
Memory Capacity
- Four 240-pin DIMM connectors supporting up to four double-sided DIMMs
- Maximum system memory up to 32 GB using 8 GB double-sided DIMMs

Memory Types
- DDR3 1333/1066 SDRAM memory support
- Non-ECC Memory
- Dual- or single-channel operation support

Memory Voltage
- Memory voltage control from 1.2 V to 1.8 V
- 1.5 V standard JEDEC voltage

JUMPERS AND FRONT PANEL CONNECTORS
Jumpers
- Jumper access for BIOS maintenance mode

Front Panel Connectors
- Reset, HD LED, Power LEDs, power on/off
- Front-panel audio header

Other Connectors
- Consumer IR emitter/receiver headers
- Chassis intrusion detect header

MECHANICAL
Board Style
- ATX

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

Baseboard Power Requirements
- ATX 12 V

ENVIRONMENT
Operating Temperature
- 0° C to +55° C

Storage Temperature
- –20° C to +70° C

REGULATIONS AND SAFETY STANDARDS
United States
UL 60950-1

Canada
CAN / CSA-C22.2 No. 60950-1

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

International
IEC 60950-1

EMC Regulations (Class B)

United States
FCC CFR Title 47, Chapter I, Part 15, Subparts A/B

Canada
ICES-003

Europe
(EMC Directive 2004/108/EC)
EN 55022 and EN 55024

Australia/New Zealand
EN 55022

Japan
VCCI V-3, V-4

South Korea
KN-22 and KN-24

Taiwan
CNS 13438

International
CISPR 22

Environmental Compliance

Europe
Europe RoHS (Directive 2002/95/EC)
WEEE (Directive 2002/96/EC)

China
China RoHS (MII Order # 39)

For ordering information, visit:
www.intel.com

For the most current product information, visit:
http://developer.intel.com/products/desktop/motherboard/

[1] Intel® Turbo Boost Technology—maximum single-core turbo frequency (GHz). 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.

[2] 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. See www.intel.com/info/hyperthreading for more information.

[3] Responsive performance measurements performed using Intel Core Processor, Intel Z68 Express Chipset, Intel® Solid-State Drive, and Intel® Rapid Storage Technology driver. Performance as measured by PCMark Vantage v1.0.1 tests on systems with Intel DZ68DB motherboard, Intel Core processor, Intel 6 Series chipset, Microsoft Windows* 7 Ultimate 64-bit, SATA 2 for both SSD and HDD, Hitachi 7200 RPM 320 GB HDD, Intel 20/40/80 GB Solid-State Drives, Integrated Graphics, 4 GB 1066 MHz DDR3 DRAM. System performance improvement on platforms is configuration-dependent; as measured by PCMark* Vantage tests. Boot times taken with Microsoft Velocity v4.3 and Microsoft PwrTest (included in Microsoft WDK, for S4 times only).

[4] 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.

[5] 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.

[6] The Intel® Core Utilities Bundle includes Intel® Integrator Assistant, Intel® Integrator Toolkit, Intel® Express Installer, and Intel® Express BIOS Update.

[7] 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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