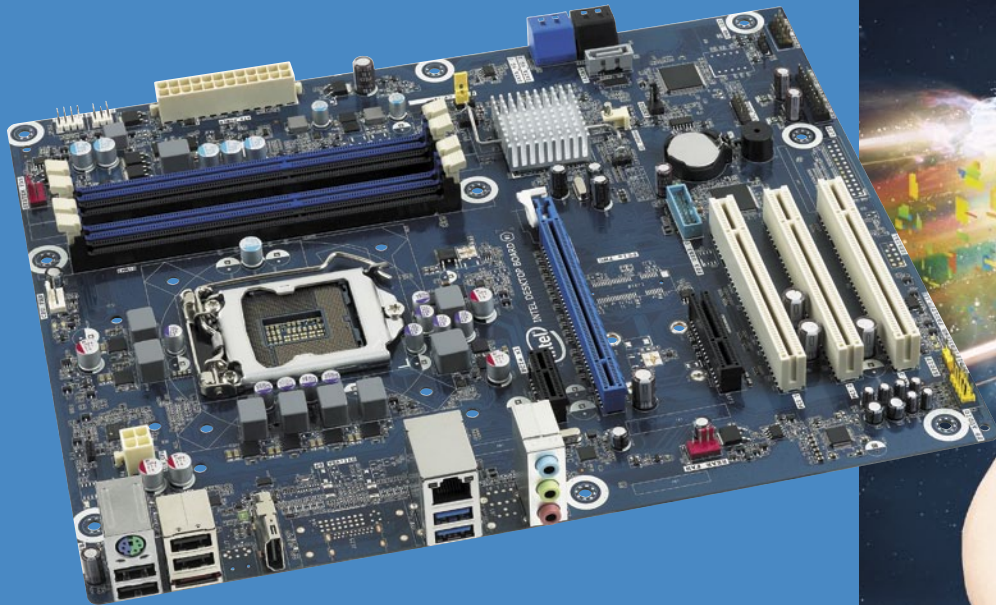


Intel® Desktop Board DZ77SL-50K

Media Series ATX Form Factor

Optimized
for Intel® -K Processors



PRODUCT BRIEF



Intel® Desktop Board DZ77SL-50K

Optimized for Intel® -K Processors!

Introducing the Intel® Desktop Board DZ77SL-50K. Maximize your overclocking performance with the Intel® -K Processors and Intel®'s latest -K Series Desktop Board, DZ77SL-50K

Supports the 2nd and 3rd generation Intel® Core™ processors in the LGA1155 package

Once again with the introduction of the Intel® Desktop Board DZ77SL-50K Intel is offering a great board at a very attractive price point for gamers and overclockers. In combination with the new Intel® Visual BIOS¹, this board will surely satisfy all of the needs of the performance enthusiasts. As a member of the newly introduced -K Series Intel® Desktop Boards, the DZ77SL-50K is optimized to take full advantage of the Intel® -K processors. Combination of very sophisticated power delivery design and ease of performance tuning and overclocking of the Core, Graphics, and memory offered by the Intel® Visual BIOS¹ make the DZ77SL-50K an ideal board for the Intel® -K processors. Intel® -K Series Desktop Board PLUS Intel® -K processor EQUALS performance.

INTEL® VISUAL BIOS¹ Advanced Overclocking

The new Intel® Visual BIOS¹ offers graphical interface and animated controls which allow you to configure settings faster and take full advantage of your Intel® -K processors. Intel® Visual BIOS¹ allows easy overclocking of Core, Graphics, and Memory. Intel Visual BIOS¹ operates by your choice of touch screen, keys, or mouse. All controls are literally at your fingertips, in a format you can visualize. When your quest for ultimate performance takes you to extremes, choose the Intel® Desktop Board DZ77SL-50K here and Intel® Visual BIOS¹.

Power and Responsiveness for the Hottest New Games

The advanced power and overclocking² capabilities of the DZ77SL-50K board coupled with the dramatic responsiveness improvements delivered by the Intel® Smart Response Technology provide the board of choice for gamers and media creation enthusiasts alike. Intel Smart Response Technology provides SSD like performance and up to 50% improvement in responsiveness as compared to an HDD only system³. The Intel® Desktop Board DZ77SL-50K also includes other new responsiveness technologies such as Intel® Rapid Start Technology⁴ which allow the user to quickly resume the system from sleep and standby modes.



DZ77SL-50K solution includes:

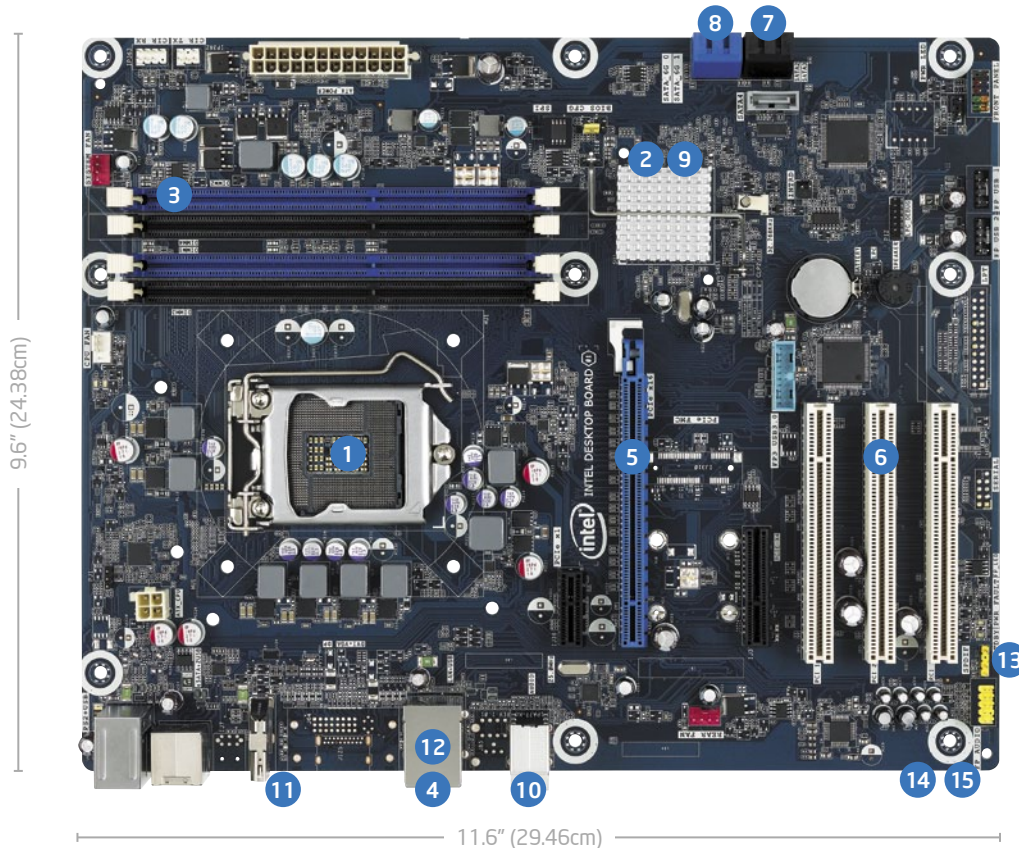
- ATX compliant I/O shield
- SATA cables
- Board and back panel I/O layout stickers
- Quick reference guide
- Intel® Express Installer



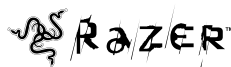
Capability	Software included
Utilities	<ul style="list-style-type: none">▪ Intel® Integrator Tool Kit▪ Intel® Desktop Utilities
Productivity	<ul style="list-style-type: none">▪ Splashtop* Remote Desktop
Antivirus	<ul style="list-style-type: none">▪ McAfee* Antivirus Plus
GPU Virtualization	<ul style="list-style-type: none">▪ Lucid* Virtu Universal Software

Intel® Desktop Board DZ77SL-50K

Features and Benefits



- 1 Support for the Intel® Core™ i7 processor in the LGA 1155 package. Optimized for the Intel® -K Processors. Features Intel® Turbo Boost Technology⁵, Intel® Hyper-Threading Technology⁶ for exceptional performance and scalability.
- 2 Intel® Z77 Express Chipset: Features Intel® Smart Response Technology.
- 3 Four DIMM slots: Designed to support overclocked² DDR3 1600 + O.C.⁷ memory, delivering up to 32 GB/s memory bandwidth.
- 4 Four Super-Speed USB 3.0 ports (2 external, 2 via internal header), two IEEE 1394a ports (1 external, 1 via internal header), and Eight Hi-Speed USB 2.0 Ports (4 external, 4 via internal header)
- 5 PCI Express 3.0* ×16 slot.
- 6 PCI Express* and PCI connectors: Flexibility to support PCI Express and legacy PCI devices.
- 7 Two SATA 6.0 Gb/s ports, three SATA 3.0 Gb/s ports, and one eSATA 3.0Gb/s port.
- 8 Intel® Rapid Storage Technology: Performance and reliability with support for RAID 0, 1, 5, 10.
- 9 Intel® Smart Response and Intel® Rapid Start⁴ 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.
- 10 8 Channel (5.1+2) Intel® High Definition Audio⁸ Enables high-quality integrated audio that rivals the performance of high-end discrete solutions.
- 11 HDMI* Video Connector.
- 12 Intel® Gigabit Ethernet LAN: Features onboard 10/100/1000 Mb/s Ethernet LAN connectivity.
- 13 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.
- 14 ATX (11.6" × 9.6") Form Factor: ATX board supports more fully featured tower designs.
- 15 Lead-free: Meets all worldwide regulatory



Intel® Desktop Board DZ77SL-50K

Technical Specifications



PROCESSOR

Processor Support

- Optimized for Intel® -K processors. Supports 2nd and 3rd Generation Intel® Core™, and other Intel® processors in the LGA1155 package

CHIPSET

Intel® Z77 Express Chipset

- Intel® Z77 PCH
- Intel® Rapid Storage Manager (RAID 0, 1, 5, 10)
- Intel® Smart Response Technology
- Intel® Rapid Start Technology¹

PERIPHERAL CONNECTIVITY

- Two SATA 6.0 Gb/s ports
- Three SATA 3.0 Gb/s ports
- Four SuperSpeed USB 3.0 ports with 5.0 Gb/s link speed (Two back panel and Two via internal headers)
- Eight Hi-Speed USB 2.0 ports (Four back panel ports and Four 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* 3.0 x16 connector
- One PCI Express* 2.0 x1 connector
- One PCI Express* 2.0 x4 connector
- Three PCI connectors

AUDIO

- 5.1 + 2 multi-streaming Intel® High Definition Audio⁸
- Three stack analog audio ports and one optical

VIDEO

- HDMI*Video connector 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 GB⁹ using 8 GB doublesided DIMMs

Memory Types

- DDR3 1600+ 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

- 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

1. The Intel® Visual BIOS may not be available at time of launch of DZ77SL-50K product and may require a BIOS update.

2. Warning: Altering clock frequency and/or voltage may (i) reduce system stability and useful life of the system and processor; (ii) cause the processor and other system components to fail; (iii) cause reductions in system performance; (iv) cause additional damage; and (v) affect system data integrity. Intel has not tested, and does not warrant, the operation of the processor beyond its specifications.

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 DZ68BC 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 DDR 3 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 54 times only).

4. BIOS Update may be required to support Rapid Start Technology features. This feature may not be available at initial launch of product.

5. 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.

6. 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.

7. Maximum peak memory bandwidth requires four DDR 3 modules to be populated in each of the blue memory slots. DDR 3 2400 memory support on this motherboard requires advanced knowledge of BIOS and memory tuning; individual results may vary. For specific supported memory for this motherboard, please visit www.intel.com/products/motherboard/ for more details.

8. 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.html.

9. 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.

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Actual Intel® Desktop Board may differ from the image shown.

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