



Pico Balanced Technology Extended (picoBTX) Form Factor

Upgrade your senses. See more. Hear more. Do more.

Introducing Intel® Desktop Board DG965PZ Media Series
based on the Intel® G965 Express Chipset.

Exciting possibilities for communicating, learning and playing.

Immerse yourself in the exciting world of digital entertainment with the new Intel® Desktop Board DG965PZ Media Series in the PicoBTX form factor. With support for dual-core processors and Intel® Viiv™ technology, this desktop board merges the power of the Intel® Core™2 Duo processor with new multimedia technology in a small form factor.

Get more of a good thing: more power, more possibilities.

Music enthusiasts, movie fans, gamers, and multimedia creators will be thrilled with the performance and features of the DG965PZ Desktop Board Media Series.

- Support for the Intel® Core™2 Duo, Intel® Pentium® D, and Intel® Pentium® 4 processors
- Support for Intel® Viiv™ Technology
- Dual independent display (DVI-D and VGA) for an expanded visual workspace
- HDCP 1.1 compliant via DVI-D, for true High Definition digital video playback
- PicoBTX form factor is excellent for small form factor systems or systems with a consumer electronics look and feel
- Intel® High Definition Audio support for Dolby® 7.1 channel surround sound
- 1394a and USB 2.0 connector support provides flexibility for uploading photos and videos from digital cameras and camcorders

- PCI Express* x16 graphics connector to support the latest high-end graphics cards
- Intel® Matrix Storage Technology helps protect photos stored on the computer
- PCI Express Mini Card connector ideal for an add-in wireless card

Through collaboration with leading software developers, Intel Desktop Board Media Series includes an extensive list of software that facilitates access to video, music, and images. Intel® Audio Studio Pro, Intel® Desktop Utilities, InterVideo® MediaOne® Gallery, InterVideo® WinDVD Player®, Ulead® Video Studio® SE DVD, Ulead® Pocket DVD Show, Farstone RestoreIT®, and Premium VoIP Service Offers are examples of the software that come with an Intel Desktop Board Media Series.



Intel® Desktop Board DG965PZ



Intel® ViiV™ Technology: Essential Ingredient for Entertainment PCs

Intel® ViiV™ technology¹ is a set of PC technologies designed for the enjoyment of digital entertainment in the home. It combines power for an incredible audio/visual experience, and it is verified with leading software and online service companies around the world. Intel ViiV technology enables consumers to control and personalize both their personal digital entertainment libraries and content from an ever-expanding library of online media. Powered by an Intel dual-core processor, Intel ViiV technology can display media in a home theater quality experience and provide support for up to 7.1 surround sound. Intel ViiV technology also makes it easy to find and share content with simple navigation via a remote control².

TECHNOLOGY

Intel® ViiV™ Technology

Intel® Quick Resume Technology	Turn the PC on and off instantly
Intel® Hub Connect Technology	Easier set-up and network management to build your Digital Home Easier connection to transfer and enjoy premium entertainment and personal digital content
Intel® ViiV™ Media Server	Send movies, music and pictures from your PC to multiple rooms in your home
Intel® Smart Streaming Technology	Great experience with high definition video throughout your home
Intel® Matrix Storage Technology	Protects digital memories and content against hard drive failures
Online services available	Easy access to online and local premium digital entertainment to download movies, music, pictures, and games

BENEFITS

Brings the performance and connectivity of PCs to the world of consumer electronics



The boxed Intel® Desktop Board DG965PZ solution includes:

- SATA cables
- BTX 1.0b compliant I/O shield
- Board and back panel I/O layout stickers
- Intel® Desktop Board DG965PZ Quick Reference
- Floppy for the Intel® Matrix Storage Technology RAID driver
- Intel® Express Installer driver and software DVD
- Intel® ViiV™ Technology Set-up Guide

Software Included:

- Intel® Audio Studio Pro
- Intel® Desktop Utilities
- InterVideo® MediaOne® Gallery
- InterVideo® WinDVD Player*
- Ulead® Video Studio*SE DVD
- Ulead® Pocket DVD Show
- Norton Internet Security*
- Diskeeper® 9 Home Edition
- Farstone RestoreIT*
- Premium VoIP Service Offers
- Kaspersky® Anti-Virus (Russian)
- Kingsoft® Powerword (Chinese)
- Kingsoft® Antivirus (Chinese)

Features and Benefits

Intel® Desktop Board DG965PZ

- 1 Support for the Intel® Core™2 Duo processor:** Features dual-core processing and 1066 / 800 / 533 MHz system bus in the LGA775 package with Intel® Extended Memory 64 Technology (Intel® EM64T)³ support.
- 2 Intel® G965 Express Chipset:** Offers a new level of visual quality with integrated Intel® Graphics Media Accelerator X3000 (Intel® GMA X3000) with Intel® Clear Video Technology.
- 3 Dual Independent display (DVI-D and VGA):** Expanded visual workspace for a richer media experience through Dual-Independent Display. HDCP 1.1 compliant via DVI-D, for true High Definition digital video playback
- 4 Intel® Quick Resume Technology:** Turns the PC on and off instantly after initial boot and when activated (like a DVD or CD player). Provides continuous access for remote users to local and Internet connections.
- 5 Dual-Channel DDR2 800 / 667 / 533 memory support:** Four DIMM sockets designed to support up to 8 GB⁴ of DDR2 800 / 667 / 533 memory deliver greater platform performance and flexible memory support.
- 6 PCI Express* x16 graphics connector:** Increased graphics bandwidth provides up to 4 GB/s per direction.
- 7 Four Serial ATA ports (3.0 Gb/s):** Facilitates high-speed storage and data transfers at up to 3 Gb/s for each of four ports.
- 8 Intel® Matrix Storage Technology:** RAID 0, 1, 10, 5 and Intel® Matrix RAID.
- 9 Integrated Intel® PRO 10/100/1000 Network Connection:** Features on-board 10/100/1000 Mbps Ethernet LAN connectivity.
- 10 Intel® High Definition Audio with 7.1 surround sound:** Enables high-quality integrated audio that rivals the performance of high-end discrete solutions.
- 11 PCI Express* Mini Card connector:** Ideal for an add-in wireless card.
- 12 Ten Hi-Speed USB 2.0 ports:** Provides six back panel ports and an additional four USB ports via two internal headers.
- 13 1394a ports:** One back panel port and one internal header for one additional port enable data transfer for portable media devices, including digital cameras and camcorders.
- 14 Intel® Quiet System Technology:** Enables advanced fan speed control to help keep system cool and reduce noise levels.
- 15 Pico Balanced Technology Extended (picoBTX) form factor:** Supporting improved thermal and acoustic performance and innovative small form factor chassis designs.



Technical Specifications

Processor

Processor Support

- Intel® Core™2 Duo processor in the LGA775 package
- Intel® Pentium® D processor in the LGA775 package
- Intel® Celeron® D processor in the LGA775 package
- Supports Intel® EM64T³

Chipset

Intel® G965 Express Chipset

- Intel® 82G965 Graphics Memory Controller Hub (GMCH)
- Intel® 82801HH I/O Controller Hub (ICH8DH)

Graphics Memory Controller Hub (GMCH)

- Designed to support up to 8 GB⁴ of system memory using DDR2 800 / 667 / 533 SDRAM memory
- Intel® Fast Memory Access
- Intel® Graphics Media Accelerator X3000 with Intel® Clear Video Technology
- Integrated Dual Independent Display support (VGA and DVI-D outputs on rear panel)

Intel® ICH8DH I/O Controller Hub

- Four SATA (3.0 Gb/s) ports
- Intel® Matrix Storage Technology (RAID 0, 1, 10, 5)
- Intel® PRO 10/100/1000 Network Connection

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 1.0b

USB 2.0

Integrated Intel® ICH8 controllers:

- Six back-panel ports
- Four front-panel ports (via two headers, requiring cabling to front panel)

Intel® Quiet System Technology

- Advanced fan speed control thermal management system dynamically adjusts fan speeds to help keep system cool and reduce/improve noise levels

System BIOS

- 8 Mb Flash with Intel® Platform Innovation framework for extensible firmware interface
- Configuration and power interface V1.0b, DMI 2.0, multi-lingual support

Intel® Rapid BIOS Boot

- Optimized POST for fast access to PC from power-on

System Memory

Memory Capacity

- Four 240-pin DIMM connectors supporting up to four double-sided DIMMs memory types
- DDR2 800/667/533 support

Memory Modes

- Dual- or single-channel operation support

Memory Voltage

- 1.8V

Wake-Up From Network

- Wired for Management (WfM) 2.0-compatible
- Support for system wake-up using an add-in network interface card with remote wake-up capability or integrated LAN

Expansion Capabilities

- One PCI Express* x16 graphics connector
- One PCI Express* Mini Card connector

Jumpers and Front-Panel Connectors Jumpers

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

Front-Panel Connectors

- Reset, HD LED, Power LEDs, power on/off
- Four front-panel Hi-Speed USB 2.0 headers
- Front-panel audio header
- Front-panel 1394a header

Mechanical

Board Style

- BTX 1.0b compliant

Board Size

- 10.5" x 8" (26.6 cm x 20.3 cm)

Baseboard Power Requirements

- ATX12V

Environment

Operating Temperature

- 0° C to +55° C

Storage Temperature

- 40° C to +70° C

Regulations

Safety Regulations

United States and Canada

UL 1950, Third edition—CAN/CSA C22.2 No. 950-95 with recognized U.S. and Canadian component marks

Europe

Nemko certified to EN 60950

International

Nemko certified to IEC 60950 (CB report with CB certificate)

EMC regulations (tested in representative chassis)

United States

FCC Part 15, Class B
FCC Part 15, Class B open-chassis (cover off) testing

Canada

ICES-003, Class B

Europe

EMC directive 89/336/EEC; EN 55022:1998 Class B; EN 55024:1998

Australia/New Zealand

AS/NZS 3548, Class B

Taiwan

CNS 13438, Class B

International

CISPR 22:1997, Class B

Power requirements vary. Complies with US CRF via EN55022 +6 db in system configurations with an open chassis and EU Directive 89/336/EEC and use via EN55022 and EN50082-1 in a representative chassis.



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 Intel® Viiv™ technology platforms require a computer system with a processor, chipset, BIOS, enabling software and/or operating system, device drivers, and applications designed for these features. Home networking capability and many Intel® Viiv™ technology-based usage models will require additional hardware devices, software or services. System and component performance and functionality will vary depending on your specific hardware and software configurations. See www.intel.com/go/viiv_info for more information.

² Remote may be sold separately.

³ Intel® EM64T requires a computer system with a processor, chipset, BIOS, operating system, device drivers and applications enabled for Intel EM64T. Processor will not operate (including 32-bit operation) without an Intel EM64T-enabled BIOS. See www.intel.com/info/em64t for more information.

⁴ System resources (such as PCI and PCI Express*) require physical memory address locations that reduce available memory addresses above 7 GB. This may result in less than 8 GB of memory being available to the operating system and applications.

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