



Flexible, stable, reliable, affordable. The all-in-one mainstream platform is ideal for both home and office applications. Introducing Intel® Desktop Boards Classic Series, based on the Intel® D945G and D945P Express Chipsets.

Flexible Desktop Board solution to meet both home and office computing requirements.

The new Intel® Desktop Boards Classic Series was designed to deliver new levels of performance and innovative features to mainstream PC users. Taking advantage of the latest computing technology, these desktop boards deliver outstanding system performance that meets the demanding needs of today and tomorrow's evolving applications. Whether in a home, office, education or government environment, consumers have the flexibility to select a desktop board in the Intel Desktop Board Classic Series that offers an all-in-one stable, reliable and affordable platform solution.



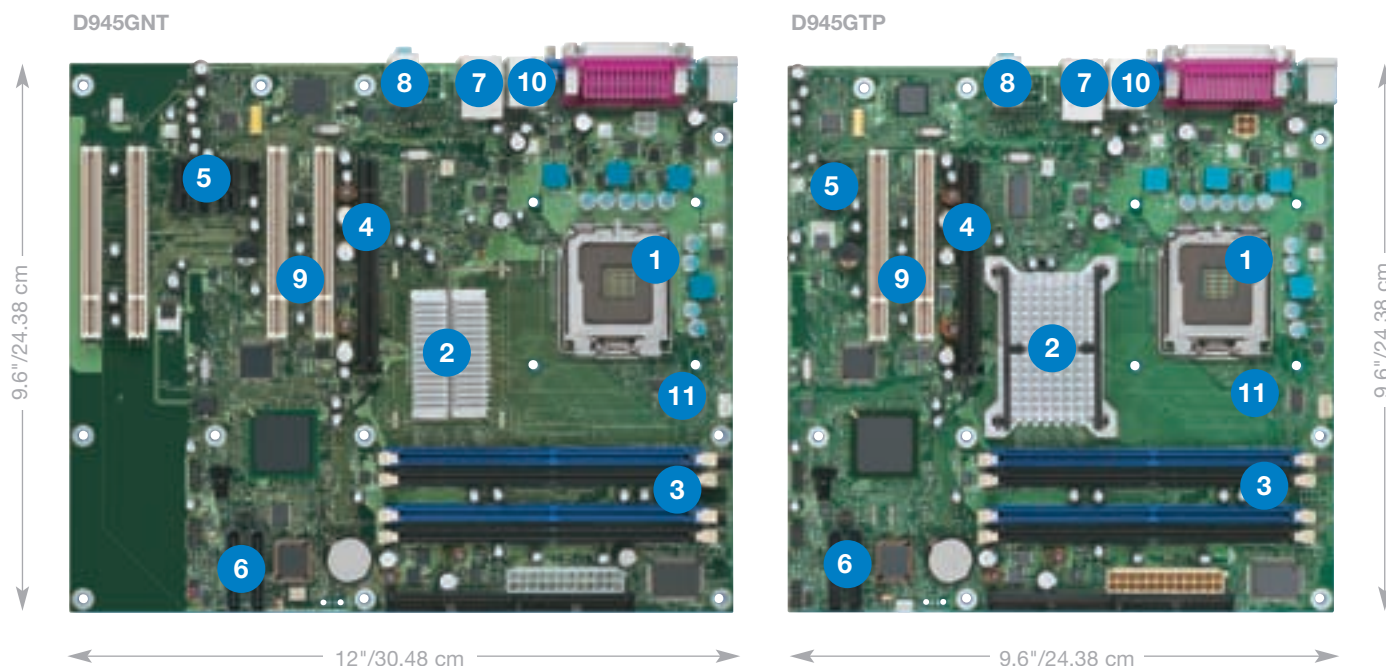
The Classic Series offers a variety of desktop boards to choose from.



Harnessing the advanced computing power of the latest Intel® Pentium® D processor in the LGA775 package, the all new desktop boards are optimized to deliver new levels of performance and innovative features that are essential for needs of both home and office mainstream PC users. Based on the Intel® D945G or D945P Express Chipset, the Intel Desktop Boards Classic Series supports 1066 MHz system bus, dual-channel DDR2 667 memory, and PCI Express* x16 graphics. The Intel Desktop Boards Classic Series comes in the ATX, MicroATX or Micro Balanced Technology Extended (MicroBTX) form factors.

Featuring the PCI Express* interface and Intel® High Definition Audio, the Intel Desktop Boards Classic Series allows users to enjoy an intense and realistic entertainment experience such as multiple audio streams, smoother video playback or video recording. For those requiring a higher level of graphics performance, desktop boards based on the Intel 945G Express Chipset enable faster graphics, improved 3D performance and enhanced video playback.

An extensive list of software applications delivers an enhanced home or office experience to mainstream consumers. The software list includes the Intel® Express Installer, Intel® Audio Studio, Norton® Internet Security 2005, InterVideo® Home Theater Silver, Musicmatch® Jukebox, Jasc® Paint Shop Photo Album 5: Starter Edition, and more.

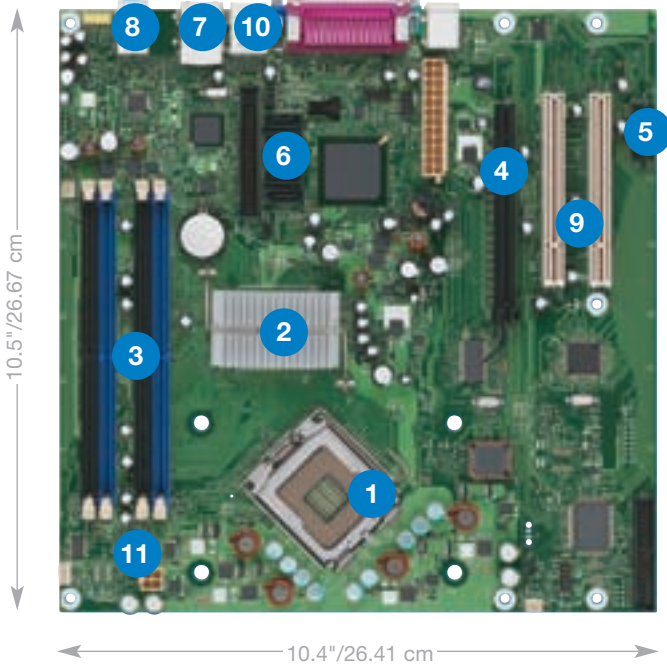


Features and Benefits

Intel® Desktop Board D945GNT, D945GTP and D945GCZ

- 1 Support for the Intel® Pentium® D processor, Pentium® 4 processor, and the Celeron® D processor in the LGA775 package:** Features 1066 MHz system bus, Intel® EM64T², and boxed Intel processors with packaging indicated by 05A, 05B, 04A or 04B.
- 2 Intel® 945G Express Chipset:** Offers a new level of visual quality with integrated Intel GMA 950.
- 3 Dual-channel DDR2 667 / 533 / 400 memory support:** Four DIMM sockets designed to support up to 4 GB³ of DDR2 667 / 533 / 400 memory for greater platform performance and flexible memory.
- 4 PCI Express* x16 graphics connector:** Increased graphics bandwidth delivers up to 4 GB/s per direction, and is up to 3.5 times faster than previous high-performance discrete graphics solutions.
- 5 Two PCI Express* x1 connectors (Desktop Board D945GNT) or one PCI Express x1 connector (Desktop Board D945GTP and D945GCZ):** Designed for bandwidth-intensive applications, PCI Express x1 I/O offers three and a half times the bandwidth over traditional PCI architecture.
- 6 Four Serial ATA ports (3.0 Gb/s):** Facilitates high-speed storage and data transfers at up to 3.0 Gb/s for each of four ports.
- 7 Integrated Intel® PRO 10/100 Network Connection:** Features on-board 10/100-Mbps Ethernet LAN connectivity.
- 8 Intel® High Definition Audio with 5.1 Surround Sound:** Provides flexible six-channel audio with jack sensing and high-quality integrated audio rivals the performance of high-end discrete solutions.
- 9 Four PCI connectors (Desktop Board D945GNT) or two PCI connectors (Desktop Board D945GTP and D945GCZ):** Offers expansion slots to support custom system configurations and future add-in card upgrades.
- 10 Eight Hi-Speed USB 2.0 ports:** Provides four back panel ports and an additional four USB ports via two internal headers.
- 11 Intel® Precision Cooling Technology:** Advanced fan speed control helps keep system cool and improve noise levels.

D945GCZ



The Boxed Intel® Desktop Board D945GNT, D945GTP and D945GCZ Solution includes:

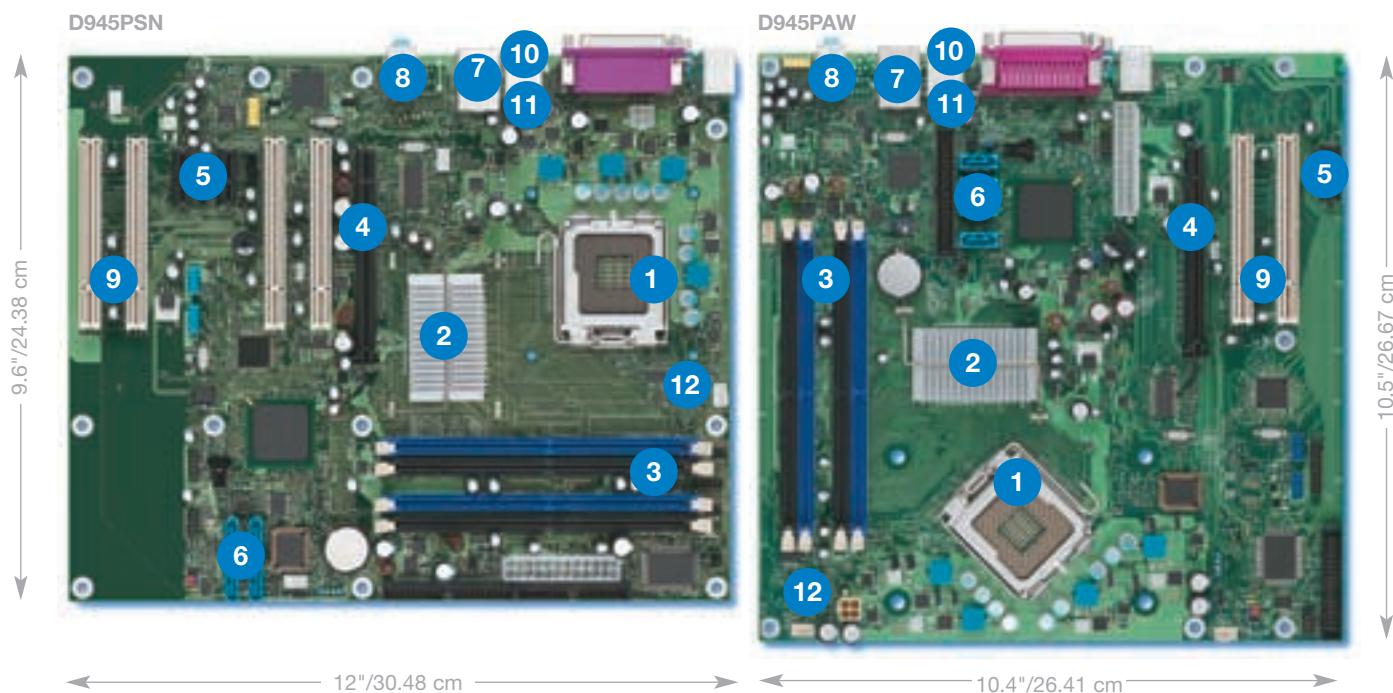
- ATX 2.2-Compliant I/O Shield (Desktop Board D945GNT and D945GTP) or BTX 1.0a-Compliant I/O Shield (Desktop Board D945GCZ)
- Floppy, SATA, and ATA 100 / 66 Cables
- Board and Back Panel I/O Layout Stickers
- Intel® Desktop Board D945GNT Quick Reference, Intel® Desktop Board D945GTP Quick Reference or Intel® Desktop Board D945GCZ Quick Reference
- Intel® Express Installer Driver and Software CDs

Software included:

- Intel® Express Installer
- Intel® Desktop Utilities⁴
- Intel® Audio Studio
- Farstone RestoreIT!® Lite
- Norton® Internet Security 2005
- InterVideo® Home Theater Silver
- InterVideo® MediaOne® Silver
- Kaspersky® AntiVirus Business Optimal (Russian only)
- Musicmatch® Jukebox
- Jasc® Paint Shop Photo Album 5: Starter Edition
- Kingsoft® AntiVirus 2005 (Chinese only)
- Yahoo!® Toolbar with Anti-spy



The Intel® Desktop Boards D945GNT (ATX), D945GTP (MicroATX) and D945GCZ (MicroBTX) are designed to showcase the latest integrated graphics chipset for the Intel® Pentium D processor. These platforms deliver outstanding system performance through high-bandwidth interfaces such as dual-channel DDR2 667 / 533 / 400¹ memory, 1066 MHz system bus and stunning displays featuring both PCI Express® x16 graphics and Intel® Graphics Media Accelerator 950 (Intel® GMA 950).



Features and Benefits

Intel® Desktop Board D945PSN and D945PAW

- 1 Support for the Intel® Pentium® D processor, Pentium® 4 processor, and the Celeron® D processor in the LGA775 package:** Featuring 1066 MHz system bus and Intel® EM64T². Supports boxed Intel processors with packaging indicated by 05A, 05B, 04A or 04B.
- 2 Intel® 945P Express Chipset:** Offers a new level of outstanding system performance through high-bandwidth interfaces and discrete graphics.
- 3 Dual-channel DDR2 667 / 533 / 400 memory support:** Four DIMM sockets designed to support up to 4 GB³ of DDR2 667 / 533 / 400 memory for greater platform performance and flexible memory support.
- 4 PCI Express* x16 graphics connector:** Increased graphics bandwidth delivers up to 4 GB/s per direction, and is up to 3.5 times faster than previous high-performance discrete graphics solutions.
- 5 Two PCI Express x1 connectors (Desktop Board D945PSN) or one PCI Express x1 connector (Desktop Board D945PAW):** Designed for bandwidth-intensive applications, PCI Express x1 I/O offers 3.5 times the bandwidth over traditional PCI architecture.
- 6 Four Serial ATA ports (3.0 Gb/s):** Facilitates high-speed storage and data transfers at up to 3.0 Gb/s for each of four ports.
- 7 Integrated Intel® PRO 10/100/1000 Network Connection:** Features on-board 10/100/1000-Mbps Ethernet LAN connectivity.
- 8 Intel® High Definition Audio with 5.1 Surround Sound:** Provides flexible six-channel audio with jack sensing and high-quality integrated audio that rivals the performance of high-end discrete solutions.
- 9 Four PCI connectors (Desktop Board D945PSN) or two PCI connectors (Desktop Board D945PAW):** Offers expansion slots for custom system configurations and future add-in card upgrades.
- 10 1394a connectors:** One back panel port and two internal headers for an additional two ports enable data transfer from consumer electronic devices such as digital camcorders and MP3 players.
- 11 Eight Hi-Speed USB 2.0 ports:** Provides four back panel ports and an additional four USB ports via two internal headers.
- 12 Intel® Precision Cooling Technology:** Enables advanced fan speed control to help keep system cool and improve noise levels.



The Intel® Desktop Boards D945PSN (ATX) and D945PAW (MicroBTX) are designed to showcase the latest discrete graphics chipset for the Intel® Pentium® D processor. These platforms deliver outstanding system performance through high-bandwidth interfaces such as dual-channel DDR2 667 / 533 / 400¹ memory, 1066 MHz system bus and stunning visual and audio featuring the PCI Express* x16 graphics and Intel® High Definition Audio.

Boxed Intel® Desktop Board D945PSN and D945PAW Solution includes:

- ATX 2.2-Compliant I/O Shield (Desktop Board D945PSN) or BTX 1.0a-Compliant I/O Shield (Desktop Board D945PAW)
- Floppy, SATA, and ATA 100 / 66 Cables
- Board and Back Panel I/O Layout Stickers
- Intel® Desktop Board D945PSN Quick Reference or Intel® Desktop Board D945PAW Quick Reference
- Intel® Express Installer Driver and Software CDs

Software included:

- Intel® Express Installer
- Intel® Desktop Utilities⁴
- Intel® Audio Studio
- Farstone RestoreIT!® Lite
- Norton® Internet Security 2005
- InterVideo® Home Theater Silver
- InterVideo® MediaOne® Silver
- Kaspersky® AntiVirus Business Optimal (Russian only)
- Musicmatch® Jukebox
- Jasc® Paint Shop Photo Album 5: Starter Edition
- Kingsoft® AntiVirus 2005 (Chinese only)
- Yahoo!® Toolbar with Anti-spy

Intel® Desktop Boards Classic Series

Product Family	Intel® Desktop Board D945GNT	Intel® Desktop Board D945GTP	Intel® Desktop Board D945GCZ	Intel® Desktop Board D945PSN	Intel® Desktop Board D945PAW
Form Factor	ATX	MicroATX	Micro Balanced Technology Extended (MicroBTX)	ATX	Micro Balanced Technology Extended (MicroBTX)
Product Code/UPC	BOXD945GNTL (Intel® PRO 10/100) / 00735858174695	BOXD945GTPL (Intel® PRO 10/100) / 00735858174756	BOXD945GCZL (Intel® PRO 10/100) / 00735858174817	BOXD945PSNLK (Intel® PRO 10/100/1000) / 00735858173902	BOXD945PAWLK (Intel® PRO 10/100/1000) / 00735858174039
10-pack Product Code/UPC	BLKD945GNTL (Intel PRO 10/100) / 00735858174701 KD945GNTLPAK10 (Intel PRO 10/100)	BLKD945GTPL (Intel PRO 10/100) / 00735858174763 KD945GTPLPAK10 (Intel PRO 10/100)	BLKD945GCZL (Intel PRO 10/100) / 00735858174824 KD945GCZLPAK10 (Intel PRO 10/100)	BLKD945PSNLK (Intel PRO 10/100/1000) / 00735858174831 KD945PSNLKPAK10 (Intel PRO 10/100/1000)	BLKD945PAWLK (Intel PRO 10/100/1000) / 00735858174046 KD945PAWLKPAK10 (Intel PRO 10/100/1000)
Processor Support	Intel® Pentium® D processor, Pentium® 4 processor, and Celeron® D processor in the LGA775 package	Intel® Pentium® D processor, Pentium® 4 processor, and Celeron® D processor in the LGA775 package	Intel® Pentium® D processor, Pentium® 4 processor, and Celeron® D processor in the LGA775 package	Intel® Pentium® D processor, Pentium® 4 processor, and Celeron® D processor in the LGA775 package	Intel® Pentium® D processor, Pentium® 4 processor, and Celeron® D processor in the LGA775 package
Platform Compatibility Guide	05A, 05B, 04A, 04B	05A, 05B, 04A, 04B	05A, 05B, 04A, 04B	05A, 05B, 04A, 04B	05A, 05B, 04A, 04B
Supported FSB	1066 MHz / 800 MHz / 533 MHz	1066 MHz / 800 MHz / 533 MHz	1066 MHz / 800 MHz / 533 MHz	1066 MHz / 800 MHz / 533 MHz	1066 MHz / 800 MHz / 533 MHz
Chipset	Intel® 945G Express Chipset	Intel® 945G Express Chipset	Intel® 945G Express Chipset	Intel® 945P Express Chipset	Intel® 945P Express Chipset
Supports Hyper-Threading Technology	Yes	Yes	Yes	Yes	Yes
Graphics	Intel® Graphics Media Accelerator 950	Intel® Graphics Media Accelerator 950	Intel® Graphics Media Accelerator 950	None	None
Graphics Connector	PCI Express* x16	PCI Express* x16	PCI Express* x16	PCI Express* x16	PCI Express* x16
Memory Support	DDR2 667 / 533 / 400' SDRAM 4 slots, Dual-channel (4GB³ Max)	DDR2 667 / 533 / 400' SDRAM 4 slots, Dual-channel (4GB³ Max)	DDR2 667 / 533 / 400' SDRAM 4 slots, Dual-channel (4GB³ Max)	DDR2 667 / 533 / 400' SDRAM 4 slots, Dual-channel (4GB³ Max)	DDR2 667 / 533 / 400' SDRAM 4 slots, Dual-channel (4GB³ Max)
Expansion Slots	2 PCI Express* x1, 4 PCI	1 PCI Express* x1, 2 PCI	1 PCI Express* x1, 2 PCI	2 PCI Express* x1, 4 PCI	1 PCI Express* x1, 2 PCI
Audio	Intel® High Definition Audio: Flexible 6-channel audio with jack sensing	Intel® High Definition Audio: Flexible 6-channel audio with jack sensing	Intel® High Definition Audio: Flexible 6-channel audio with jack sensing	Intel® High Definition Audio: Flexible 6-channel audio with jack sensing	Intel® High Definition Audio: Flexible 6-channel audio with jack sensing
USB Ports	Hi-Speed USB 2.0, 4 Back Ports / 4 Ports via 2 internal headers	Hi-Speed USB 2.0, 4 Back Ports / 4 Ports via 2 internal headers	Hi-Speed USB 2.0, 4 Back Ports / 4 Ports via 2 internal headers	Hi-Speed USB 2.0, 4 Back Ports / 4 Ports via 2 internal headers	Hi-Speed USB 2.0, 4 Back Ports / 4 Ports via 2 internal headers
1394	None	None	None	Up to 3 IEEE-1394a ports (1 back port)	Up to 3 IEEE-1394a ports (1 back port)
Storage	4 SATA ports (3.0 Gb/s)	4 SATA ports (3.0 Gb/s)	4 SATA ports (3.0 Gb/s)	4 SATA ports (3.0 Gb/s)	4 SATA ports (3.0 Gb/s)
RAID	None	None	None	None	None
On-Board LAN	Intel PRO 10/100 Network Connection	Intel PRO 10/100 Network Connection	Intel PRO 10/100 Network Connection	Intel PRO 10/100/1000 Network Connection	Intel PRO 10/100/1000 Network Connection
TPM	No	No	No	No	No
Lead Free Board	Yes	Yes	Yes	Yes	Yes

Product Family	Intel® Desktop Board D945GNT	Intel® Desktop Board D945GTP	Intel® Desktop Board D945GCZ	Intel® Desktop Board D945PSN	Intel® Desktop Board D945PAW
Software	Intel® Express Installer Intel® Desktop Utilities ⁴ Intel® Audio Studio Farstone RestoreIT!* Lite Norton® Internet Security 2005 InterVideo® Home Theater Silver Kaspersky® AntiVirus Business Optimal (Russian only) Musicmatch® Jukebox Jasc® Paint Shop Photo Album 5: Starter Edition InterVideo® MediaOne® Silver Kingsoft® AntiVirus 2005 (Chinese only) Yahoo!* Toolbar with Anti-spy	Intel® Express Installer Intel® Desktop Utilities ⁴ Intel® Audio Studio Farstone RestoreIT!* Lite Norton® Internet Security 2005 InterVideo® Home Theater Silver Kaspersky® AntiVirus Business Optimal (Russian only) Musicmatch® Jukebox Jasc® Paint Shop Photo Album 5: Starter Edition InterVideo® MediaOne® Silver Kingsoft® AntiVirus 2005 (Chinese only) Yahoo!* Toolbar with Anti-spy	Intel® Express Installer Intel® Desktop Utilities ⁴ Intel® Audio Studio Farstone RestoreIT!* Lite Norton® Internet Security 2005 InterVideo® Home Theater Silver Kaspersky® AntiVirus Business Optimal (Russian only) Musicmatch® Jukebox Jasc® Paint Shop Photo Album 5: Starter Edition InterVideo® MediaOne® Silver Kingsoft® AntiVirus 2005 (Chinese only) Yahoo!* Toolbar with Anti-spy	Intel® Express Installer Intel® Desktop Utilities ⁴ Intel® Audio Studio Farstone RestoreIT!* Lite Norton® Internet Security 2005 InterVideo® Home Theater Silver Kaspersky® AntiVirus Business Optimal (Russian only) Musicmatch® Jukebox Jasc® Paint Shop Photo Album 5: Starter Edition InterVideo® MediaOne® Silver Kingsoft® AntiVirus 2005 (Chinese only) Yahoo!* Toolbar with Anti-spy	Intel® Express Installer Intel® Desktop Utilities ⁴ Intel® Audio Studio Farstone RestoreIT!* Lite Norton® Internet Security 2005 InterVideo® Home Theater Silver Kaspersky® AntiVirus Business Optimal (Russian only) Musicmatch® Jukebox Jasc® Paint Shop Photo Album 5: Starter Edition InterVideo® MediaOne® Silver Kingsoft® AntiVirus 2005 (Chinese only) Yahoo!* Toolbar with Anti-spy
Intel Advanced BIOS	Intel® Platform Innovation Framework for the Extensible Firmware Interface (EFI) Intel® Rapid BIOS Boot Intel® Precision Cooling Technology Intel® Express BIOS Update Digital Signature Technology Fault Tolerant Flashing Multiple Language Support	Intel® Platform Innovation Framework for the Extensible Firmware Interface (EFI) Intel® Rapid BIOS Boot Intel® Precision Cooling Technology Intel® Express BIOS Update Digital Signature Technology Fault Tolerant Flashing Multiple Language Support	Intel® Platform Innovation Framework for the Extensible Firmware Interface (EFI) Intel® Rapid BIOS Boot Intel® Precision Cooling Technology Intel® Express BIOS Update Digital Signature Technology Fault Tolerant Flashing Multiple Language Support	Intel® Platform Innovation Framework for the Extensible Firmware Interface (EFI) Intel® Rapid BIOS Boot Intel® Precision Cooling Technology Intel® Express BIOS Update Digital Signature Technology Fault Tolerant Flashing Multiple Language Support	Intel® Platform Innovation Framework for the Extensible Firmware Interface (EFI) Intel® Rapid BIOS Boot Intel® Precision Cooling Technology Intel® Express BIOS Update Digital Signature Technology Fault Tolerant Flashing Multiple Language Support
Warranty	3 year limited warranty	3 year limited warranty	3 year limited warranty	3 year limited warranty	3 year limited warranty

Technical Specifications

Processor

Processor Support

- Intel® Pentium® D processor in the LGA775 package
- Intel® Pentium® 4 processor in the LGA775 package
- Intel® Celeron® D processor in the LGA775 package
- Supports Intel® EM64T²
- Platform Compatible Guide: 04A, 04B, 05A, 05B

Chipset

Intel® 945G Express Chipset

- Intel® 82945G Graphics and Memory Controller Hub (GMCH)
- Intel® 82801GB I/O Controller Hub (ICH7)
- Serial Peripheral Interface (SPI) Flash or Firmware Hub (FWH)

Intel® 945P Express Chipset

- Intel® 82945P Memory Controller Hub (MCH)
- Intel® 82801GB I/O Controller Hub (ICH7)
- Serial Peripheral Interface (SPI) Flash or Firmware Hub (FWH)

Graphics and Memory

Controller Hub (GMCH) for Intel® 945G Express Chipset, Memory Controller Hub (MCH) for Intel® 945P Express Chipset

Designed to support up to 4 GB³ of system memory using DDR2 667 / 533 / 400¹ SDRAM Memory

Intel® ICH7 I/O Controller Hub

- Up to two Ultra ATA 100 / 66 devices
- Four SATA (3.0 Gb/s) ports
- Four PCI request-grant pairs for support of four PCI bus masters (Desktop Boards D945GNT, D945PSN)

- Two PCI request-grant pairs for support of two PCI bus masters (Desktop Boards D945GTP, D945GCZ, D945PAW)
- Intel® PRO 10/100 Network Connection (Desktop Boards D945GNT, D945GTP, D945GCZ)
- Intel® PRO 10/100/1000 Network Connection (Desktop Boards D945PSN, D945PAW)

I/O Features

Integrated super I/O LPC bus controller

- Four PCI local bus slots (Desktop Boards D945GNT/D945PSN)
- Two PCI local bus slots (Desktop Boards D945GTP, D945GCZ, D945PAW)
- Two PCI Express* x1 local bus slot (Desktop Boards D945GNT, D945PSN)
- One PCI Express* x1 local bus slot (Desktop Boards D945GTP, D945GCZ, D945PAW)

USB 2.0

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

Intel® Rapid BIOS Boot

- Optimized POST for faster 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 667 / 533 / 400¹ SDRAM memory support
- Non-ECC Memory

Memory Modes

- Dual or single-channel operation support

Memory Voltage

- 1.8V

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 1.0b

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

- Four PCI bus add-in card connectors (Desktop Boards D945GNT, D945PSN)
- Two PCI bus add-in card connectors (Desktop Boards D945GTP, D945GCZ, D945PAW)
- Two PCI Express x1 bus add-in card connectors (Desktop Boards D945GNT, D945PSN)
- One PCI Express x1 bus add-in card connector (Desktop Boards D945GTP, D945GCZ, D945PAW)
- One PCI Express x16 graphics connector

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
- Two front-panel Hi-Speed USB 2.0 headers
- Two front-panel 1394a headers (Desktop Boards D945PSN, D945PAW)
- Front-panel audio header

Mechanical

Board Style

- Desktop Boards D945GNT, D945PSN—ATX 2.2-compliant
- Desktop Board D945GTP—MicroATX 1.2-compliant
- Desktop Boards D945GCZ, D945PAW—MicroBTX 1.0a-compliant

Board Size

- Desktop Board D945GNT, D945PSN—12" x 9.6" (30.48 cm x 24.38 cm)
- Desktop Board D945GTP—9.6" x 9.6" (24.38 cm x 24.38 cm)
- Desktop Boards D945GCZ, D945PAW—10.5"x10.4 (26.67 cm x 26.41 cm)

Baseboard Power Requirements

- Desktop Board D945GNT, D945PSN—ATX12V
- Desktop Boards D945GTP, D945GCZ, D945PAW—ATX12V or SFX12V

Environment

Operating Temperature

- 0° C to +55° C

Storage Temperature

- -40° C to +70° C

Regulations

Safety Regulations

U.S. 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)

U.S.: FCC Part 15, Class B

U.S.: 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.



Ordering Information: See the Intel Web site at www.intel.com.

**For the most current product information,
visit developer.intel.com/design/motherbd/**

- 1 DDR2 400 memory is only supported in combination with Intel® Pentium® 4 processor with 800 MHz system bus.
- 2 Intel® Extended Memory 64 Technology (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. Performance will vary depending on your hardware and software configurations. See www.intel.com/info/em64t for more information including details on which processors support Intel EM64T or consult with your system vendor for more information.
- 3 Desktop Boards D945GTP, D945GCZ, D945GNT, D945PSN and D945PAW were designed to support up to 4-GB total system memory using DIMMs based on 512-Mbit or 1-Gbit technologies. 1-Gbit technology has not been validated on these Intel® Desktop Boards. For more information about the latest list of tested memory, refer to the Intel World Wide Web site at: <http://support.intel.com/support/motherboards/desktop/>.
- 4 Intel® Desktop Utilities includes: hardware monitoring, Diskeeper® Lite defragmentation, NTI Backup Now®, StressTest®, OSA AdminWorks® and Symantec® Security Check.

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Order Number: 307670-001