

Mini-ITX / MicroATX-compatible Form Factor

Intel® Desktop Board D945GSEJT Essential Series

With an Integrated Intel® Atom™ Processor N270

Intel introduced an innovative and affordable desktop board solution based on the Intel® Atom™ processor, exhilarating the nettop market with a radically thin, low-power motherboard for innovative system designs.

Experience the Intel® Desktop Board D945GSEJT—created for users demanding affordable yet stylish computing solutions. This breakthrough platform addresses emerging slim nettops, affordable all-in-one PCs, thin/enriched-client PCs, and other usage models with its versatile, low-power, thin form factor design.

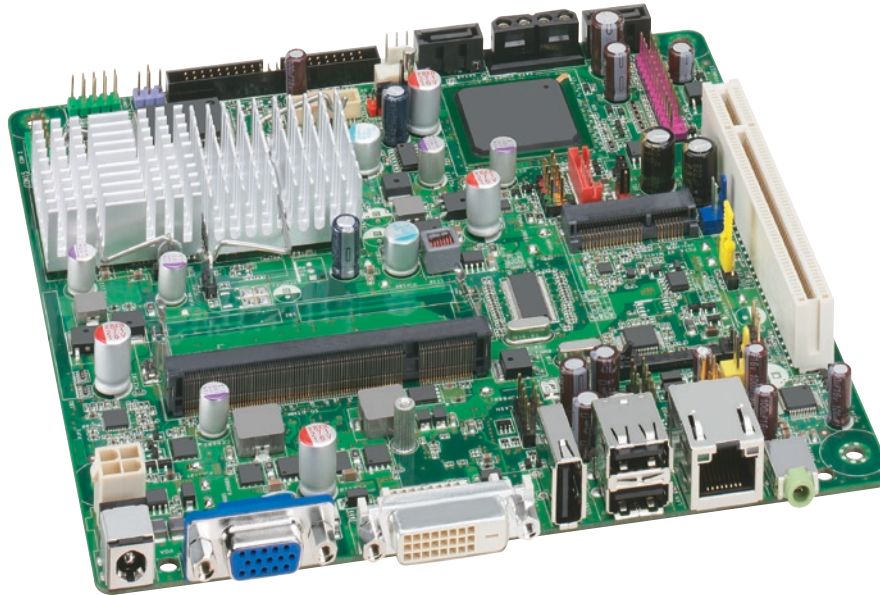
Featuring the integrated 45nm Intel® Atom™ processor N270 and the Mobile Intel® 945GSE Express Chipset, this board delivers an energy-efficient nettop solution for consumer and corporate users alike, both in traditional and unique vertical markets. The Intel Atom processor N270 delivers robust performance-per-watt for cost-effective and low-power solutions, while the Mobile Intel® 945GSE Express Chipset features power-efficient graphics with an integrated 32-bit 3D graphics engine based on Intel® Graphics Media Accelerator 950 architecture. The combined platform delivers impressive power-optimization and rich I/O capabilities, such as PCI Express* Mini Card

and conventional PCI slots, Serial ATA ports, Hi-Speed USB 2.0 and GbE LAN connectivity, Intel® High Definition Audio, and legacy I/O expandability.

The Intel Desktop Board D945GSEJT promotes channel diversification into innovative solutions based on its mini-ITX (170mm x 170mm) form factor, total board height of only 20mm, and passively cooled components for very thin and potentially fanless system designs. Featuring VGA and DVI dual graphics (see your Intel representative for LVDS option), the Intel Desktop Board D945GSEJT is ideal for entry-level or secondary home entertainment, small- to medium-sized businesses, call centers, and a host of innovative applications such as infotainment devices, kiosks, and home surveillance. The Intel Desktop Board D945GSEJT also supports low-cost external 12 V power, onboard power for SATA storage devices, internal USB and IDE flash disk-on-modules, network boot via gPXE/iSCSI protocol, and wireless connectivity via the PCI Express Mini Card slot (including mechanical support for up to three external antennas through the supplied I/O shield).



Intel® Desktop Board D945GSEJT



The boxed Intel® Desktop Board D945GSEJT solution includes:

- ATX 2.2 compliant I/O shield
- SATA Cable
- Board and back panel I/O layout stickers
- Quick reference guide
- Intel® Express Installer driver and software DVD
- Microsoft* Windows Vista* Basic WHQL certified

The software included with the Intel® Desktop Board D945GSEJT will thrill you with a new digital experience that benefits your everyday computing.

CAPABILITY

SOFTWARE INCLUDED:

Productivity

- Intel® Integrator Assistant (Internet Download)
- Diskeeper* Home Edition
- Laplink* PCmover* Express
- Skype*
- TypePad*
- Kingsoft* Powerword* (Chinese)

Entertainment

- DivX* for Windows*
- WildTangent* Wildgames*

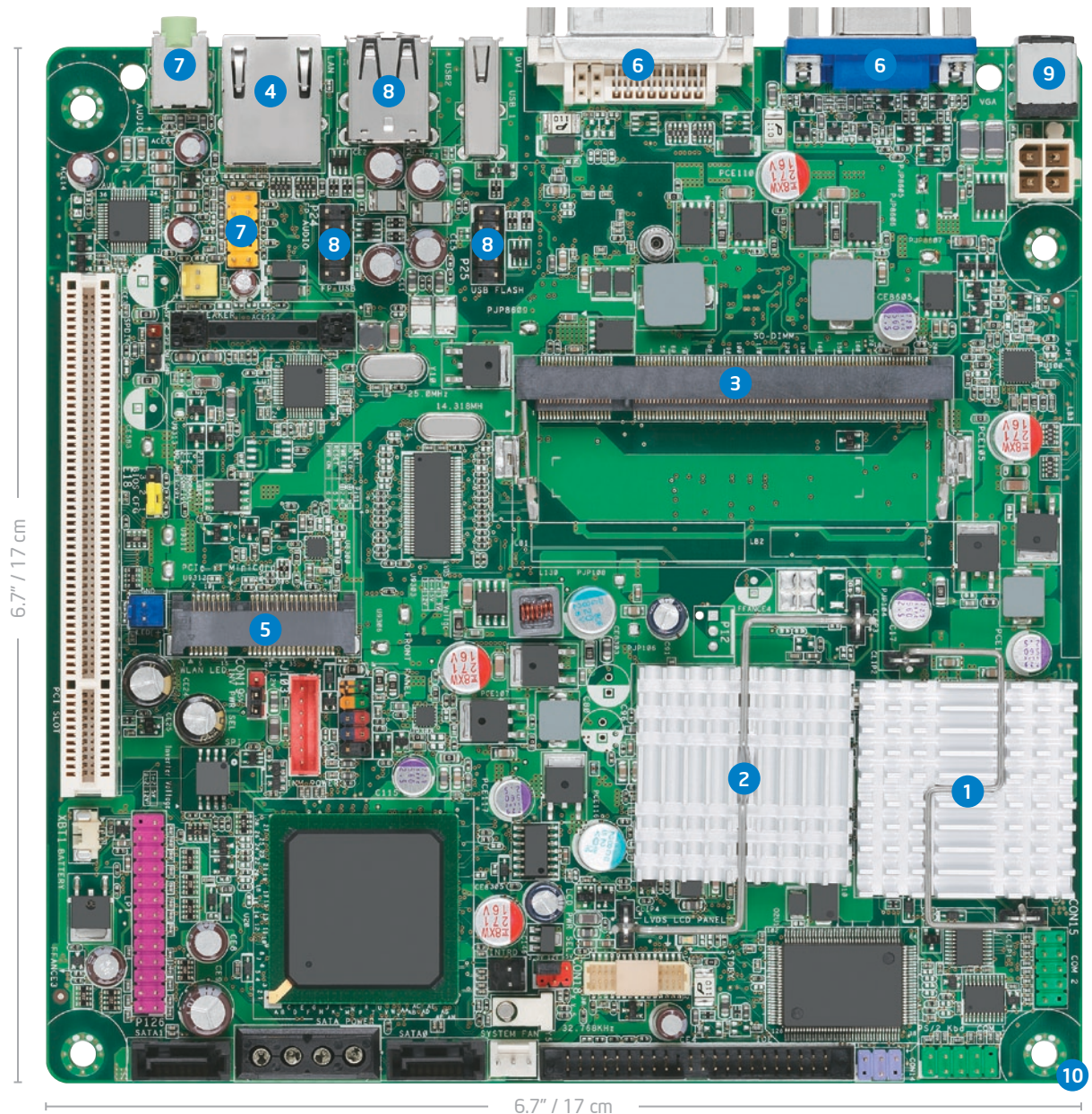
Antivirus

- Norton Internet Security*
- Kaspersky* Anti-Virus (Russian)
- Kingsoft* Antivirus (Chinese)

Features and Benefits

Intel® Desktop Board D945GSEJT

- 1 Intel® Atom™ Processor N270:** Integrated single-core, low-power processor with 533 MHz system bus.
- 2 Mobile Intel® 945GSE Express Chipset:** Featuring Intel® Graphics Media Accelerator 950.
- 3 Single-Channel SODIMM Socket:** Designed to support up to 2 GB DDR2 800 / 667 / 533 SDRAM¹ memory.
- 4 Integrated 10/100/1000 Mb/s LAN:** Gigabit Ethernet LAN connectivity.
- 5 PCI Express* Mini Card slot:** Enables wireless connectivity.
- 6 Support for two displays via VGA and DVI connectors (see your Intel representative for LVDS option)**
- 7 High Definition Audio:** 2+2 channel HD audio with front panel audio header and internal speaker header.
- 8 Support for up to seven USB 2.0 ports:** Three back panel ports and two dual-port front panel headers (supports a single USB flash drive).
- 9 12 V DC connector:** Supports DC input via power adapter without having traditional power supply within the chassis.
- 10 Low profile mini-ITX / microATX-compatible form factor:** Total board height of 20mm, enabling integration into a small, potentially fanless chassis.



Technical Specifications

Processor

Processor Support

- Intel® Atom™ Processor N270 integrated (1.6 GHz / 512 KB L2 Cache / 533 System Bus)

Chipset

- Intel® 945GSE Express Chipset with ICH7M

I/O Features

- Two SATA ports with SATA power connector
- One Parallel ATA port (44-pin mobile header)
- One PCI local bus slot

USB 2.0

- Three back panel ports
- Four front panel ports (via two internal headers; support for single internal USB flash drive)

Audio Solution

- 2-channel (single) / 2+2 channel (multi) HD audio (analog)
- Front panel mic/headphone header
- Internal speaker header
- Digital audio via S/PDIF

10/100/1000 Network Connection

- Realtek® 10/100/1000 Ethernet Controller with gPXE/iSCSI network boot support
- Supported wireless via PCI Express Mini Card slot

SPI

System BIOS

- 4 Mb Flash EEPROM with Intel® BIOS featuring Plug and Play, IDE drive auto-configure

Intel® Rapid BIOS Boot

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

System Memory

Memory Capacity

- Single-Channel DDR2 DIMM Socket (533)
- Designed to support up to 2 GB

Memory Type

- SODIMM DDR2 800 / 677 / 533¹

Memory Voltage

- 1.8 V

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

Expansion Capabilities

- One PCI slot
- One PCI Express Mini Card slot

Jumpers and Front-Panel Connectors

Jumpers

- Jumper access for BIOS configuration mode

Front Panel Connectors

- Reset, HD LED, Power LED, power on/off, Wireless LED
- Two USB 2.0 headers
- Audio header

Mechanical

Board Style

- Mini-ITX/microATX compatible
- 170mm x 170mm
- Total Z height of board 20mm

Desktop Board Power Requirements

- Primary: Rear 12 V DC jack for 60 W external power supply (GND via 5.5mm/OD; 12V via 2.5mm/ID)
- Alternate: Internal +12 V 2 x 2 internal power connector (for system with internal power supply)

Environment

Operating Temperature

- 0° C to +35° C

Storage Temperature

- 20° C to +70° C

Regulations and Safety Standards

United States and Canada

- CSA/UL 60950-1, First Edition (Binational Standard)

Europe

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

International

- IEC 60950-1:2001, First Edition

EMC Regulations

(tested in representative chassis)

United States

- FCC 47 CFR Part 15, Subpart B

Canada

- ICES-003, Issue-004 Class B

Europe

- (EMC Directive 2004/108/EC) EN 55022:2006 and EN 55024:1998

Australia/New Zealand

- EN 55022:2006 Class B

Japan

- VCCI V-3/2007.04, V-4/2007.04, Class B

South Korea

- KN-22:2005 and KN-24:2005

Taiwan

- CNS 13438:2006 Class B

International

- CISPR 22:2005 +A1:2005 +A2:2006 Class B

Environmental Compliance

Europe

- Europe RoHS (Directive 2002/95/EC)

China

- China RoHS (MII Order # 39)



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/products/desktop/motherboard/

¹ Perform up to System Bus speed at 533 MHz.

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