

### Mini-ITX / MicroATX-Compatible Form Factor

# Intel® Desktop Boards D945GCLF2 and D945GCLF2D Essential Series

## Small on Size. Big on Potential.

Intel recently introduced an innovative and affordable desktop solution for use with Intel® Atom™ processor-based nettop PCs. Intel-powered nettop PCs bring an exciting new category of small form factor designs created especially for value users. The nettop is used to address the need for an Internet-centric usage model for the broad channel. The Intel® Desktop Boards D945GCLF2 and D945GCLF2D are designed to support this basic computing and vertical usage model. Featuring the flexible mini-ITX form factor as well as the innovative technology of the Intel Atom processor, the Intel Desktop Boards D945GCLF2 and D945GCLF2D are small on size and big on potential.

Featuring the integrated 45nm Dual-Core Intel Atom processor and the Intel® 945GC Express Chipset, these boards deliver an energy-efficient nettop solution for home users as well as for unique vertical market needs.

The futuristic Intel Atom processor is Intel's smallest low-power processor<sup>1</sup>. Designed with Intel's leading-edge technology using Intel's 45nm Hi-k metal gate silicon, the Intel Atom processor uses 47 million of the world's smallest transistors. Energy-efficient, lightweight, and designed for low-power use, the Intel Atom processor delivers a rich and full experience in a tiny, power-packed package.

The Intel 945GC Express Chipset features built-in Intel® Graphics Media Accelerator 950 and Intel® Flex Memory Technology. In addition, the Intel Desktop Boards

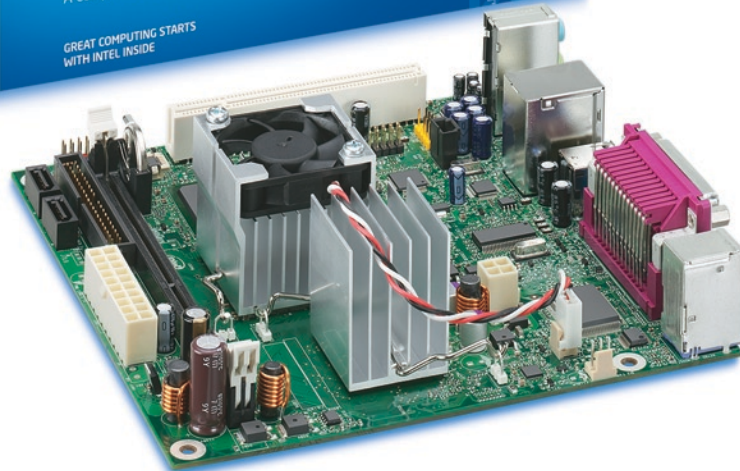
D945GCLF2 and D945GCLF2D provide enhanced features such as 10/100/1000 integrated LAN, and integrated 6-channel HD audio. The Intel Desktop Board D945GCLF2 also includes an S-Video connector.

The Intel Desktop Boards D945GCLF2 and D945GCLF2D also feature the newest mini-ITX form factor. Backward compatible with ATX/MicroATX, this form factor allows you to build green and energy-efficient solutions. Using a compact 6.75" x 6.75" size, these boards power simple, affordable, and Internet-centric computer designs, allowing designers the ultimate in small chassis flexibility.

Nettops represent a fundamental shift in system design—small, yet powerful enough to enable a big Internet experience for all audiences. At an affordable price point, the Intel Desktop Boards D945GCLF2 and D945GCLF2D are ideal for innovative system usage models such as kiosks, call centers, home surveillance, classrooms, emerging markets, and entry-level home entertainment systems. The Intel Desktop Boards D945GCLF2 and D945GCLF2D offer incredible opportunities to communicate, listen, watch, play, and learn.



# Intel® Desktop Boards D945GCLF2 (with TV-out solution) and D945GCLF2D



Intel® Desktop Board D945GCLF2

## The boxed Intel® Desktop Boards D945GCLF2 and D945GCLF2D include:

- Integrated Dual-Core Intel® Atom™ Processor
- ATA 100/66 and Serial ATA Cable
- Back Panel I/O and Board Layout Stickers
- Quick Reference and Product Guides
- Intel® Express Installer Driver and Software CD

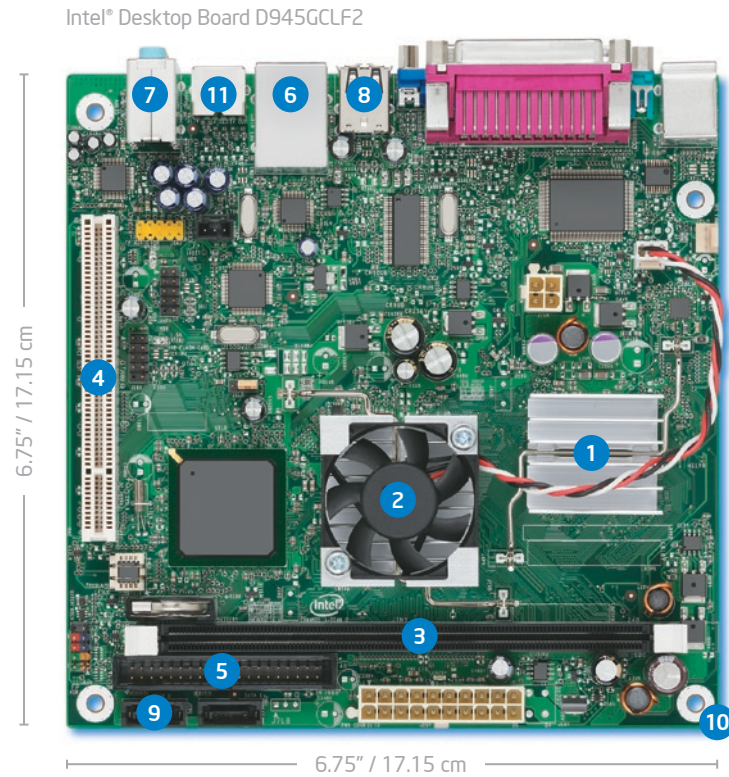
## Software Included:

- Intel® Integrator Assistant (Internet Download)
- Diskeeper\* Home Edition
- Norton Internet Security\*
- TypePad\*
- Kaspersky\* Anti-Virus (Russian)
- Kingsoft\* Antivirus (Chinese)

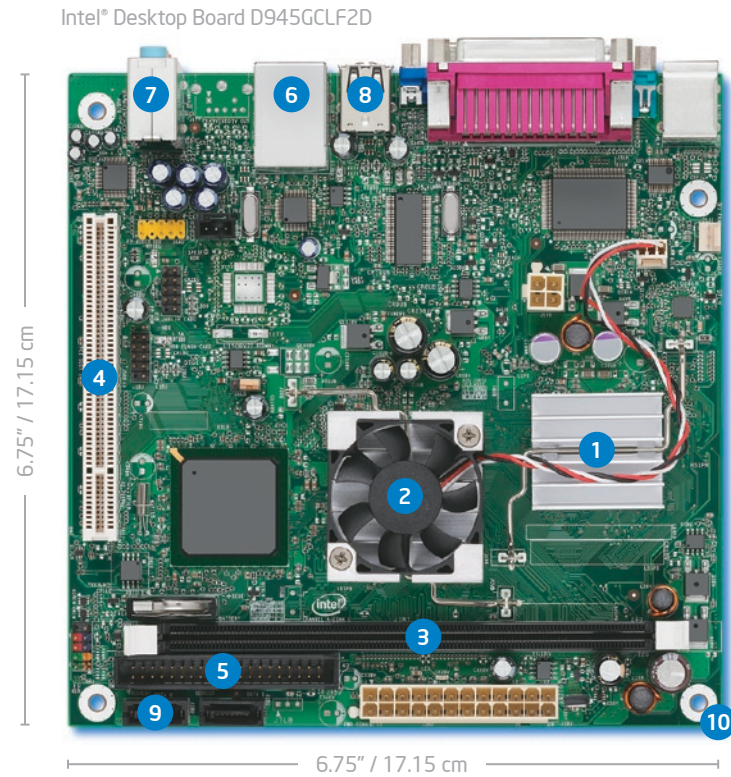
*Actual Intel® Desktop Board may differ from the image shown.*

## Features and Benefits

# Intel® Desktop Boards D945GCLF2 (with TV-out solution) and D945GCLF2D



- 1 Dual-Core Intel® Atom™ Processor:** Integrated, low-power processor with 533 MHz system bus.
- 2 Intel® 945GC Express Chipset featuring Intel® Graphics Media Accelerator 950**
- 3 Single DIMM socket:** Designed to support up to 2 GB of DDR2 667 / 533 SDRAM<sup>2</sup>.
- 4 PCI slot:** Expansion slot for custom system configurations and future add-in card upgrades.
- 5 IDE connector:** Supports up to two ATA 100/66 devices.
- 6 Integrated 10/100/1000 LAN:** Onboard 10/100/1000 Mb/s Ethernet LAN connectivity.



- 7 High Definition Audio (6-Channel) with front panel header:** Integrated stereo audio at an excellent value.
- 8 Support for up to eight Hi-Speed USB 2.0 ports:** Four back panel ports and two onboard headers supporting four additional USB 2.0 ports.
- 9 Two Serial ATA ports (3.0 Gb/s)**
- 10 Mini-ITX/microATX-compatible form factor**
- 11 S-Video connector**

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

## Technical Specifications

### Processor

#### Processor Support

- Dual-Core Intel® Atom™ Processor 330 integrated (1.6 GHz / 2 x 512 KB L2 Cache / 533 System Bus)

#### Chipset

- Intel® 945GC Express Chipset with ICH7

#### I/O Features

- Integrated super I/O LPC bus controller
- Ultra ATA 100/66 device support
- Two SATA ports (3.0 Gb/s)
- One PCI local bus slot
- S-Video connector (Intel® Desktop Board D945GCLF2 only)

#### USB 2.0

- Four back panel ports
- Two onboard headers providing four port support

#### Audio Solution

- Integrated High Definition Audio (6-channel) with front panel header

#### 10/100/1000 Network Connection

- Onboard 10/100/1000 Ethernet LAN

### SPI

#### System BIOS

- 4 Mb Flash EEPROM with Intel® BIOS featuring Plug and Play, IDE drive auto-configure
- Advanced configuration and power interface V2.0, DMI 2.0

#### Intel® Rapid BIOS Boot

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

<sup>1</sup> Processor size based on actual Intel® architectural product offerings.

<sup>2</sup> System bus speed performance up to 533 MHz.

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### System Memory

#### Memory Capacity

- One 240-pin DIMM connector
- Designed to support up to 2 GB of system memory using DDR2 667 / 533 SDRAM<sup>2</sup>

#### Memory Type

- DDR2 667 / 533 SDRAM<sup>2</sup>

#### 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 bus add-in 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, aux LED
- Two USB 2.0 headers
- Audio header

### Mechanical

#### Board Style

- Mini-ITX/microATX compatible
- 6.75" x 6.75" (17.15 cm x 17.15 cm)

#### Desktop Board Power Requirements

- ATX12V or SFX12V

### Environment

#### Operating Temperature

- 0° C to +55° 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](http://www.intel.com). For the most current product information, visit [intel.com/products/desktop/motherboard](http://intel.com/products/desktop/motherboard)**

