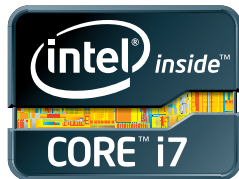


ATX Form Factor

# The Ultimate Workhorse!

Introducing the Intel® Desktop Board DX79T0, designed for professional grade computing and to support the new Intel® Core™ i7 Processors



## When Performance Counts

With the Intel® Desktop Board DX79T0, Intel is at it again. Built with stability and reliability in mind, performance users will have the peace of mind needed to perform critical compute-intensive tasks. The Intel Desktop Board DX79T0 provides break-away performance in production and editing, as well as digital media rendering and real-time audio/video preview capabilities. The massive data throughput and support for the Intel® Core™ i7 processor runs more applications simultaneously, with less wait time. The Trusted Platform Module (TPM) provides extra platform integrity with secure hardware authentication for the most sensitive work environments.

## Power and Stability

With incredible support for up to twelve threads of raw processing power, unprecedented bandwidth, quad-channel DDR3 memory with support for up to eight DIMMs, the Intel Desktop Board DX79T0 offers the power and affordability for a desktop workhorse.

BIOS Vault Technology protects the board and provides fault tolerant and secure firmware. Intel BIOS is protected from outside attacks and enables advance security checks and balances. Fast Boot also speeds through boot times and eliminates unnecessary delays. Intel® Extreme Memory Profiles (Intel® XMP) is a performance-packed expansion of the standard DDR3 memory specification, enabling a robust and stable solution for ultra-fast memory.

## Intel® Desktop Board DX79T0 Extreme Series

The Boxed Intel® Desktop Board DX79T0 Solution Includes:

- Intel® Desktop Board DX79T0
- ATX 2.2 compliant I/O shield
- SATA cables
- Board and back panel I/O layout stickers
- Quick reference guide
- Intel® Express Installer driver and software DVD
- Windows\* Premium WHQL certified
- NVIDIA\* SLI\* Bridge connectors
- Post code information card

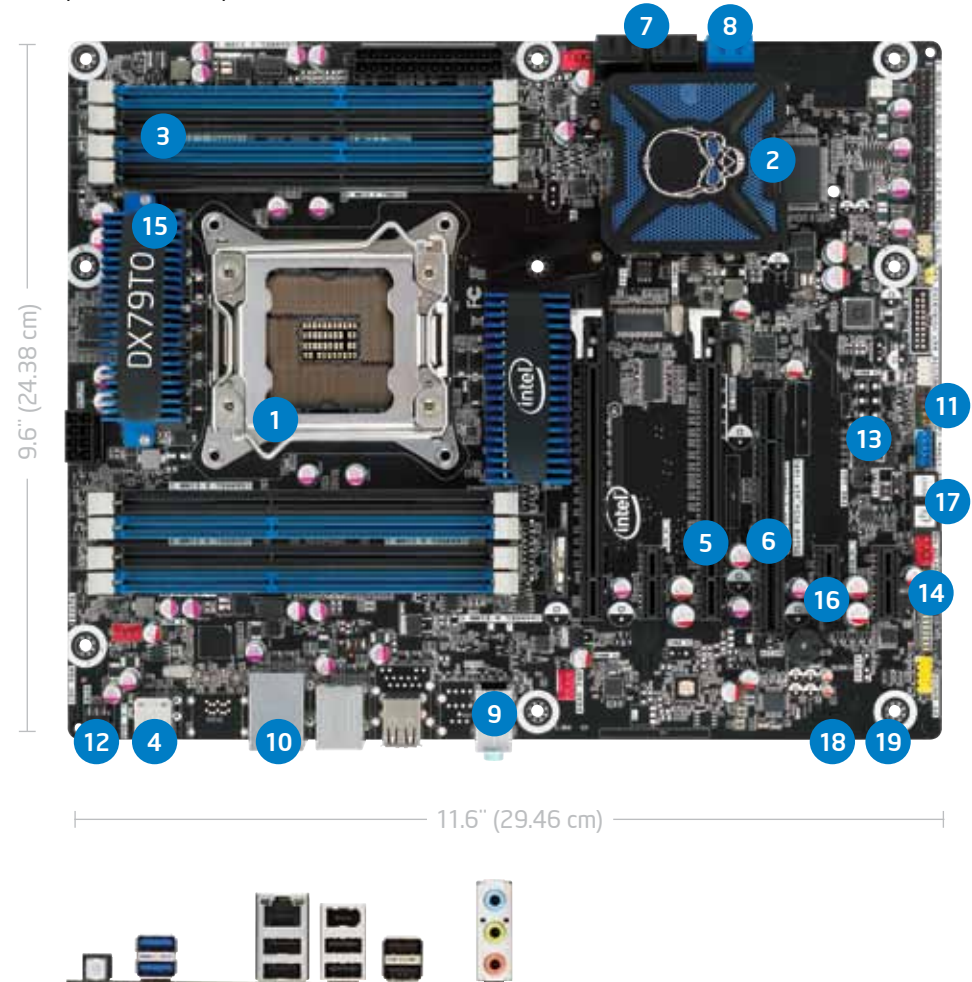
## Software Included:

Capability	Software Included
<b>Utilities</b>	<ul style="list-style-type: none"><li>▪ Intel® Extreme Tuning Utility (XTU) (Internet Download):<ul style="list-style-type: none"><li>- Monitors system temperature and fan speeds</li><li>- Enables manual tuning of memory and processor or one-button auto-tuning</li></ul></li><li>▪ Intel® Express Installer: Streamlines board integration</li></ul>
<b>Productivity</b>	<ul style="list-style-type: none"><li>▪ Additional free software: Helps get your system up and running smoothly and quickly</li></ul>
<b>Antivirus</b>	<ul style="list-style-type: none"><li>▪ ESET* Smart Security 5 Antivirus: Removes viruses automatically, blocks certain internet worm attacks, and protects e-mail and instant messages</li></ul>

# Intel® Desktop Board DX79T0 Extreme Series

## Features and Benefits

- 1 Support for the Intel® Core™ i7 processor Extreme Edition in the LGA2011 package:** Supports both 4 core and 6 core processors. Features Intel® Turbo Boost Technology<sup>1</sup>, Intel® Hyper-Threading Technology<sup>2</sup> for exceptional performance and scalability, and up to 15 MB Intel® Smart Cache, enabling dynamic and efficient allocation of cache.
- 2 Intel® X79 Express Chipset:** Features DMI uni-directional connectivity to the processor.
- 3 Eight DIMM slots:** Designed to support overclocked<sup>3</sup> DDR3 2400+ O.C.<sup>4</sup> memory, delivering up to 64 GB/s memory bandwidth.
- 4 Two Super Speed USB 3.0 Ports, Two IEEE 1394a ports (1 external/1 via internal header) and 14 USB 2.0 ports (6 back ports/8 via internal headers):** Provides for the most flexible back panel connectivity options.
- 5 Two PCI Express 3.0\* x16 slots:** Improved graphics bandwidth and support for Certified ATI CrossFireX\* and NVIDIA\* SLI\*.
- 6 PCI Express\* and PCI connectors:** Flexibility to support PCI Express and legacy PCI devices.
- 7 Two SATA 6.0 Gb/s ports and Four SATA 3.0 Gb/s ports:** Support for up to six ports with the ability to disable individual ports via the Intel® Rapid Storage driver stack.
- 8 Intel® Rapid Recovery Technology:** Performance and reliability with support for RAID 0, 1, 5, 10, and Intel® Rapid Recover Technology.
- 9 6-Channel Intel® High Definition Audio (5.1):** Enables high-quality integrated audio that rivals the performance of high-end discrete solutions.
- 10 Intel® Gigabit Ethernet LAN:** Features onboard 10/100/1000 Mb/s Ethernet LAN connectivity.
- 11 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.
- 12 Back-to-BIOS switch:** Allows easy access to the BIOS for easy overclocking<sup>3</sup> and recovery.
- 13 Post code decoder:** Allows for display of post codes for debug along with the included post code quick reference card displaying critical areas to help troubleshoot performance-increase roadblocks.
- 14 Initialization and Diagnostic LEDs:** Provides instant visible system feedback.
- 15 Exclusive voltage regulator heat sinks:** Provides reliable and silent cooling for extreme performance tuning.
- 16 Solid State Capacitors and exclusive Power Supervisor:** Maximizes stability and power for advanced performance tuning.
- 17 Tweaker switches:** Power and reset switches for overclocking<sup>3</sup> on the go, quick reset and power on.
- 18 ATX (9.6" x 11.6") Form Factor:** ATX board supports more fully featured tower designs.
- 19 Lead-free:** Meets all worldwide regulatory requirements for lead-free manufacturing.



# Intel® Desktop Board DX79TO Extreme Series

## Technical Specifications

### PROCESSOR

#### Processor Support

- Intel® Core™ i7 processors in the LGA2011 package
- Intel® Turbo Boost Technology<sup>1</sup>
- Intel® Hyper-Threading Technology<sup>2</sup>
- Integrated Memory Controller with support for up to 64 GB<sup>4</sup> of system memory DDR3 2400+ O.C. SDRAM
- Intel® Fast Memory Access
- Supports Intel® 64 architecture<sup>5</sup>

### CHIPSET

#### Intel® X79 Express Chipset

- Intel® X79 PCH
- Intel® Rapid Storage Manager (RAID 0, 1, 5, 10)
- Two SATA (6.0 Gb/s) and four SATA (3.0 Gb/s) ports

### USB PORTS

- Six Hi-Speed USB 2.0 ports via back panel
- Eight additional Hi-Speed USB 2.0 ports via four internal headers
- Two Super-Speed USB 3.0 ports via NEC controller

### SYSTEM BIOS

- 64 Mb Flash EEPROM with Intel® Platform Innovation Framework for EFI Plug and Play, IDE drive auto-configure
- Advanced configuration and power interface V3.0b, DMI 2.5

### INTEL® RAPID BIOS BOOT

- Intel® Rapid BIOS Boot
- Intel® Express BIOS update support: BIOS update via F7 function key

### 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 3.0b

### INTEL® PRO 10/100/1000 NETWORK CONNECTION

- Intel® LAN on the back panel
- New low-power design can meet Energy Star\* 5.0 specifications

### EXPANSION CAPABILITIES

- Two PCI Express\* x16 connectors (configured as x16/x16 in Dual graphics mode)
- Two PCI Express 2.0 x1 slots
- One PCI Express x4 slot
- One PCI slots

### AUDIO

- 8-channel Intel® High Definition Audio<sup>6</sup> codec
- 6-channel via the back panel
- 2-channel via the front panel
- Back panel support for output via optical cable
- One internal header for S/PDIF output for HDMI\* support

### SYSTEM MEMORY

#### Memory Capacity

- Eight 240-pin DIMM connectors supporting quad channel memory. Two double-sided DIMMS per channel
- Maximum system memory up to 64 GB<sup>7</sup> using 8 GB double-sided DIMMS

### Memory Types

- DDR3 2400+ O.C. SDRAM memory support
- Non-ECC Memory

### Memory Modes

- Quad- or tri- or dual- or single-channel operation support

### Memory Voltage

- 1.35 V low voltage
- 1.5 V standard JEDEC voltage
- Support for Intel® XMP extended voltage profiles

### 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
- Four front-panel Hi-Speed USB 2.0 headers
- Front-panel audio header
- One IEEE 1394a 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 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

# Intel® Desktop Board DX79TO Extreme Series

## Technical Specifications

### Environmental Compliance

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.

For ordering information, visit [www.intel.com](http://www.intel.com)

For the most current product information, visit [www.intel.com/go/idb](http://www.intel.com/go/idb)

<sup>1</sup> 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](http://www.intel.com/technology/turboboost) for more information.

<sup>2</sup> 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](http://www.intel.com/info/hyperthreading).

<sup>3</sup> 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 warranty, the operation of the processor beyond its specifications.

<sup>4</sup> Maximum peak memory bandwidth requires four DDR3 modules to be populated in each of the blue memory slots. DDR3 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/](http://www.intel.com/products/motherboard/) for more details.

<sup>5</sup> 64-bit computing on Intel® architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers, and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. See <http://developer.intel.com/technology/intel64/index.htm> for more information.

<sup>6</sup> 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.htm](http://www.intel.com/design/chipsets/hdaudio.htm).

<sup>7</sup> 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.

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL® PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER, AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT, OR OTHER INTELLECTUAL PROPERTY RIGHT.

Intel products are not intended for use in medical, life-saving, or life-sustaining applications. Intel may make changes to specifications and product descriptions at any time, without notice.

All products, dates, and figures specified are preliminary based on current expectations, and are subject to change without notice. Availability in different channels may vary.

Actual Intel® Desktop Board may differ from the image on the box.

Copyright © 2011 Intel Corporation. All rights reserved. Intel, the Intel logo, and Intel Core are trademarks of Intel Corporation in the U.S. and other countries.

\*Other names and brands may be claimed as the property of others.  
0911/JB/HBD/PDF 326044-001US

