PRODUCT BRIEF Intel® Desktop Board D410PT + Intel® Atom™ Processor D410



## Mini-ITX / MicroATX-compatible

# Intel<sup>®</sup> Desktop Board D410PT + Intel<sup>®</sup> Atom<sup>™</sup> Processor D410





The Intel® Desktop Board D410PT Essential Series optimizes the performance of the Intel® Atom™ processor D410 while delivering access to new-generation technologies, value-added features, and easy integration. Entry-level desktop PCs represent a fundamental shift in system design—small, yet powerful enough to enable a big Internet experience for all audiences.

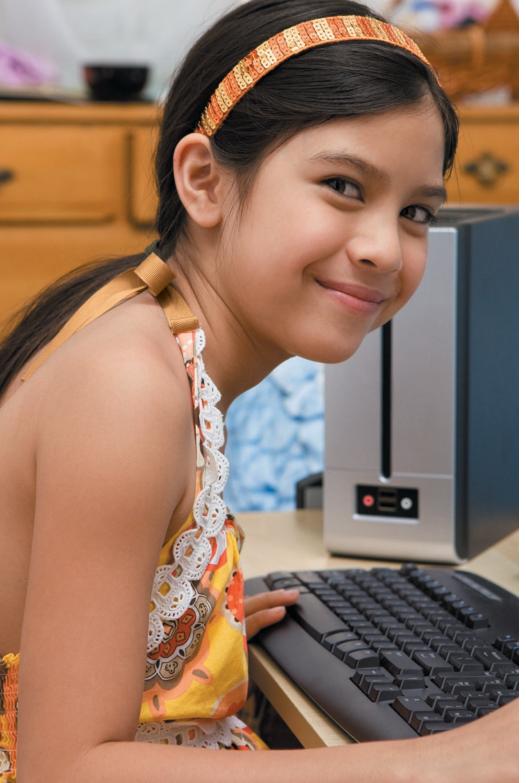
The revolutionary two-chip layout enables lower power consumption and improved graphics performance for a better user experience. With this two-chip solution, the Intel Desktop Board D410PT saves 70 percent of its board layout size by adding additional features, enabling easier routing and better heat flow with the passive thermal solution. The Intel Desktop Board D410PT, built with the Intel® NM10 Express Chipset, features the integrated 1.66 GHz Intel Atom processor D410 and the Intel® Graphics Media Accelerator 3150. This board provides additional flexibility and upgradability for the entrylevel desktop PC usage model with two single-channel connectors for DDR2 800 / 667 MHz memory support (4 GB<sup>1</sup> max), delivering even greater performance and power efficiency.

Supporting a USB Solid-State Drive keepout-zone design, the Intel Desktop Board D410PT is ideal for the diskless usage model by integrating with a standard USB connector.

The Intel Desktop Board D410PT provides enhanced features such as 10/100 Mb/s integrated LAN, integrated 2+2-channel Intel<sup>®</sup> High Definition Audio<sup>2</sup>, and legacy feature support for emerging market needs with two onboard serial headers. The Intel Desktop Board D410PT also features the mini-ITX form factor. Backwardcompatible with ATX and microATX, this form factor allows you to build green and energy-efficient solutions.

This board powers simple, affordable, and Internet-centric computer designs in a compact 170mm x 170mm size, allowing designers the ultimate in small chassis flexibility.

At an affordable price point, the Intel Desktop Board D410PT is not only suitable to serve as an entry-level desktop PC, but is ideal for innovative system usage models such as kiosks, call centers, home surveillance solutions, and entry-level home entertainment systems.



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# The boxed Intel® Desktop Board D410PT solution includes:

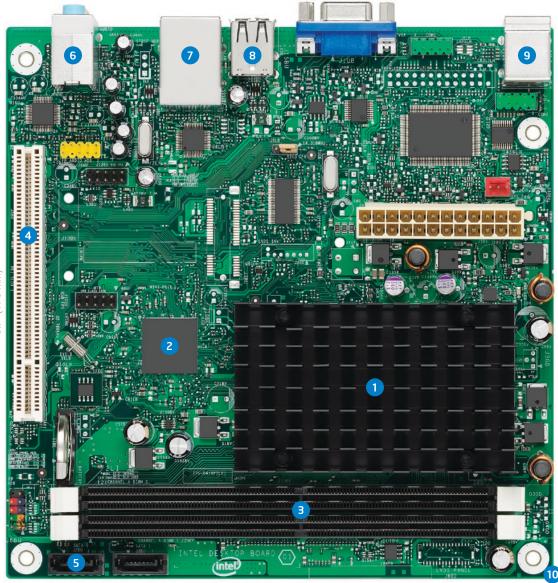
- Integrated single-core Intel<sup>®</sup> Atom<sup>™</sup> processor D410
- SATA cable
- Board and back panel I/O layout stickers
- Quick reference and product guides
- Intel® Express Installer driver and software DVD

# The takeaway software included with the Intel® Desktop Board D410PT works best for your everyday computing.

CAPABILITY	SOFTWARE INCLUDED:
Productivity	Intel® Integrator Assistant (Internet Download)
	Laplink* PCmover* Express
Entertainment	DivX* for Windows*
Antivirus	<ul> <li>Norton Internet Security*</li> </ul>

# Intel<sup>®</sup> Desktop Board D410PT + Intel<sup>®</sup> Atom<sup>™</sup> Processor D410 Features and Benefits

- 1 Integrated with the new singlecore Intel® Atom<sup>™</sup> processor D410: Features an integrated graphics core (Intel® GMA 3150) with graphics performance improvements.
- 2 Intel® NM10 Express Chipset: Designed to support the new Intel® Atom™ processor.
- Single-channel DDR2 with two connectors for 800 / 667 MHz memory support (4 GB<sup>1</sup> max)
- **One PCI connector:** Expansion connector for custom system configurations and future add-in card upgrades.
- 5 Two SATA ports (3.0 Gb/s)
- 6 Four-channel Intel<sup>®</sup> High Definition Audio<sup>2</sup>: Integrated audio stereo at an excellent value.
- 7 Integrated 10/100 Mb/s Network Connection
- 8 **Eight Hi-Speed USB 2.0 ports:** Four back panel ports and four additional ports via internal headers.
- 9 Two PS/2 ports: Support keyboard and mouse.
- Mini-ITX / microATX-compatible form factor



6.7" (170 mm)

# Intel<sup>®</sup> Desktop Board D410PT + Intel<sup>®</sup> Atom<sup>™</sup> Processor D410 **Technical Specifications**

# For ordering information, visit www.intel.com For the most current product information, visit

http://developer.intel.com/products/desktop/motherboard/

#### PROCESSOR

#### Processor Support

 Intel<sup>®</sup> Atom<sup>™</sup> processor D410 (single-core / 1.66 GHz / 512 KB L2 cache)

#### CHIPSET

Graphics

Intel<sup>®</sup> NM10 Express Chipset

Intel<sup>®</sup> Graphics Media Accelerator 3150

#### I/O Controller

- Two SATA ports (fully shrouded)
- Two PS/2 ports
- Two Serial headers

#### **USB 2.0**

- Four external ports
- Four ports via headers

#### Audio Solution

 2+2-channel Intel<sup>®</sup> High Definition Audio<sup>2</sup> (with multi-streaming)

# Front-panel mic / headphone header

- 10/100 Network Connection
- Realtek\* 10/100 Mb/s Ethernet Controller

#### System BIOS

- 8 Mb Flash EEPROM with Intel<sup>®</sup> Platform Innovation Framework for EFI Plug and Play, IDE drive auto-configure
- Advanced configuration and power interface V2.0b, DMI 2.0, multilingual support
- Serial Peripheral Interface (SPI) Flash

#### Intel<sup>®</sup> Rapid BIOS Boot

Optimized POST for fast access to PC from power-on

## SYSTEM MEMORY

- Memory Capacity
- Single-channel DDR2 with two connectors for 800 / 667 MHz memory support (4 GB max<sup>1</sup>)

#### Memory Types

 DDR2 800 / 667 SDRAM memory support Non-ECC Memory

#### 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 connector

## **IUMPERS AND FRONT-PANEL CONNECTORS**

- lumpers
- lumper: yellow
- Header: black

#### Front-Panel Connectors

- Reset, HD LED, Power LEDs, power on/off, aux LED USB 2.0 headers
- Audio header

# MECHANICAL

#### **Board Style**

 Mini-ITX / microATX-compatible • 170mm x 170mm

**Baseboard Power Requirements** ATX12V or SFX12V

### **ENVIRONMENT**

Operating Temperature 0°C to +50°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

#### lapan 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.

<sup>1</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.

<sup>2</sup> Intel<sup>®</sup> High Definition Audio requires a system with an appropriate Intel<sup>®</sup> 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

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