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

Mini-ITX / MicroATX-compatible

Intel® Desktop Board D410PT + Intel® Atom™ 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 entry-level desktop PC usage model with two single-channel connectors for DDR2 800 / 667 MHz memory support (4 GB[1] max), delivering even greater performance and power efficiency.

Supporting a USB Solid-State Drive keep-out-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® High Definition Audio[2], 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. Backward-compatible 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.



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

The boxed Intel® Desktop Board D410PT solution includes:

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

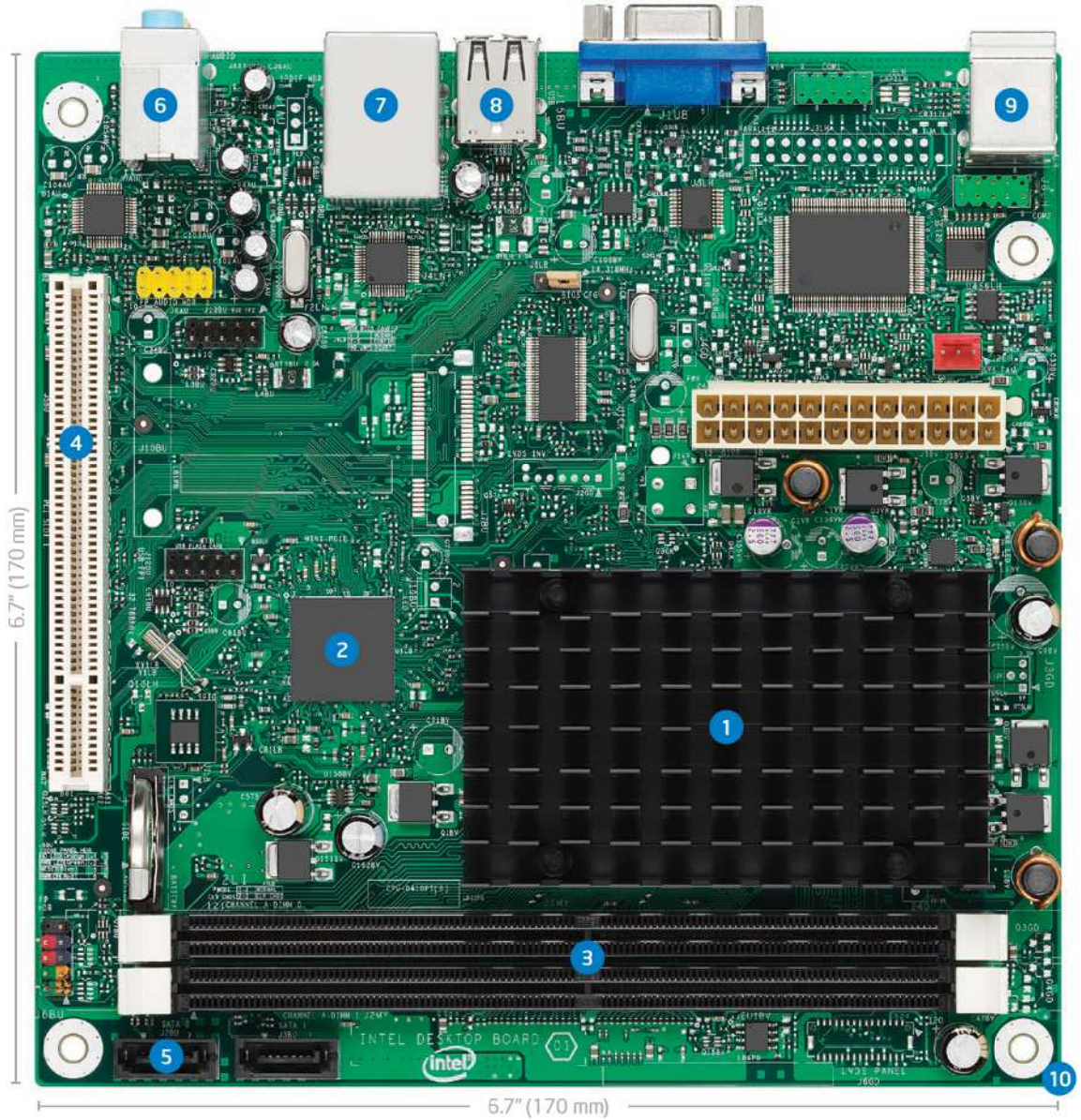
The takeaway software included with the Intel® Desktop Board D410PT works best for your everyday computing.

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

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

Features and Benefits

1. **Integrated with the new single-core Intel® Atom™ 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.
3. **Single-channel DDR2 with two connectors for 800 / 667 MHz memory support (4 GB[1] max)**
4. **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® High Definition Audio[2]:** 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.
10. **Mini-ITX / microATX-compatible form factor**



Intel® Desktop Board D410PT + Intel® Atom™ 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® Atom™ processor D410 (single-core / 1.66 GHz / 512 KB L2 cache)

CHIPSET
- Intel® NM10 Express Chipset

Graphics
- Intel® 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® High Definition Audio[2] (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® 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® 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[1])

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

JUMPERS AND FRONT-PANEL CONNECTORS

Jumpers
- Jumper: 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

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.

[1] 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.

[2] 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

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 shown.

Intel, the Intel logo, Intel Atom, and Intel Atom Inside are trademarks of Intel Corporation in the U.S. and other countries.

* Other names and brands may be claimed as the property of others.

Copyright © 2009 Intel Corporation. All rights reserved. 1109/KL/MS/PDF 322585-001US