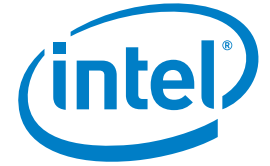


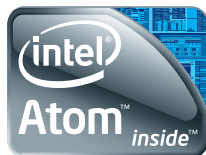
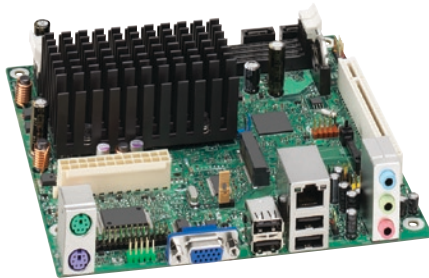
PRODUCT BRIEF

Intel® Desktop Board D510MO  
+ Intel® Atom™ Processor D510



Mini-ITX / MicroATX-compatible

# Intel® Desktop Board D510MO + Intel® Atom™ Processor D510



Introducing the Intel® Desktop Board D510MO—an innovative and affordable desktop solution featuring the Intel® Atom™ processor D510 for entry-level desktop PCs. The Intel Desktop Board D510MO represents a fundamental shift in system design—small, yet powerful enough to enable a big Internet experience for all audiences. This new-generation board delivers a low-power, cost-optimized platform solution for basic computing.

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 D510MO 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 D510MO, built with the Intel® NM10 Express Chipset, features the integrated 1.66 GHz Intel Atom processor D510 and the Intel® Graphics Media Accelerator 3150, an improved graphics core when compared with the previous-generation entry-level desktop PC. 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<sup>1</sup> max), delivering even greater performance and power efficiency.

The Intel Desktop Board D510MO provides enhanced features such as 10/100/1000 Mb/s integrated LAN, and additional wireless options via the PCI Express\* Mini Card, wireless card, WiMAX\* card, or third-party HD video decoder card.

Supporting a USB Solid-State Drive keep-out-zone design, the Intel Desktop Board D510MO is ideal for the diskless usage model by integrating with a standard USB connector.

Integrated six-channel Intel® High Definition Audio, S/PDIF header, and legacy features, including two serial ports and one parallel port, support emerging market needs.

The Intel Desktop Board D510MO 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 D510MO 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 D510MO + Intel® Atom™ Processor D510

### The boxed Intel® Desktop Board D510MO solution includes:

- Integrated dual-core Intel® Atom™ processor D510
- SATA cable
- Board and back panel I/O layout stickers
- Quick reference and product guides
- Intel® Express Installer driver and software DVD

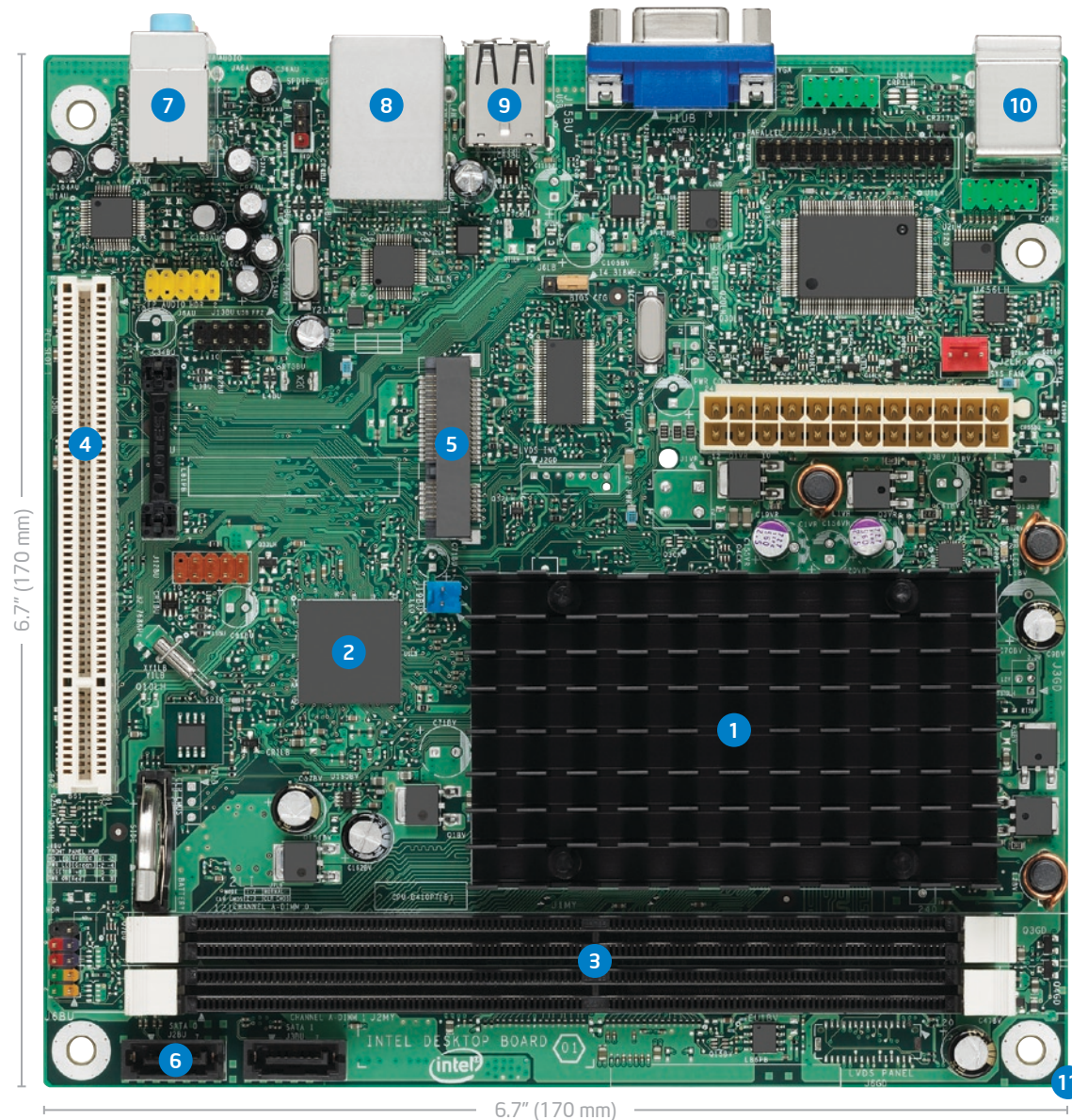
### The takeaway software included with the Intel® Desktop Board D510MO works best for your everyday computing.

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

# Intel® Desktop Board D510MO + Intel® Atom™ Processor D510

## Features and Benefits

- 1 Integrated with the new dual-core Intel® Atom™ processor D510:** 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<sup>1</sup> max)**
- 4 One PCI connector:** Expansion connector for custom system configurations and future add-in card upgrades.
- 5 PCI Express\* Mini Card connector**
- 6 Two SATA ports (3.0 Gb/s)**
- 7 Six-channel Intel® High Definition Audio<sup>2</sup>:** Integrated audio stereo at an excellent value.
- 8 Integrated 10/100/1000 Mb/s Network Connection**
- 9 Seven Hi-Speed USB 2.0 ports:** Four back panel ports and two additional ports via internal header; one USB port for flash card / Solid-State Drive.
- 10 Two PS/2 ports:** Support keyboard and mouse.
- 11 Mini-ITX / microATX-compatible form factor**



# Intel® Desktop Board D510MO + Intel® Atom™ Processor D510

## Technical Specifications

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

For the most current product information, visit  
<http://developer.intel.com/products/desktop/motherboard/>

### PROCESSOR

#### Processor Support

- Intel® Atom™ processor D510 (dual-core / 1.66 GHz / 512 KB x 2 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
- One Parallel header

### USB 2.0

- Four external ports
- Two ports via headers
- One USB for flash card / Solid-State Drive

### Audio Solution

- 6-channel Intel® High Definition Audio<sup>2</sup> (with multi-streaming)
- Front-panel mic / headphone header
- S/PDIF header

### 10/100/1000 Network Connection

- Realtek® 10/100/1000 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<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 (w/fM) 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
- One PCI Express\* Mini Card 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.

<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® 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)

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

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