

Product Brief

Development Kit

Embedded Computing



Intel® Core™ 2 Duo Processor L7400 and Intel® Core™ Duo Processor U2500 with Intel® 3100 Chipset Development Kit

Product Overview

The Intel® Core™ 2 Duo processor L7400^A and Intel® Core™ Duo processor U2500^A with Intel® 3100 chipset development kit offers an excellent platform for a variety of embedded and communications infrastructure applications. It enables outstanding instruction execution/watt while providing scalability with the Intel® Core™ 2 Duo and Intel® Core™ Duo processors. These Intel® dual-core processors combine the benefits of two high-performance execution cores with intelligent power management features to deliver significantly greater performance-per-watt over previous Intel® processors.

The Intel® 3100 chipset is Intel's first integrated chipset specifically optimized for communications, embedded and storage applications, combining server-class memory and I/O controller functions into a single component. These processor and chipset combinations help meet developers' needs for high-performance, high-reliability, low-power platforms within small form factors such as PrAMC, cPCI, and COMExpress.

The Intel 3100 chipset integrates PCI Express* serial I/O technology and DDR2 memory technology to increase I/O bandwidth and reduce system latency for data-intensive applications. The chipset includes a four-channel Enhanced Direct Memory Access controller, providing low-latency and high-throughput data transfer capability for higher overall system performance with no CPU intervention. It also integrates I/O controller features such as Serial ATA, PCI and USB, saving board real-estate and power by removing the need for a separate, legacy I/O bridge chip.

This and other development kits from Intel provide a fully working system with a range of performance options that can be modified or used immediately for product development. A validated board platform lets software vendors test BIOS and operating system software.



Evaluation Board

- Includes the following processors¹:
 - Intel Core 2 Duo processor L7400, 1.50 GHz with 667 MHz front-side bus (FSB)
 - Intel Core Duo processor U2500, 1.20 GHz with 533 MHz FSB
- Supports the Intel 3100 chipset
- DDR2-PC3200 400 MHz registered ECC for up to 16 GB system memory
- One on-board PCI video chip
- LPC bus super I/O controller
- Support for USB 1.0 and 2.0 devices
- Four USB ports: UHCI or EHCI configurations
- Two serial ports
- One parallel port

Evaluation Board (continued)

- Up to six SATA interfaces (six in AHCI mode/four in enhanced IDE mode)
- One floppy drive interface
- PS/2 keyboard and mouse ports
- American Megatrends BIOS support and power interface, plug and play, SMBIOS, and Intel® Active Management Technology²
- Three PCI Express x4 bus add-in card slots utilizing x8 connectors
- One PCI 32/33 bus add-in card connector, specification 2.3

Included in the Kit

- Development board
- Intel Core 2 Duo processor L7400, 1.50 GHz (installed)
- Intel Core Duo processor U2500, 1.20 GHz (supplied)
- CPU heat sink
- Two DDR2-PC3200 400 MHz 1 GB registered ECC DIMMs (total 2 GB memory)
- Intel® Gigabit NIC (PCI Express)
- Drivers CD
- Pre-installed jumpers
- Firmware Hub, socketed and flashed with an AMIBIOS[®]-based BIOS

Intel Access

Embedded Intel® Architecture Home Page:	intel.com/design/intarch
Developer's Site:	intel.com/design
Intel in Embedded and Communications:	intel.com/go/embedded
General Information Hotline:	(800) 628-8686 or (916) 356-3104 5 a.m. to 5 p.m. PST
Intel® Literature Center:	(800) 548-4725 7 a.m. to 7 p.m. CST (U.S. and Canada) International locations please contact your local sales office.

⁴Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See http://www.intel.com/products/processor_number for details.

¹The Intel® Core™2 Duo processor U7500⁴ with 533 MHz FSB and Intel® Celeron® M processor Ultra Low Voltage 423⁴ with 533 MHz FSB are also supported and can be ordered separately. Please contact your Intel Sales Representative for more information.

²Intel® Active Management Technology requires the platform to have an Intel® AMT-enabled chipset, network hardware and software, connection with a power source and a network connection.

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Software Overview

The following independent software vendors support the Intel Core 2 Duo processor L7400 and Intel Core Duo processor U2500 with Intel 3100 chipset development kit. These include:

- Operating system vendors:
 - Monta Vista Linux* Pro 3.1
 - Wind River VxWorks* 6.x
- BIOS vendors:
 - American Megatrends AMIBIOS[®]
 - General Software Embedded BIOS* 2000
 - Insyde Technology InsydeH20*
 - Phoenix Technologies, Ltd. with Phoenix TrustedCore*

In order to provide customers with a complete development environment in the development kit, Intel works to enable the platform to support customer applications and operating systems. Any software/firmware provided in the kit is subject to change without notice. For the most recent updates, please refer to the Web site for embedded Intel® architecture development kits at developer.intel.com/design/intarch/devkits/index.htm.

Ordering Information

IPDCD3100MPDVK

