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Dual-Core Intel® Xeon® Processor LV and Intel® 3100 Chipset Development Kit

Product Overview

The Dual-Core Intel® Xeon® processor LV and 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 Dual-Core Intel® Xeon® processors LV and ULV. These 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 single-core Intel® Xeon® 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. Validated with the Dual-Core Intel Xeon processors LV and ULV, it helps 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. A 667 MHz front-side bus (FSB) supports the Dual-Core Intel Xeon processors, and provides an upgrade path to next-generation Intel® dual-core processors. 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.
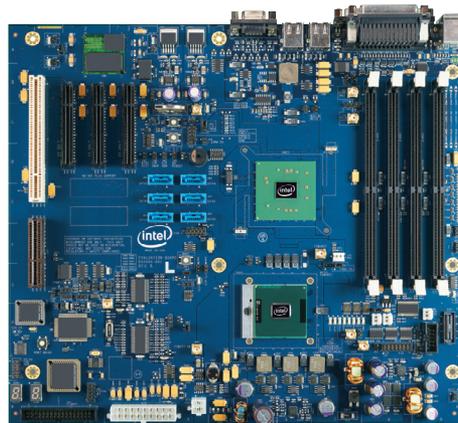
Evaluation Board

- Supports the following processors:
  - Dual-Core Intel Xeon processor LV 2.0, 1.66 GHz
  - Dual-Core Intel Xeon processor ULV, 1.66 GHz
  - Intel® Celeron® processor, 1.66 GHz
- Supports Intel 3100 chipset
- 667 MHz FSB speed
- 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 Technology[1]

- 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

- Dual-Core Intel Xeon processor LV 2.0 GHz

- CPU heat sink

- Two DDR2-PC3200 400 MHz 1 GB registered ECC DIMMs (total 2 GB memory)

- Intel® PCI Express Gigabit NIC

- Drivers CD

- Pre-installed jumpers

- Firmware Hub, socketed and flashed with an AMIBIOS8*-based BIOS

Software Overview

The following independent software vendors support the Dual-Core Intel Xeon processor LV and 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 AMIBIOS8
  - 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

IPDDCX3100HPDVK

Intel Access

[1] Intel® Active Management Technology requires the computer to have additional hardware and software, connection with a power source, and a network connection. Check with your PC manufacturer for details.