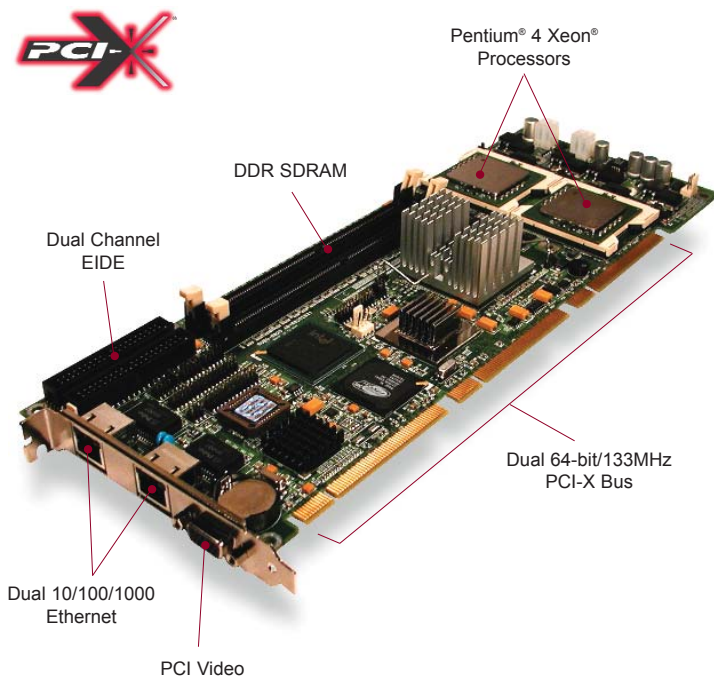


ePCI-X Single Board Computer

ePX-L520



- Single/Dual Intel® Xeon® Processor to 3.06GHz
- Intel® E7501 chipset with 533MHz FSB
- Up to 4GB DDR200/266 ECC Memory
- PCI Video with 8MB SDRAM
- Dual 10/100/1000Base-TX Ethernet, Copper or Fiber
- Dual Channel Ultra ATA/100 EIDE
- 4x USB, 2x Serial, and 1x Parallel Ports
- Optional CompactFlash™ Disk
- Supports (2) Buses up to 64-bit/133MHz
- Hardware Monitor, RTC and WDT
- PICMG® 1.2 ePCI-X Backplane Compliant

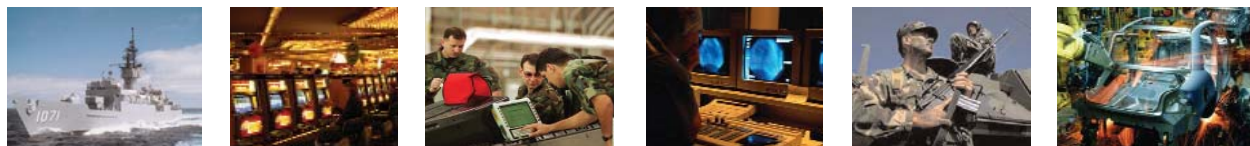
Diversified Technology's powerful Xeon-based ePX-L520 single board computer is compliant with the PICMG® 1.2 embedded PCI-X open standard. It offers extremely high, scaleable processing performance and remarkable I/O bandwidth via multiple 64-bit PCI-X buses.

The ePX-L520 system host board (SHB), part of DTI's ePIX Generation product family, features either single or dual Xeon processors with Hyper-Threading™ technology, making a single processor appear as two logical processors, Rapid Execution Engine, Execution Trace Cache, and 512KB of L2 cache. The Intel E7501 chipset supports a 533MHz Front Side Bus, up to 4GB dual-channel DDR200/266 DIMMs with Chipkill ECC on two 184-pin DIMM sockets. Onboard is a PCI video controller with 8MB SDRAM for excellent display resolution and high 2D/3D performance, dual 10/100/1000Base-TX Ethernet interfaces (either copper or fiber), dual channel Ultra ATA/100 EIDE controller, four Universal Serial Bus (USB 1.1) ports, two serial ports, one parallel port, and a floppy interface.

The board supports dual PICMG 1.2 compliant embedded PCI-X buses. A backside Type 2 CompactFlash socket is available on a secondary EIDE channel and is bootable if no drives are on the primary channel.

The ePX-L520 Award BIOS, in field upgradeable Flash, serial/parallel port re-mapping/disable, console redirection, Modem-Ring-ON, Wake on LAN, and ATX power control via the backplane. Other features include a serial ID tag (for unique board identification), hardware monitor (input voltages, temperature, and fan speed), programmable watchdog timer, battery-backed real time clock, power fail circuit, and a 2 year limited warranty.

Scaleable, high performance compute capability. High performance memory architecture. High PCI-X I/O throughput. Diversified Technology's ePX-L520 SBC is the powerful choice for OEMs addressing challenging embedded computing applications in the medical/imaging, communications, wireless aggregation, automation, and COTS military/aerospace markets.



 **Diversified
Technology®**
An Ergon Co.

www.epixgeneration.com

www.dtims.com • sales@dtims.com • 1.800.443.2667

Rev. 1.5
September 2, 2004

SPECIFICATIONS

CPU / Cache/Chipset

- Single/dual Xeon processors - to 3.06GHz with on-die 512KB L2 8-way set associative cache
- Rapid Execution Engine, Execution Trace Cache (L1) to remove decoder latency
- Intel E7501

Bus Interface

- 533MHz Front Side Bus; 133MHz PCI-X Buses
- Supports two independent PCI-X buses up to 64-bit/133MHz

Memory

- Two 184-pin latching DIMM sockets
- Up to 4GB using 64/128/256 x 72 2.5V ECC registered DDR200/266 DIMMS

Data Path

- Up to 64-bit/133MHz on onboard PCI-X bus;
- Up to 64-bit/133MHz on off-board PCI-X bus

Flash Memory

- 4 Mb (512 KB) sectored Flash for BIOS field upgrade

I/O

- USB Ports: four (two 10-pin headers)
- Serial Ports: Two RS-232 (16C550) with 16 byte FIFO as COM1-2 with BIOS selectable IRQs and addressing, (two male 10-pin headers)
- Parallel Port: One bi-directional with all IEEE 1284 protocols supported and BIOS selectable IRQs and addressing, (male 26-pin header)
- Floppy Disk: Support for two drives (360 KB to 2.88 MB), (male 34-pin header)
- EIDE: dual channel PCI Ultra ATA/100, support for four drives (master/slave configuration); PIO Mode 4, Bus Master IDE or DMA mode 5 transfers up to 100 MB/s, (two male 40-pin shrouded headers)
- Optional CompactFlash: one Type 2, secondary master (50-pin back-side header)
- Ethernet: PCI 10/100/ 1000Base-TX (Intel 82546EB), copper or fiber (two shielded RJ-45 on face plate with link and activity LEDs)

Video

- 2D/3D SVGA controller with 8 MB PC133 SDRAM (female 15-pin on face plate)
- Supports CRTs with resolution up to 1600 x 1200 @ 85Hz

Clock / Calendar

- Replaceable battery powered real-time clock with 256 byte CMOS RAM

Misc.

- PS/2 mouse/keyboard (one 6-pin header)
- Speaker, reset, keylock, HD activity LED

Misc. (cont'd)

- Strobed CPU cooler/fan (3-pin header)
- +12V Power (two 4-pin)
- Hardware Monitor - CPU and ambient board temperature, fan rotation, input voltages

BIOS

- PCI 2.1 compliant field upgradeable Award BIOS, boot from LAN (PXE 2.0)
- PnP 1.0a compliant
- Setup console redirection to serial port (VT100/ANSI mode) w/ CMOS setup access
- Diskless, keyboardless, and videoless operation extensions; system, video, and third party option card ROM shadowing
- Advanced security features for floppy and HD; SMBIOS V2.3.1 and HD S.M.A.R.T. support
- ACPI Rev 1.0b compliant (ATX power supply control via backplane, Modem-Ring-On and Wake-on-LAN)
- Custom BIOS graphical boot
- Thermal management

Supervisory

- Programmable watchdog timer initiates system reset through super IO.
- Hardware system monitor (voltages, CPU, and board temperature, fan speed)

OS Compatibility

- Standard: MS-DOS™; Windows® 2000/2003 XP/NT 4.0; VxWorks®; QNX®; Red Hat Linux®
- Optional: UnixWare® 2.1.1/7.1.1; Solaris™

Mechanical

- 13.33 in. x 4.80 in. x 2.07 in. at CPU / fan (338 mm x 122 mm x 53 mm)
- Conforms to IEEE P996 PC/AT bus, PCI Rev. 2.2/ 2.2 PCI-X Addendum, & PICMG Rev. 1.2 standards

Power Requirements

ICC typ. *	+5V	2.9A
	+12V	6.6A
	+3.3V	3.5A

VRM 8.4 module for processor Vcore.

* Based on board with dual 2.4GHz processors and 1GB of memory.

Environmental

Operating

- Min Temperature: 0°C / 32°F
- Max Temperature:
 - 3.06, 2.8, and 2.4GHz : 40°C / 104°F
 - 2.0GHz : 50°C / 122°F
- Humidity (RNC): 5 to 95% @ 40°C / 104°F
- Altitude: 3048m / 10,000ft @ 28°C / 82°F
- Vibration: 1G 5-500MHz

Environmental (cont'd)

Storage and Transit

- Temperature: -40° to +70°C / -40° to 158°F
- Humidity (RNC): 5 to 95% @ 40°C / 104°F
- Altitude: 15,240m / 50,000ft
- Shock: 30" free fall
- Vibration: 0.5G 5-50Hz, 3G 50-500Hz

Reliability

- MTBF: >140,000 hours @ 40°C / 122°F
- Telecordia Prediction Standard
- 2 year limited warranty
- Serial ID Tag
- USB and keyboard/mouse voltage protected by self-resetting fuses

Regulatory Compliance (pending)

- Safety: UL/cUL 60950-1:2003, EN/IEC 60950-1:2001
- EMC Class A: FCC 47 CFR part 15-B, CISPR22:1997/EN55022:1998, EN55024:1998

Ordering Information

ePX-L520C-2800

ePCI-X SBC with one 2.8GHz Xeon processor and copper GbE

ePX-L520F-2800

ePCI-X SBC with one 2.8GHz Xeon processor and fiber GbE

ePX-L520C-D2800

ePCI-X SBC with two 2.8GHz Xeon processors and copper GbE

ePX-L520F-D2800

ePCI-X SBC with two 2.8GHz Xeon processors and fiber GbE

* Likewise other CPU speeds - 2.06GHz, 2.4GHz, and 3.06GHz

Options

ECC registered DDR200/266 DIMMS
Type 1 / Type 2 CompactFlash media
Cables

*See also ePC-2194 chassis



All products are shipped FOB factory (MS).
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