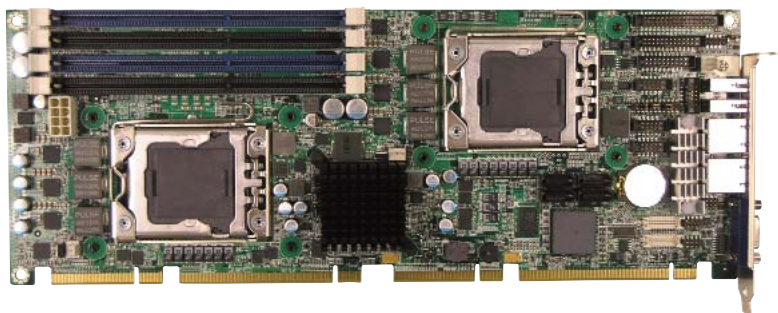


## PICMG 1.3 Single Board Computer

• PRELIMINARY •

The LHE8922 is Diversified Technology's Dual socket Intel® Xeon® Dual/Quad Core™ FCLGA-1366 package processor board designed for today's high speed/ high bandwidth applications. The board is a PICMG® 1.3 compliant processor board that combines low price with high performance for the market's data centric requirements. DTI's LHE8922 is equipped with (single or dual) Dual-Core or Quad-Core Xeon Nehalem processors, with 4MB L3 cache and support for up to 32GB of DDR3 memory. It utilizes the Intel® 3420 chipset.

I/O peripherals located on-board are the Intel® dual gigabit Ethernet controller. The new Nehalem processor has a lower thermal envelope meaning a performance improvement per-watt per square inch. Both uni-processor and dual processors are supported. The new chipset supports Asynchronous DRAM Self Refresh (ADR) meaning that when the system detects a power fail event, the data in memory is written to a disk and then recovers the data when power is restored to the system. RAID 0, 1, 5, 10 and AHCI functions are built into the chipset.

## Product Features

### Form Factor

- PICMG® 1.3 Processor Board based on the Intel® Xeon® Nehalem Dual/Quad Core™ FCLGA-1366 package

### CPU/Cache/Chipset

- 2.27GHz Dual-Core Xeon processor
- 2.53GHz Quad-Core Xeon processor
- 4MB L3 Cache per processor
- Intel® 3420 Chipset

### Bus Interfaces

- 1066/1333MHz DDR3 Memory
- Supports up to Four PCI Devices
- PCI Express expansion interface
- 2x 5.86 GT/s Chipset interface

### Memory

- Configurable up to 32GB DDR3 1066/1333MHz SDRAM on four 240-pin DIMM sockets (ECC Registered).

### Storage

- Supports up to six (6) SATA 300 drives
  - (2) of the (6) are located on the backplane
- Supports RAID 0, 1, 5, 10 and AHCI
- EIDE: N/A

### I/O

- Dedicated Dual USB ports on bracket for keyboard and mouse
- Supports up to ten (10) total USB 2.0 ports
- Dual Intel® 82574L GigE Ethernet
- XGI Z11 graphics chip
- Supports analog VGA and optional DVI-D display interfaces

### OS Support

- Windows 7
- Windows XP SP2, SP3
- Ubuntu 9
- Linux 2.6

### Warranty

- Parts and labor covered for 2 years

**CPU / Cache**

- 2.27GHz Dual-Core Intel® Xeon® Nehalem processor
- 2.53GHz Quad-Core Intel® Xeon® Nehalem processor
- 4MB L3 Cache per processor
- Intel® 3420 Chipset

**Bus Interface**

- 1066/1333MHz DDR3 Memory
- 2x 5.86 GT/s Chipset interface

**Memory**

- Configurable up to 32GB DDR3 1066/1333MHz SDRAM on four 240-pin DIMM sockets (ECC Registered)

**External Interface (Goldfinger Support)**

- Supports up to Four PCI Devices
- Support PCIe Gen 2.0 one PCIe16, two PCIe8, or four PCIe4 by jumper setting (if supported by processor)
- Support PCIe Gen 2.0 one PCIe4 or four PCIe1 from PCH 3420 by jumper setting
- (2) of the (6) SATA 300 ports provided on the backplane

**BIOS**

- AMI BIOS support
- Supports WOL and power on after power loss function
- Supports iTPM function
- ACPI 1.0b, APM 1.2, DMI 2.1, PCI 2.2, Plug and Play (PnP) 1.0a
- Programmable watchdog timer, time out period 0.5 - 254.5 s

**Peripherals and I/O Interfaces**

- Dedicated USB ports on bracket for keyboard and mouse
- Supports up to ten (10) USB 2.0 ports
- Dual Intel® 82574L GigE Ethernet
- XGI Z11 graphics chip
- Supports analog VGA and optional DVI-D display interfaces

**I/O Interface      Bracket**

USB 2.0	2
GB Ethernet	2
Analog VGA	1

**OS Compatibility**

- Windows 7
- Windows XP SP2, SP3
- Ubuntu 9
- Linux 2.6

**Power Requirements**

- Supports ATX mode and emulation AT mode
- +12V TBD
- +5V TBD

**Mechanical**

- 338.6(L) x 126.39(W) mm; 13.33"(L) x 4.98" (W)
- 12-layer PCB

**Environmental****Operating**

- Temperature: -5° to 55°C
- Humidity (RNC): 10% to 85% non-condensing
- Altitude: 4,000m / 13,000 ft @40°C
- Shock: 10g 11ms half-sine
- Vibration: 5-100Hz @ 1g sine sweep

**Storage and Transit**

- Temperature: -40° to 70°C
- Humidity (RNC): 10% to 90% non-condensing
- Altitude: 12,192m / 40,000 ft
- Shock: 40g 6ms half-sine, 500/axis
- Vibration: 5-50Hz @ ½g 50-100Hz @ 3g sine sweep  
Random 5-20Hz @ 0.01g2/Hz; 20-500 -3dB slope

**Reliability & Serviceability**

- MTBF: TBD
- 2 year limited warranty

**Regulatory Compliance (pending)**

- Designed for NEBS/ETSI Compliance
- Designed for CE Certification
- UL/cUL 60950-1; EN/IEC 60950-1
- EMI/EMC: FCC 47 CFR Part 15 Class B; EN 55024:1998, EN 55022:1998

**Ordering Information****LHE8922-DC**

PICMG 1.3 SBC with single or dual 2.27GHz Dual-Core Intel® Xeon® Nehalem Processors

**LHE8922-QC**

PICMG 1.3 SBC with single or dual 2.53GHz Quad-Core Intel® Xeon® Nehalem Processors

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