

Themis RES-32XEL Server



New Intel Xeon-based 3RU Rackmountable Server/Workstation

The RES-32XEL, Themis Computer's new 3U Dual-Processor server/workstation, combines the robust design of Themis' Rugged Enterprise Server (RES) family with five PCI-X and PCI slots and storage expandability. The rugged RES-32XEL reflects Themis Computer's extensive expertise designing high performance systems for use in demanding environments. This new system combines proven Intel Xeon™ processor and E7505 chipset technologies with Themis' proprietary thermal and mechanical design techniques, to achieve I/O configuration flexibility and high reliability in shock and vibration environments of up to 25G.

The RES-32XEL can be configured with single or dual high speed Intel Xeon processors, connecting to a 533/400-MHz Front Side bus. With an 8X/4X AGP Pro expansion slot and a wealth of I/O and storage options, the RES-32XEL allows users versatile configurability and system expansion. The RES-32XEL is easily expanded through the addition of commercially available, off the shelf networking cards, I/O, peripherals and other value-added options to meet current and future system requirements. Dual Intel Xeon processors with 533 MHz system bus provide up to 4.3GB/s of available bandwidth.

Intel Xeon Technology and Expandability for Outstanding Performance

The RES-32XEL's fast Intel Xeon processor and new E7505 chipset provides innovative technologies including Hyper-Threading Technology and next generation AGP 8X graphics. The RES-32XEL offers outstanding platform performance, dependability, and value. Its expansion versatility provides ample headroom for integration with current and future server platforms.

The new Intel E7505 chipset represents the next step in Intel server technology while providing high performance and scalability. The E7505 Memory Controller Hub (MCH) is the central hub for all data passing through the core system elements; such as the dual Xeon processors, and delivers 4.3GB/s of bandwidth across a 533 MHz system bus and up to 4.3GB/s of bandwidth across two high performance DDR SDRAM memory channels. The Intel 82801DB I/O controller Hub (ICH4) connects to the MCH and offers greater bandwidth for I/O-intensive peripherals.

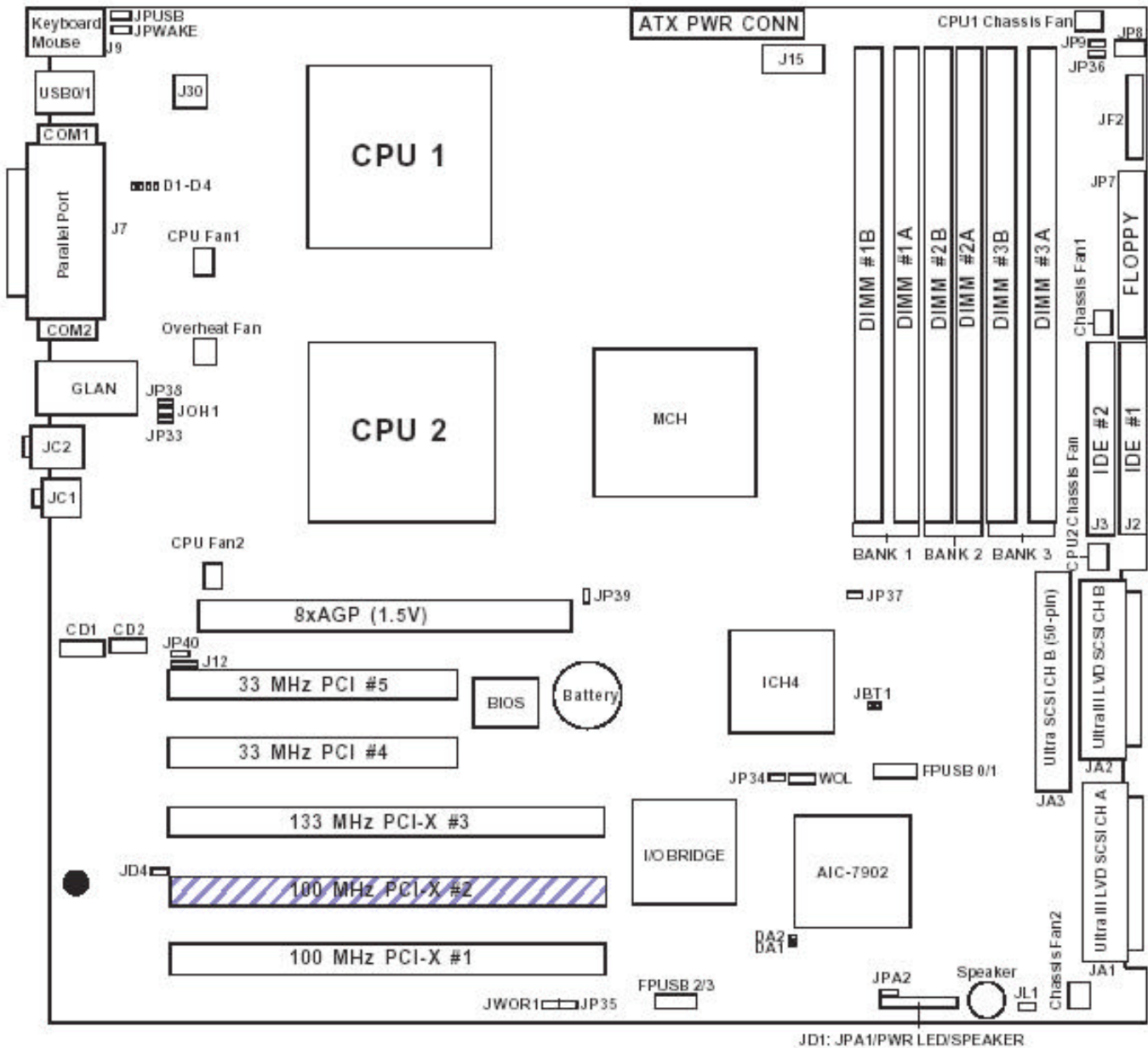
Themis RES-32XEL Features

- Intel Xeon processor speeds up to 3.2GHz
- Up to 12GB of DDR-200/266 memory
- Rack-optimized design for unique user requirements
- Optional InfiniBand ports for remote connection to Themis TPX-4 PCI Expansion System
- Designed for reliability in extended operating environments
- HDD/CD-ROM/DVD/FDD storage options
- Supports Zero-Channel (Adaptec 2010S) RAID
- Suspend to RAM and Wake-on-LAN system management
- Linux and Windows® 2000 OS support

RES-32XEL Specifications

- Single or Dual Intel Xeon processors – up to 3.2GHz with 1MB L2 Cache
- Up to 12GB ECC registered DDR-200/266 memory
- Intel E7505 Chipset
- Rear panel access and I/O:
 - One (1) Gigabit Ethernet port (RJ45)
 - Two (2) RS-232 Serial ports (DB9)
 - One (1) Parallel Port (ECP/EEP)
 - PS/2 Keyboard and Mouse ports
 - Two (2) USB ports
 - Power connector and switch
 - Line In/Out, Microphone In (3.5mm Jacks)
- Five PCI slots
 - One (1) 64-bit 133 MHz PCI-X
 - Two (2) 64-bit/100 MHz PCI-X
 - Two (2) 32-bit/33 MHz PCI
- One (1) 8x/4x AGP graphics slot
- Front panel incorporates the following:
 - Two (2) removable SCSI drives
 - Floppy drive
 - CD-RW/DVD drive
 - Optional DAT/DDS drive
 - Status LEDs, reset switch
- Airflow direction: Front to Rear
- Operating Shock: up to 25 G @ 12-40 ms (MIL-901D)
- Operating Vibration: 0.5g from 4 – 50Hz
- Operating Temperature: 0 - 50°C
- Humidity: up to 90% non-condensing
- Dual 2x redundant fans
- Power Supply: Dual redundant, N+1 hot swappable 110/220 VAC (460 Watt) autoranging power supplies
- Safety: UL 1950, CSA 950
- RFI/EMI: FCC class A
- Dimensions (HWD): 3U (133 mm) x 17.1" (19") x 20.0" (508.0 mm)

RES-32XEL Motherboard Block Diagram



Intel Xeon Processor-based Server Features

Processor Speeds to 3.2GHz with 1MB L2 cache

Features

- Dual-processor enabled
- Intel NetBurst microarchitecture
- Hyper-Threading Technology
- Rapid Execution Engine
- Streaming SIMD Extensions 2 (SSE2)

Advanced Dynamic Execution

- Double Precision Floating Point

Cache – Level 1: Execution Trace cache
Level 2: 1MB or

512KB Advanced Transfer cache

RAM Dual-channel DDR

I/O Bandwidth Up to 3.2-GB/sec

System Bus

Frequency 533/400-MHz Front side Bus



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