

# Themis RES-32DCO Rugged Enterprise Server



## Quad-Core AMD Opteron 3RU Server

Themis' new RES-32DCO, a 3 Rack Unit (3U) dual-processor socket server, combines the robust design of its Rugged Enterprise Server (RES) family with the latest, fastest multiple core 64-bit processing power. The rugged RES-32DCO reflects Themis' extensive expertise designing high performance systems for use in demanding environments. This new system combines the newest Quad-Core AMD Opteron™ processors, and the latest nVidia chipset with Themis' advanced thermal and mechanical design techniques. The RES-32DCO achieves I/O configuration flexibility and provides high reliability in shock and vibration environments of up to 25G.

The RES-32DCO can be configured with one or two AMD Quad-Core Opteron processors running at up to 2.8GHz. Featuring multiple expansion slots, extensive high speed I/O, and multiple storage options the RES-32DCO allows users versatile configurability and system expansion. The RES-32DCO 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.

### AMD Quad-Core Opteron and nVidia Server Chipset offer Extensive I/O and Unmatched 64-bit Performance!

The RES-32DCO's fast Quad-Core AMD Opteron processor provides innovative technologies such as AMD's exclusive Direct Connect Architecture, Hyper Transport™ technology, Simultaneous 32 and 64-bit computing, and AMD PowerNow!™ technology. The RES-32DCO offers outstanding system compute and I/O performance, dependability, and value. Its expansion versatility provides ample headroom for integration with current and future server platforms.

The nVidia MCP55-Pro, IO55, and NEC 720400 chipset represents the latest in server architecture, providing the highest possible performance and scalability by using Hyper Transport Technology. The MCP55-Pro is the central hub for all data passing through the core system elements; including the two Multiple-Core Opteron processors, delivering high bandwidth across a 1000MHz Hyper Transport bus. The IO55 is a dedicated I/O processor, and the NEC 720400 is a PCI-Express to PCI-X bridge.

### Themis Rugged Enterprise Server Features

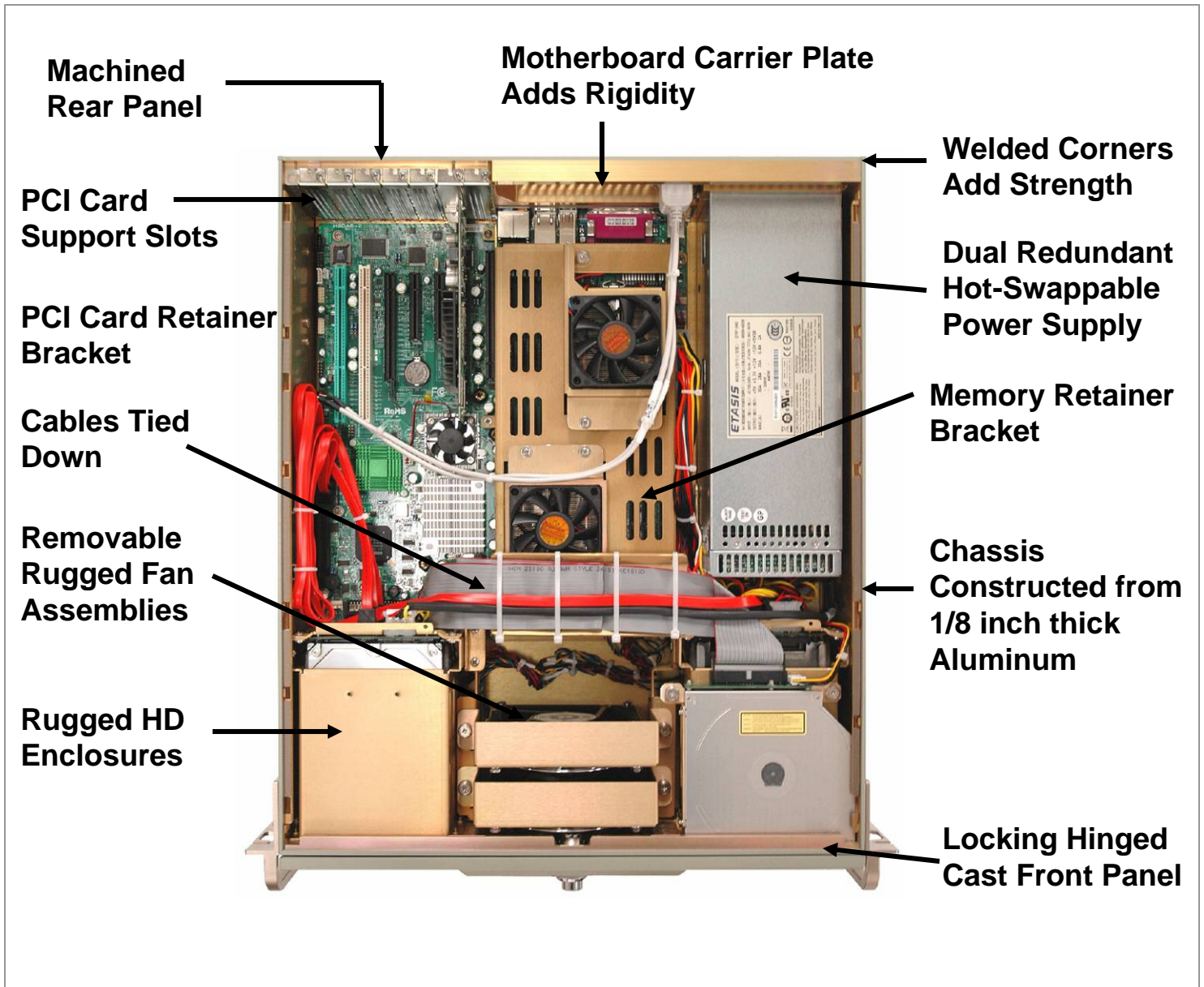
- Designed for high reliability in harsh operating environments
- Rack-optimized design for unique user requirements
- Extensive use of specially coated light-weight aluminum
- Excellent corrosion resistance, and durability
- Modular I/O design for easy upgrade and service
- Optional rack-mount slides
- Linux, Windows®, and Solaris® support
- Operating Shock: up to 25G @ 12-40 ms
- Operating Vibration: 0.9G (rms) from 10 – 2000Hz
- Operating Temperature: 0°C - 50°C
- Humidity: up to 90% non-condensing
- Safety: UL 1950, CSA 950
- RFI/EMI: FCC class B
- Linux® and Windows® OS support

### RES-32DCO Specifications

- One or two Quad-Core Opteron processors up to 2.7 GHz
- Up to 32GB registered DDR2 667 SDRAM memory
- nVidia MCP55-Pro chipset
- Rear panel access and I/O:
  - Two (2) Gigabit Ethernet ports (RJ45)
  - Two (2) Serial ports
  - One (1) Parallel (ECP/EEP) port
  - PS/2 Keyboard and Mouse ports
  - Four (4) USB 2.0 ports
  - Optional two (2) additional USB 2.0 ports
  - Power connector and switch
  - Line In/Out, Microphone In (3.5mm Jacks)
- Expansion slots:
  - One (1) 64-bit 133 MHz PCI-X (3.3V) slot
  - One (1) 64-bit/100 MHz PCI-X (3.3V) slot
  - Four (4) PCI-Express slots (two x16 slots, one x8 slot, one x4 slot)
- Front panel storage and I/O:
  - Up to five (5) removable Ultra320 SCSI or SATA-2 Drives
  - DAT/DDS Tape drive (optional)
  - CD-RW/DVD-RW drive (optional)
  - Floppy Drive (optional)
  - Status LEDs, reset switch
- Functional Features
  - Suspend to RAM and Wake-on-LAN system management
  - Zero-Channel RAID support
  - IPMI v2.0 support
- Dual redundant fans
- Power Supply: Dual redundant, N+1 hot swappable 110/220 VAC (460 Watt) autoranging (50/60Hz, 400Hz)
- Dimensions (HWD): 3U (133 mm) x 17" (431.8mm) x 20" (508 mm)



# RES-32DCO Internals – What Makes Them So Rugged?



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