

# Themis RES-22DCO Rugged Enterprise Server



## Quad Core AMD Opteron 2RU Server

Themis' RES-22DCO, a 2 Rack Unit (2U) Dual-Processor socket server, combines the robust design of its Rugged Enterprise Server (RES) family with the latest, fastest quad core 64-bit processing power. The rugged RES-22DCO reflects Themis' extensive expertise designing high performance systems for use in harsh, demanding environments. This new system combines the newest Quad-Core AMD Opteron™ processors, an nVidia chipset, with Themis' advanced thermal and mechanical design techniques. The RES-22DCO achieves I/O configuration flexibility and provides high reliability in shock and vibration environments of up to 25G.

The RES-22DCO can be configured with one or two AMD Quad-Core Opteron processors. Featuring multiple expansion slots, extensive high speed I/O, and multiple storage options the RES-22DCO allows users versatile configurability and system expansion. The RES-22DCO 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 offers Extensive I/O and Unmatched 64-bit Performance!

The RES-22DCO's fast AMD Quad-Core Opteron F-Series 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-22DCO 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 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 Dual or Quad-Core Opteron processors, delivering high bandwidth across a 1000MHz Hyper Transport bus. The NEC 720400 is a PCI-Express to PCI-X bridge.

### Themis Rugged Enterprise Server Features

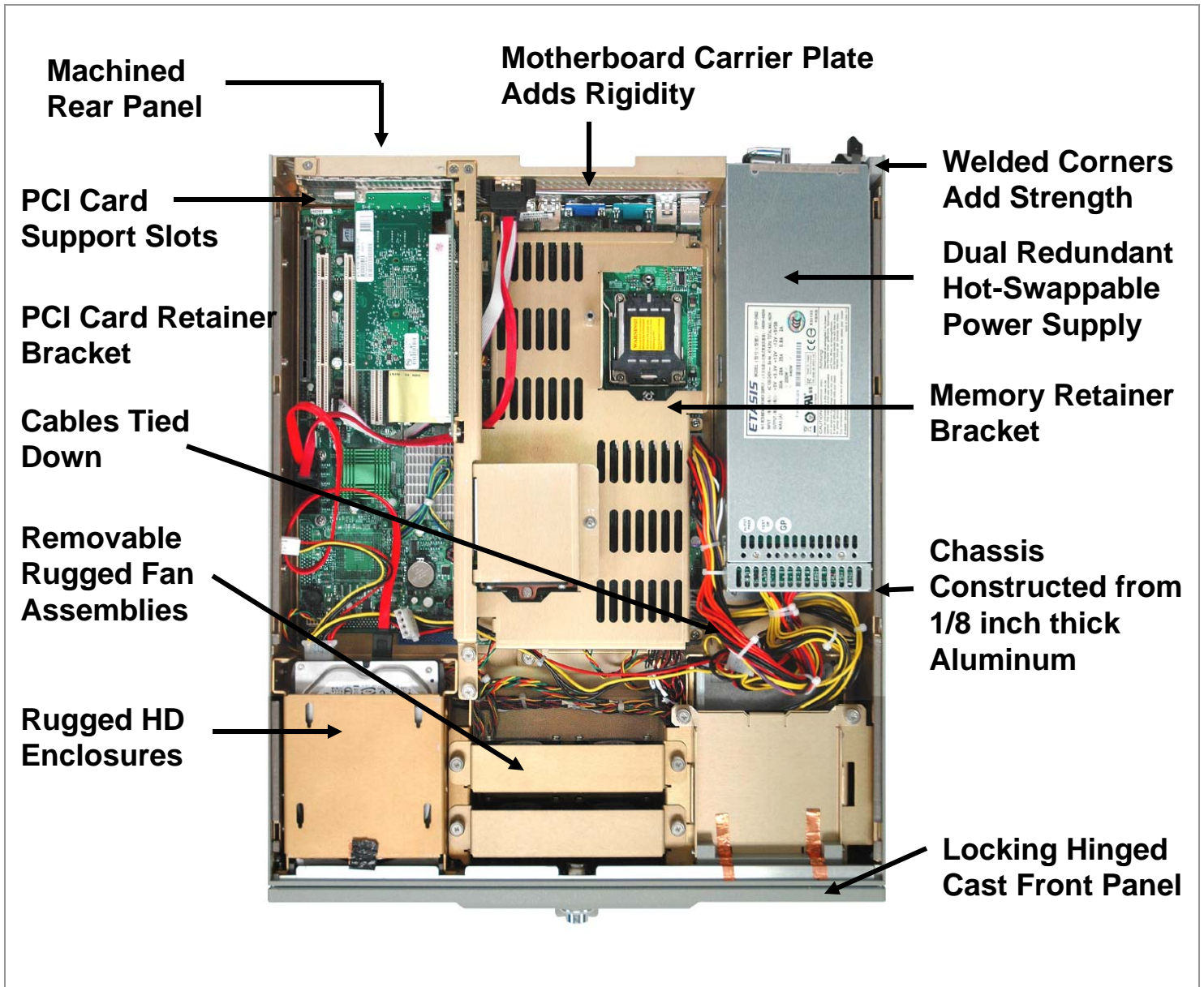
- Designed for high reliability in harsh operating environments
- Rack-optimized design for unique user requirements
- Extensive use of specially coated light-weight aluminum
- Excellent corrosion resistance, and durability
- Modular I/O design for easy upgrade and service
- Optional rack-mount slides
- Airflow direction: front to rear
- Operating Shock: up to 25G @ 12-40 ms (MIL-901D)
- 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-22DCO Specifications

- One or two Quad-Core Opteron Socket F processors up to 2.7GHz
- Up to 64GB ECC registered DDR2 SDRAM memory
- nVidia MCP55 Pro chipset
- ATI ES1000 16MByte PCI color graphics controller
- Rear panel access and I/O:
  - Two (2) Gigabit Ethernet port (RJ45)
  - One (1) Serial port
  - One VGA port
  - PS/2 keyboard and mouse ports
  - Two (2) USB 2.0 ports
  - Optional two (2) additional USB 2.0 ports
  - Power connector and switch
- Expansion Slots:
  - Three (3) 64-bit 100/133MHz PCI-X slots (3.3V)
- Front panel incorporates the following:
  - Three (3) Ultra320 SCSI or SATA2 Drives - two (2) removable, one (1) fixed
  - CD-RW/DVD-RW Drive (optional)
  - Status LEDs, reset switch
- Functional Features
  - Suspend to RAM and Wake-on-LAN system management
  - IPMI v2.0 support
- Dual redundant fans
- Power Supply: Dual redundant, N+1 hot swappable 110/220 VAC (460 Watt) autoranging power supplies (50/60Hz, 400Hz)
- Optional 300 Watt 24 or 48V DC power supply
- Dimensions (HWD): 2U (89 mm) x 17" (431.8 mm) x 20" (508 mm)



# RES-22DCO Internals – What Makes Them So Rugged?



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