



FEATURES

MECHANICAL INTEGRITY

- ▶ Rack-optimized design for unique user requirements
- ▶ Designed for high reliability in harsh operating environments
- ▶ Specially coated aluminum for light weight and corrosion resistance
- ▶ Stainless steel reinforcement for strength and stiffness
- ▶ Modular design for easy upgrade and service
- ▶ Optional rack-mount slides
- ▶ Front-to-rear airflow direction
- ▶ Optional dust filter

MANAGEMENT AND OPERATING SYSTEM

- ▶ Windows® and Linux® application support
- ▶ IPMI v2.0 support

ENVIRONMENTAL RESILIENCY

- ▶ Operating shock: 3 axis, 35G, 25ms
- ▶ Operating vibration: 3.0 Grms, 8 Hz to 2000 Hz
- ▶ Operating temperature: 0°C to 50°C
- ▶ Operating humidity: 8% to 90% non-condensing

* Environmental specifications are configuration dependent.

MODULAR MAINTAINABILITY

- ▶ Hot swappable fans
- ▶ Power supply options
 - Single or redundant 110/220 VAC, 650 Watt (50/60Hz, 400Hz)
 - Single or redundant 18-36 VDC, 32 Amp
 - Single or redundant 36-72 VDC, 18 Amp
- ▶ Hot swappable disk drives

MILSPEC

- ▶ MIL-STD-810G (shock and vibration)

RES-12XR3

1U Two Socket, 17 or 20 Inch Depth Rack Mountable Server

OVERVIEW

The Themis RES-12XR3 server is a one rack unit with a 17 or 20 inch depth that combines the robust design of the Rugged Enterprise Server (RES) family with the latest 5500 and 5600 series Intel® Xeon® processors.

Themis extensive thermal and kinetic management expertise makes these high performance systems suitable for mission-critical applications in demanding environments.

The RES-12XR3 is configured with one or two Intel Xeon 5500 or 5600 series processors and features multiple expansion slots, extensive high-speed I/O, and multiple storage options that provide users with configuration versatility and system expansion to meet current and future system requirements.

Featuring up to two expansion slots, extensive high-speed I/O, and multiple storage options, RES-12XR3 systems offer users versatile configuration and system expansion options.



Figure 1: Themis RES-12XR3 Rack Mountable Server

UNMATCHED FLEXIBILITY

The RES-12XR3 is configured with one or two 5500 or 5600 series Intel Xeon processors. The addition of commercially available, off-the-shelf networking cards, graphics, I/O, peripherals, and other value-added options provides users even greater flexibility to meet current and future system requirements.

Designed for operation use in harsh operating environments, Themis RES systems incorporate advanced

thermal and mechanical design features including: dual, redundant, hot swappable AC and DC power supply options.

Aluminum die cast front and rear panels, and a 17- or 20-inch deep chassis constructed from strong, lightweight aluminum, improve system resistance to corrosion, and makes Themis systems attractive candidates for use in programs where Size, Weight, and Power (SWAP) are essential considerations.

TECHNICAL SPECIFICATIONS

Processor and CPU

| PARAMETER | DESCRIPTION |
|-----------|--|
| Processor | One or Two 5500 or 5600 Series Intel Xeon Processors |
| Memory | Up to 96GB DDR3 ECC |

On-Board Expansion

| PARAMETER | OPTIONS |
|----------------|--|
| Expansion slot | One PCI-E 2.0 x16 slot, One PCI-E x 8 slot |

Front Panel and Rear Panel Access I/O *Note 1*

| I/O | QUANTITY | ACCESS |
|--|------------------|-------------|
| Removable 2.5 inch SATA or SAS disk drives | Up to 3 | Front panel |
| Optional CD-RW/DVD-RW drive | 1 | Front panel |
| Status LEDs | | Front panel |
| Gigabit Ethernet ports (RJ45) | 2 | Rear panel |
| USB 2.0 ports | Up to 4 standard | Rear panel |
| RS-232 serial ports (DB9) | 1 or 2 | Rear panel |
| PS/2 keyboard and mouse ports | | Rear panel |
| Power connector | 1 or 2 | Rear panel |
| Power switch | 1 | Rear panel |
| VGA port (graphics) | 1 | Rear panel |

Environmental

| PARAMETER | NON-OPERATING | OPERATING |
|---------------------------|---------------------------|--------------------------------|
| Temperature range | -40°C to 70°C | 0°C – Up to 50°C <i>Note 2</i> |
| Humidity (non-condensing) | 5% to 95% non-condensing | 8% to 90% non-condensing |
| Shock | 3 axis, 35G, 25ms | 3 axis, 35G, 25ms |
| Vibration (10-2000Hz) | 3.0 Grms, 8 Hz to 2000 Hz | 3.0 Grms, 8 Hz to 2000 Hz |

Modular Maintainability

| PARAMETER | DESCRIPTION |
|----------------------|--|
| Hot swappable fans | |
| Power supply options | Single or redundant 110/220 VAC, 650 Watt (50/60Hz, 400Hz) Single or redundant 18-36 VDC, 500 Watt, 32 Amp Single or redundant 18-36 VDC, 500 Watt, 32 Amp |

Mechanical

| PARAMETER | NON-OPERATING |
|------------------|--|
| Dimensions | Height: 1RU or 1.75 inches (44.45 mm) Width: 17.06 inches (433.3 mm) Depth: 17 or 20 inches (431.8 or 508 mm) |
| Chassis features | Coated aluminum for light weight and corrosion resistance Stainless steel in selected areas to add strength and stiffness Modular design for easy upgrade and service Optional rack-mount slides Front to rear airflow |

Notes

1. I/O options are configuration dependent.
2. Up to 60°C in specially configured systems.

THE RES-XR3 SERVER FAMILY

The Themis family of XR3 Rugged Enterprise Servers (RES) feature the latest Intel® four- and six-core Xeon® processors to provide reliability and superior server performance in the most demanding environments.

The Themis rugged server design keeps mission-critical applications available, improves life-cycle management, at a substantially lower total cost of ownership. When the environment is tough and your data is critical, rely on Themis to protect it and keep it available.

THEMIS VALUE

Themis provides systems manufacturers and end-users with the most modern, best-of-breed computing resources available. Package and performance scale from small form factor embedded servers to bladed servers.

Themis listens, understands, and works closely with our customers to optimize computing solutions that are easy to integrate, yet inexpensive to own and operate. Our solutions achieve the right balance between standard commercial technology and requirements for rugged environments, optimizing space, weight, and performance. For more information on Themis products, visit www.themis.com.



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