# RES-22XR3 FIO

## 2U Two Socket 13 or 17 Inch Depth Rack Mountable Server

## 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

### 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 – 55°C
- Operating Humidity: 8% to 90% non-condensing

* Environmental specifications are configuration dependent.

### MODULAR MAINTAINABILITY

- Power supply options
  - Single or redundant 110/220 VAC, (50/60Hz, 400Hz)
  - Single or redundant 18-36 VDC 32 Amp
  - Single or redundant 36-72 VDC 18 Amp

### MILSPEC

- MIL-STD-810G (Shock and Vibration)

## OVERVIEW

The Themis RES-22XR3 FIO Dual-Processor socket server, 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-22XR3 FIO 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.

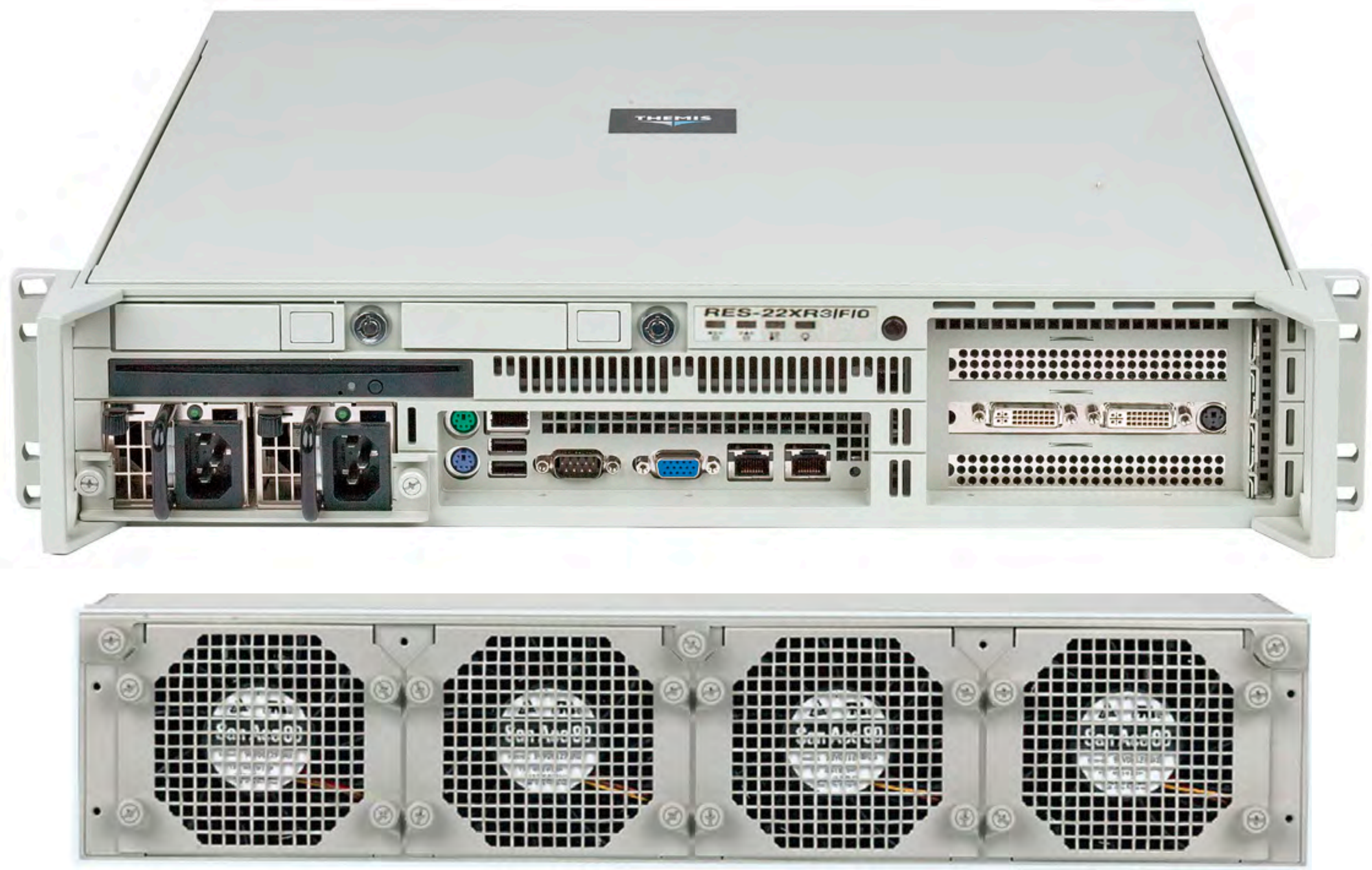

*FIGURE 1: Themis RES-22XR3 FIO Rack Mountable Server*

## UNMATCHED FLEXIBILITY

The RES-22XR3 FIO has all I/O accessible from the front of the machine. Power supplies, disk drives, Gigabit Ethernet controllers and graphics port are also front-panel accessible. The RES-22XR3 FIO features a shallow 13 inch (318.5 mm) or 17 inch (431.8 mm) chassis depth. Front access and shallow depth make the RES-22XR3 FIO and ideal solution for space constrained environments.

The RES-22XR3 FIO combines the robust design of the Rugged Enterprise Server (RES) family, with the latest 5500 and 5600 series Intel® Xeon® processors. 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.
This system combines the Intel four and six core Xeon processors, with advanced thermal and mechanical design techniques, to achieve I/O configuration flexibility and high reliability in high shock and vibration environments.

Featuring multiple expansion slots, extensive high speed I/O, and multiple storage options, the RES-22XR3 FIO allows users versatile configurability and system expansion.

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. Aluminum die cast front and rear panels, and a 13- or 17-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 96 GB DDR3 ECC |

## *On-Board Expansion*

| PARAMETER | OPTIONS |
|---|---|
| Expansion slot (varies with configuration) | Up to 7 low-profile PCI-E slots |
| | Up to 3 full-height PCI-E expansion slots |
| | PCI-X and PCI available on some configurations |

## *Front Panel and Rear Panel Access I/O* [Note 1]

| I/O | QUANTITY | ACCESS |
|---|---|---|
| Removable 2.5” SATA or SAS Drives | 2 | Front panel |
| Optional CD-RW/DVD-RW drive | 1 | Front panel |
| Status LEDs | | Front panel |
| Gigabit Ethernet ports (RJ45) | 2 | Front panel |
| RS-232 serial ports (DB9) | 1 or 2 | Front panel |
| VGA ports | 1 | Front panel |
| USB 2.0 ports | Up to 6 standard | Front panel |
| PS/2 keyboard and mouse ports | | Front panel |
| Power connector | 1 or 2 | Front panel |
| Power switch | 1 | Front panel |

## *Environmental*

| PARAMETER | NON-OPERATING | OPERATING |
|---|---|---|
| Temperature range | -40° C – 70° C | 0° C – 55° C [Note 2] |
| Humidity (non-condensing) | 5% to 95% | 8% to 90% |
| Shock | 25G @ 12-40 ms | 25G @ 12-40 ms |
| Vibration (10-2000Hz) | 3.0 Grms, 8 Hz to 2000 Hz | 3.0 Grms, 8 Hz to 2000 Hz |
| Safety | UL 1950, CSA 950 | UL 1950, CSA 950 |
| RFI/EMI | FCC class B‘“ | FCC class B‘“ |

## *Modular Maintainability*

| PARAMETER | DESCRIPTION |
|---|---|
| Hot swappable fans | Four |
| Power supply options | Single or redundant 110/220 VAC, (50/60Hz, 400Hz) |
| | Single or redundant 18-36 VDC 32 Amp |
| | Single or redundant 36-72 VDC 18 Amp |
| Hot swappable disk drives | Two |

## *Mechanical*

| PARAMETER | NON-OPERATING |
|---|---|
| Dimensions | Height: 2RU or 3.5 inches (88.9 mm)<br>Width: 17.06 inches (433.3 mm)<br>Depth: 13 or 17 inches (330.2 or 431.8 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 65° 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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