



FEATURES

PROCESSOR AND CPU

- ▶ One or two E5 Series Intel® Xeon® processors with four, six, or eight cores
- ▶ Up to 768 GB DDR3 ECC

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 – Up to 50°C*
- ▶ Operating Humidity: 8% to 90% non-condensing
- ▶ Weight*
 - -17 inch depth: 23 lbs (10.4 kg)
 - -20 inch depth: 25 lbs (11.3 kg)

MODULAR MAINTAINABILITY

- ▶ Hot swappable fans (3)
- ▶ Power supply options
 - Single or redundant 110/220 VAC, 750 Watt (50/60Hz, 400Hz)
 - Single or redundant 18-36 VDC, 32 Amp (500 W)
 - Single or redundant 36-72 VDC, 18 Amp (500 W)
- ▶ Hot pluggable disk drives (8)

MILSPEC*

- ▶ MIL-STD-810G
- ▶ MIL-STD-901D
- ▶ MIL-STD-167-1

* Themis designs all products to meet or exceed listed data sheet specifications. Some specifications are configuration dependant. Please contact Themis for information specific to your desired configuration requirements.



RES-XR4-2U

2U Dual Socket, 17 or 20 Inch Depth Rack Mountable Server

OVERVIEW

The Themis RES-XR4-2U server combines the robust design of the RES Servers family with the latest E5 Series Intel® Xeon® processors with four, six, or eight cores. Featuring two expansion slots, extensive high-speed I/O, and multiple storage options, the RES-XR4-2U server provides users with configuration versatility, system expansion, and state-of-the-art thermal and kinetic design to meet current and future system requirements suitable for mission-critical applications in demanding environments.

THERMAL AND KINETIC DESIGN MANAGEMENT

Designed for operation use in demanding environmental conditions, Themis RES systems incorporate advanced thermal and mechanical design features that include dual, redundant, hot swappable AC and DC power supply options.

Aluminum die cast front and rear panels and a 20-inch deep chassis, constructed from strong, light-weight aluminum, improve system resistance to corrosion, and make Themis systems an attractive option for programs where Size, Weight, and Power (SWAP) are essential considerations. 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.

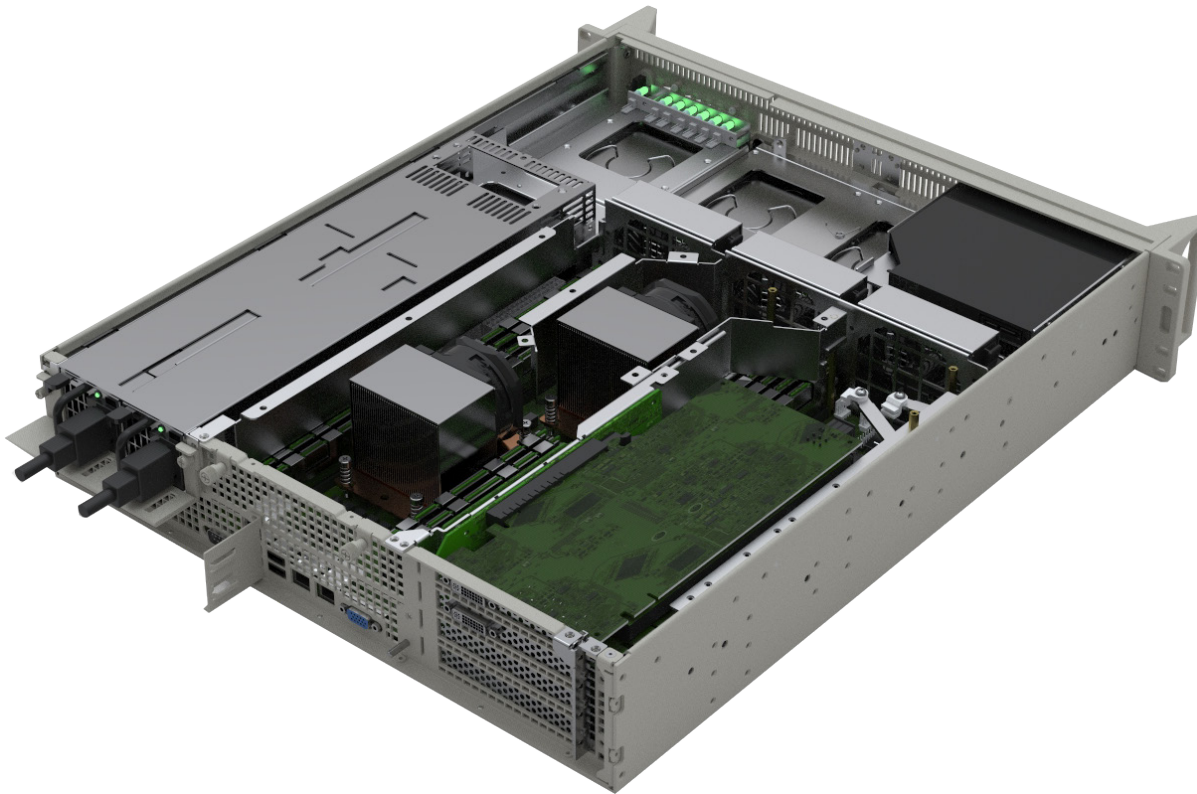
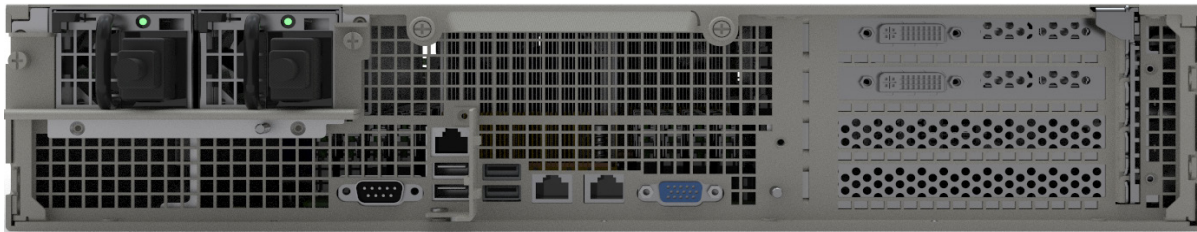
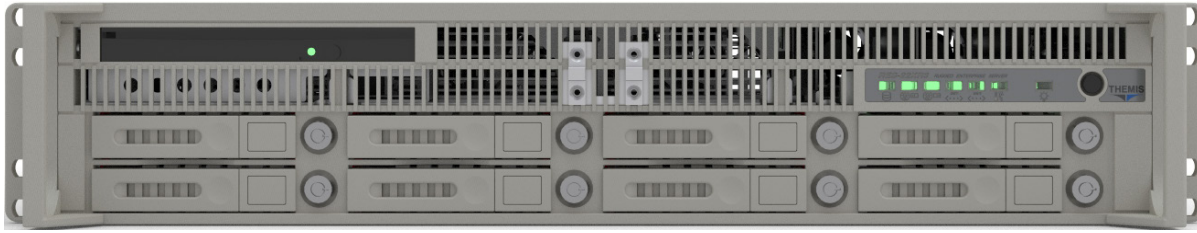


FIGURE 1: Themis RES-XR4-2U Rack Mountable Server

TECHNICAL SPECIFICATIONS

Processor and CPU

PARAMETER	DESCRIPTION
Processor	One or two E5 Series Intel® Xeon® processors with four, six, or eight Core Xeons
Memory	Up to 768 GB DDR3 ECC

On-Board Expansion

PARAMETER	DESCRIPTION
Expansion slots	Up to seven PCI-E 3.0 low profile cards (vertical I/O) or up to three PCIe full height cards (horizontal I/O)

Front Panel and Rear Panel Access I/O ^{Note 1}

I/O	QUANTITY	ACCESS
Removable 2.5 SATA or SAS disk drives	Up to 8	Front panel
CD-RW/DVD-RW drive	1	Front panel
Status LEDs	7	Front panel
Gigabit Ethernet ports (RJ45)	2	Rear panel
USB 2.0 ports	4 standard vertical I/O or 2 standard horizontal I/O	Rear panel
RS-232 serial ports (DB9)	1 standard	Rear panel
Power connector	1 or 2	Rear panel
Power switch	1	Rear panel
VGA Graphics	1	Rear panel

Environmental

PARAMETER	NON-OPERATING	OPERATING
Temperature range	-40°C to 70°C	0°C to 50°C ^{Note 2}
Humidity (non-condensing)	5% to 95% non-condensing	8% to 90% non-condensing
Shock	3 axis, 35G at 25 ms	3 axis, 35G at 25 ms
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	3
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 pluggable disk drives	8

Mechanical

PARAMETER	DESCRIPTION
Dimensions	Height: 2RU or 3.5 inches (88.9 mm) Width: 17 inches (432 mm) Depth: 17 or 20 inches (432 or 508 mm)
Weight ^{Note 3}	17 inch depth: 23 lbs (10.4 kg) 20 inch depth: 25 lbs (11.3 kg)
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 and shock pins Front to rear airflow

Notes

1. I/O options are configuration dependent.

2. Environmental specifications are configuration dependent. Higher operating temperatures are available in specially configured systems. Contact your Themis sales representatives for more information.

3. Weights are provided for typical configurations. Weight may vary depending on configuration. Contact your Themis sales representatives for more information.

INTEL® XEON® PROCESSOR E5 FAMILY

By 2015, it's estimated that more than 3 billion people and 15 billion devices will be connected to the Internet. The amount of data traveling over the Internet will grow by 33 percent annually, surpassing 4.8 zettabytes per year, or more than 3 times the amount in 2011. Additionally, each connected user will generate over 4 gigabytes of data traffic every day. This will increase the amount of data that needs to be stored by almost 50 percent per year. To meet this growth, the number of worldwide cloud servers is expected to triple by 2015.

To capitalize on these new opportunities, the industry faces challenges in scaling data center infrastructure to meet the unprecedented demand for computing, storage, and network bandwidth. The new Intel® Xeon® processor E5 family addresses these challenges by enabling IT organizations to seamlessly scale their infrastructures for future needs.

The Intel Xeon processor E5 family addresses the incredible growth of connected users, devices, and data traffic in the cloud through record-breaking performance, exceptional energy efficiency, breakthrough I/O innovation, and built-in security features.

THE RES-XR4 SERVER FAMILY

The Themis family of XR4 RES Servers feature E5 Intel® Xeon® processors with four, six, or eight Core Xeons 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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