RES-21XR3 FIO

2U Single Socket 13 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-21XR3 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-21XR3 FIO is configured with one Intel Xeon 5500 or 5600 Series Processor 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.
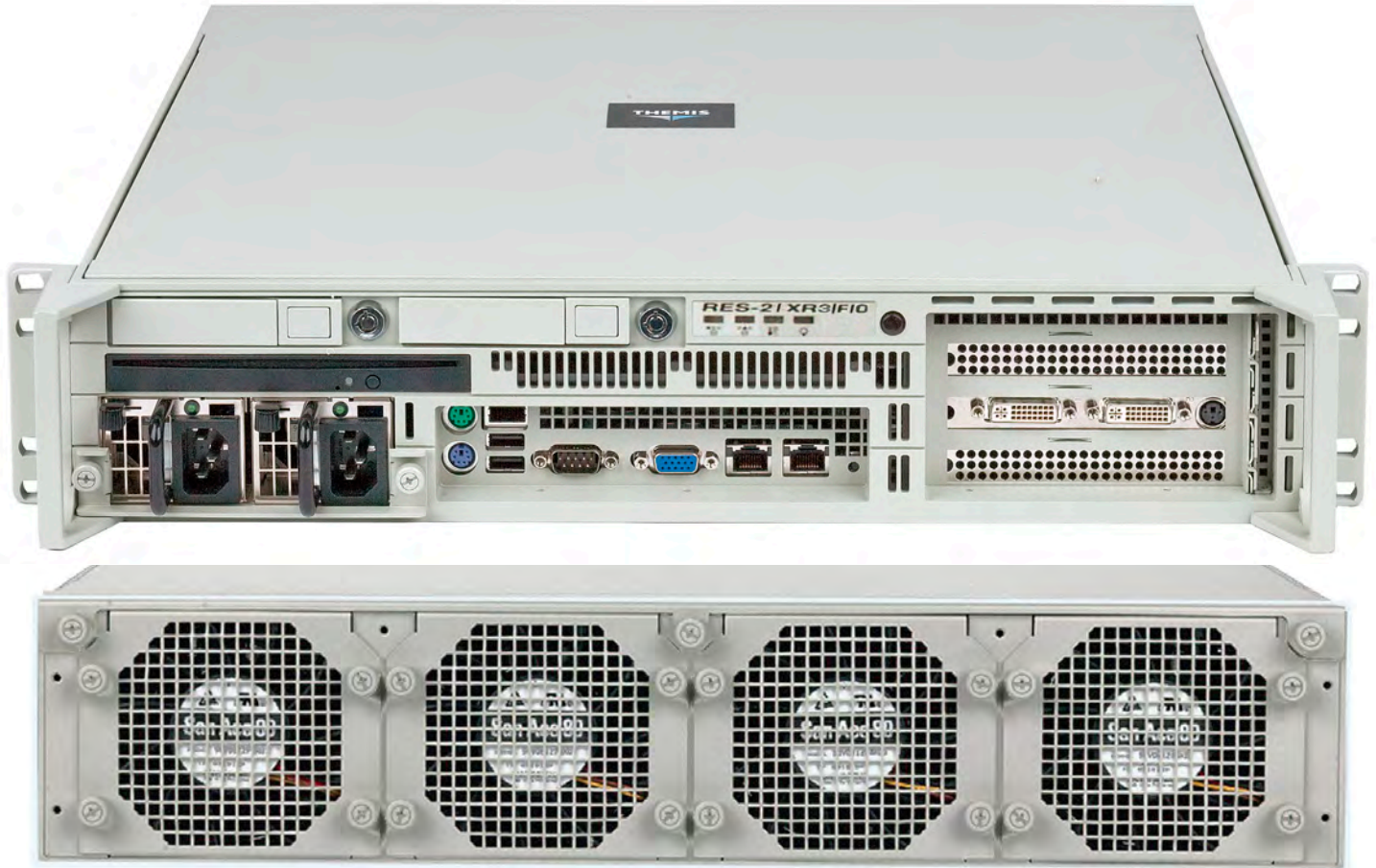
FIGURE 1: Themis RES-21XR3/FIO Rack Mountable Server

UNMATCHED FLEXIBILITY

The RES-21XR3/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-21XR3/FIO features a shallow 13 inch (318.5 mm) chassis depth. Front access and shallow depth make the RES-21XR3/FIO and ideal solution for space constrained environments.

The RES-21XR3/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-21XR3/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-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 5500 or 5600 Series Intel Xeon Processors
Memory	Up to 48 GB DDR3 ECC

On-Board Expansion

PARAMETER	OPTIONS
Expansion slot (varies with configuration)	2 low-profile PCI-E slots
	2 full-height PCI-E expansion slots
	1 expansion slot

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) Width: 17.06 inches (433.3 mm) Depth: 13 inches (330.2 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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THEMIS

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