INDUSTRY-LEADING PERFORMANCE, ENHANCED RELIABILITY AND SUPERIOR RESILIENCE TO SHOCK, VIBRATION, AND TEMPERATURE EXTREMES.

The RES-XR5-HDS8 Storage module occupies two chassis slots with two processor sockets, eight DIMMs (8, 16, or 32 GB), up to three high-bandwidth I/O ports, one RAID controller, and eight 2.5 inch SAS/SATA HDD/SDD disk slots for up to 16 TB of storage with integrated RAID/ Storage Controller and mSATA Boot Drive. The HDS8 module includes a companion RES-XR5-HDC processor module with two E5-2600 v3 Series Intel Xeon processors with up to sixteen cores per socket.

RES-HDS8 STORAGE EXPANSION MODULE

RES-HDS8 Storage Expansion modules occupy one chassis slot and require a base HDS8 Storage module (with companion processor). Each storage expansion module supports eight 2.5 inch HDD or SDD drives for up to 16 TB of storage. Maximum storage configuration for the 3RU HD chassis would be one HDS8 module plus four HDS8 Storage Expansion modules for a total of 40 drives (including 8 drives in HDS8 Storage module) or 80 TB.

RES HD SYSTEMS

Themis RES HD systems can be used in a multitude of applications that require high-compute density and low latency access to large-data storage. Themis RES HD servers:

▶ Deliver high performance processing power
▶ Double compute density
▶ Enable a 50% rack space savings with per server weights as low as seven pounds
▶ Reduce total system weight by nearly 50%

Designed with leading edge components, RES-HD servers provide maximum system configuration flexibility and system expansion options with processor, storage, high-speed switch, and system management module options.

Designed with enhanced reliability features for military, industrial, or rugged commercial use, RES HD systems can be mounted in standard commercial racks or mobile rugged transit cases, and provide industry-leading performance and superior resilience to shock, vibration, and temperature extremes.

COMPANION MODULE RES-XR5 PROCESSOR AND CPU

▶ Two E5-2600 V3 Series Intel® Xeon® processors with up to sixteen cores per socket
▶ Up to 256 GB DDR4 ECC

MANAGEMENT AND OPERATING SYSTEM

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

HD SYSTEM ENVIRONMENTAL SPECIFICATIONS*

▶ Operating temperature range: 0°C to 55°C
▶ Extended temperature range: -15°C – 65°C **
▶ Operating shock: 3 axis, 35g, 25ms
▶ Operating vibration: 4.76 Grms, 5Hz to 2000Hz (SSD)
▶ Operating humidity: 8% to 95% non-condensing
▶ MIL-STD-810G, MIL-STD-901D, and MIL-STD-167-1*
▶ MIL-STD-461 options available

HD SYSTEM AND MODULE MECHANICAL SPECIFICATIONS

▶ Height
   ▶ 4 chassis slot, 2RU or 3.5 inches (88.9 mm)
   ▶ 6 chassis slot, 3RU or 5.25 inches (133.35 mm)
▶ Width: 17.06 inches (433.3 mm)
▶ Depth: 20 inches (508 mm)
▶ Typical System Weight*
   ▶ 2RU chassis: 40 pounds
   ▶ 3RU chassis: 55 pounds

HD SYSTEM MODULAR MAINTAINABILITY

▶ Removable 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)

* Themis HD modules are implemented in a 2RU or 3RU system chassis. The envionmental specifications provided herein reflect HD system temperatures. Themis designs all products to meet or exceed listed data sheet specifications. Some specifications are configuration dependent.

** Extended temperature range is dependent on system configuration, components, and application thermal profile. Please contact Themis for information specific to your desired configuration requirements.

RES-XR5 HDS8 STORAGE MODULE SPECIFICATIONS

RES-HDS8 MODULE SPECIFICATIONS	
PARAMETER	RES-HDS
Companion Processor	Two Intel Xeon E5-2600 v3 series with up to sixteen cores per socket
Memory	Up to 32 GB memory modules for a total of 256 GB DDR4 ECC
Ethernet Support	Gigabit Ethernet, QDR, or FDR
Interface	Copper or fiber
Remote Management	BMC
Boot Options	PXE or storage canister boot mSATA
Expansion Slot	One PCIe 2.0 x 8
SAS/SATA Drives	Eight 2.5 inch SAS/SATA drives (HDD or SSD) in a single removable storage canister

RES-XR5-HDC MODULE REAR PANEL ACCESS I/O	
PARAMETER	QUANTITY
RJ-45 Gigabit Ethernet LAN Ports	2
RJ-45 Dedicated IPMI LAN Ports	1
PCIe 3.0 x 16 Expansion Slot	1
Fast UART 16550 Port	1
USB 3.0 Ports	2
QSFP (quad small form-factor pluggable) Controller	1
Status LED Indicators	1
VGA Port	1 or 2

MANAGEMENT	
PARAMETER	DESCRIPTION
Ethernet Support	56 Gb/s Infiniband, 40 Gb/s Ethernet, 10 Gb/s Ethernet (option)
Management and OS	Windows® and Linux® application support IPMI v2.0 support
Interface	Copper or fiber
Remote Management	BMC

RES HD SYSTEM SPECIFICATIONS

HD SYSTEM ENVIRONMENTAL SPECIFICATIONS, NOTE 1		
PARAMETER	NON-OPERATING	OPERATING
Temperature range	-40°C to 70°C	0°C to 55°C
Extended Temperature range	-40°C to 70°C	-15°C – 65°C, Note 2
Humidity (non-condensing)	5% to 95%	8% to 95%
Shock	3 axis, 35g at 25 ms	3 axis, 35g at 25 ms
Safety	EN60000	EN60000
RFI/EMI	EN55022/24	EN55022/24
Compliance	CE Mark	CE Mark

RES-HD SYSTEM MECHANICAL SPECIFICATIONS, NOTE	
PARAMETER	NON-OPERATING
HD System Dimensions	Height: 4 chassis slot, 2RU or 3.5 inches (88.9 mm), 6 chassis slot, 3RU or 5.25 inches (133.35 mm) Width: 17.06 inches (433.3 mm) Depth: 20 inches (508 mm)
Typical System Weight	2RU chassis: 40 pounds 3RU chassis: 55 pounds
HD-Chassis Power Supply Options	Single or redundant 110/220 VAC (1200W) Single or redundant 28 VDC (500W, 750W DC)
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

RES-HD SYSTEM FAN AND POWER SPECIFIATIONS	
PARAMETER	DESCRIPTION
Removable 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

Notes

1. Themis designs all products to meet or exceed listed data sheet specifications. Some specifications are configuration dependent. I/O options are configuration dependent
2. Extended temperature is dependent on system configuration, components, and application thermal profile. Please contact Themis for information specific to your desired configuration requirements.
3. Weights are provided for typical configurations. Weight may vary depending on configuration. Contact your Themis sales representatives for more information.

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