

RES NT2 1U

25 INCH DEPTH, 2 DRIVES, REAR IO



ACCELERATE YOUR MISSION

The Themis RES-NT2 High-Performance Computer (HPC) combines one NVIDIA® GPU accelerator, up to 1 TB ECC DDR4 memory, and two E5-2600 v3/v4 Series Intel® Xeon® processors with up to eighteen cores per processor in a resilient, lightweight, and shallow 1U chassis. The RES-NT2 performs in harsh environments where optimized Size, Weight, and Power (SWAP) is essential.

GRID VIRTUALIZATION

Fully compatible with popular virtualization technologies, the RES-NT2 with NVIDIA® GRID™ enables multiple virtual machines to have direct access to high performance graphic processing such as 3D visualization, visual simulation, and virtual reality.

TESLA SUPERCOMPUTING

Designed for artificial intelligence, deep learning, and simulation applications, the RES-NT2 with NVIDIA® TESLA™ delivers record speeds for video and signal processing, simulation, modeling, and computational physics. With teraflops of single and double precision performance, NVIDIA® TESLA™ Computing Accelerators are the world's fastest and most efficient high-performance computing companion processors.

SYSTEM AND GPU ACCELERATORS

- ▶ Two Intel® E5 2600 series Xeon® v3/v4 processors with up to 18 cores per processor
- ▶ Up to two NVIDIA® TESLA™ GPU accelerators
- ▶ Up to 1 TB ECC DDR4 2400MHz; 16x DIMM slots

MANAGEMENT AND OPERATING SYSTEMS

- ▶ Windows®, Linux®, VMWARE®, Citrix application support
- ▶ IPMI v2.0, Redfish option available

ENVIRONMENTAL RESILIENCY

- ▶ Operating temperature: 0°C – Up to 50°C*
- ▶ Operating shock: 3 axis, 30G, 25ms
- ▶ Operating vibration: 3.0 Grms, 8 Hz to 2000 Hz
- ▶ Operating Humidity: 8% to 95% non-condensing
- ▶ MIL-STD-810G (Shock and Vibration)

MECHANICAL

- ▶ Height: 1U or 1.75 inches (44.45mm)
- ▶ Width: 17.06 inches (433.3 mm), 19" rack-mountable
- ▶ Depth: 25 inches (635 mm)
- ▶ Weight (typical*): 24 pounds (10.9 kg)

MODULAR MAINTAINABILITY

- ▶ Hot-Pluggable disk drives: 2

* 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.



NVIDIA® GPU ACCELERATORS

GRID™ (VIRTUALIZATION)

	H.264 1080p30 streams	# desktops (users)	Memory bandwidth	Power	Form factor	CUDA Cores	Memory
M10	2	64	4 x 83 GB/s	225W	Double slot	2,560	4 x 8GB GDDR5
M60	36	32	2 x 160 GB/s	300W	Double slot	4,096	2 x 8GB GDDR5

TESLA™ (SUPERCOMPUTING)

	Max single precision (GFLOPS)	Max double precision (GFLOPS)	Memory bandwidth	Power	Form factor	CUDA Cores	Memory
P4	5,443	170	192 GB/s	50-75W	Single Slot	2,560	8GB GDDR5
P40	11,758	367	346 GB/s	250W	Double Slot	3,840	24GB GDDR5
K80	8,736	2,912	2 x 240 GB/s	300W	Double Slot	4,992	24GB GDDR5
P100	9,340	4,670	540 GB/s	250W	Double Slot	3,584	12GB HBM2
P100	9,340	4,670	720 GB/s	250W	Double Slot	3,584	16GB HBM2
V100	14,000	7,000	900 GB/s	250W	Double Slot	5,120	16GB HBM2

SYSTEM

Parameter	Quantity	Description
Processor	2	Intel® E5 2600 series Xeon® v3/v4 processors with up to 18 cores per processor
Memory		Up to 1 TB ECC DDR4 2400MHz; 16x DIMM slots
GPU Accelerators	2	Double slot NVIDIA Tesla or GRID GPU Accelerators
Expansion Slots	2	(1) PCIe 3.0 x16 GPU slot (1) PCIe 3.0 x8 (in a x16 slot)
Removable 2.5" SATA or SAS disk drives	2	Front access HDD (up to 2TB) or SSD drives (up to 8TB each)
Disk on Module	2	Up to 128GB per DOM
Network	2	1GbaseT Ethernet (up to 100GbE Ethernet available)
RAID Controller	1	On board. Supports add-in SAS3/HBA Controller or on board controller for SATA drives
Power Supply	2	1600W 110/220V AC

FRONT AND REAR PANEL I/O ACCESS

I/O	Quantity	Access
Status LEDs	2	Front
Gigabit Ethernet ports (RJ45)	2	Rear
USB 3.0 ports	2	Rear
IPMI 2.0 port	1	Rear
Power connector	2	Rear
Power switch	1	Front
VGA port	1	Rear

ENVIRONMENTAL*

Parameter	Non-operating	operating
Temperature range	-40°C to 70°C	0°C to 50°C
Humidity (non-condensing)	5% to 95%	8% to 95%
Shock	3 axis, 35g at 25 ms	3 axis, 35g at 25 ms
Vibration (10-2000 Hz)	3.0 Grms, 8Hz to 2000Hz	3.0 Grms, 8Hz to 2000Hz

MECHANICAL

Parameter	Description
Dimensions	Height: 1U or 1.75 inches (44.45 mm), Width: 17.06 inches (433.3 mm), Depth: 25 inches (635 mm)
Weight	24lbs (10.9 kg), Note 3
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.
Filter	Front Filter Option

*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 range is dependent on system configuration, components, and application thermal profile. Contact Themis for information specific to your configuration requirements.
3. Weights are provided for typical configurations. Weight may vary depending on configuration. Contact your Themis sales representatives for more information.

Corporate Headquarters
47200 Bayside Parkway
Fremont, CA 94538
Tel: 510-252-0870
Fax: 510-490-5529

International Office
5 rue Irène Joliot-Curie
38320 Eybens, France
Tel: +33.476.14.77.86
Fax: +33.476.14.77.89

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Themis and our products visit
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