



## Trusted Mission Solutions Product Guide

*Industry-Leading Performance, Enhanced Reliability, and Superior Resilience to Shock, Vibration, and Temperature Extremes*



# EnterpriseSeries™

## Cloud Computing on the Edge

Themis RES-XR6

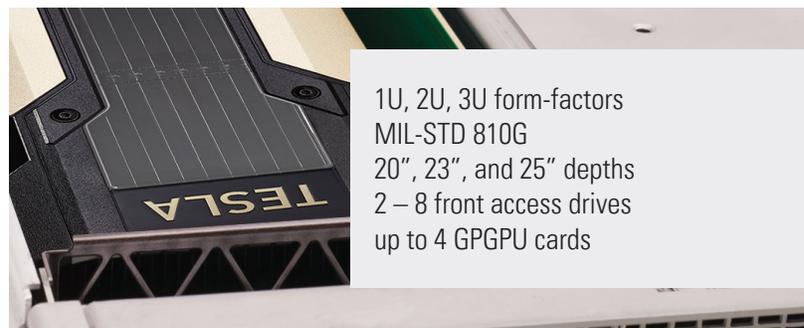


1U, 2U, 3U form-factors  
MIL-STD 810G, 901-D, 167-1, 461F  
14" – 21" depths  
2 – 16 front access drives  
configurable rear or front I/O

Designed for cloud/edge computing on the move, RES-XR6 rackmount servers package the latest Intel Xeon Scalable processors and 2666MHz DDR4 ECC memory in resilient, reliability-enhanced, and lightweight form factors. Featuring expansion slots, multiple sizes and depths, rear or front high-speed I/O, security features, and various storage options, RES-XR6 servers provide users maximum system expansion and configuration versatility to meet current and future system requirements.

## Supercomputing and Virtualization

Themis RES-NT2



1U, 2U, 3U form-factors  
MIL-STD 810G  
20", 23", and 25" depths  
2 – 8 front access drives  
up to 4 GPGPU cards

Equipped with the latest NVIDIA® GPU accelerators, Themis RES-NT2 tackles the most difficult challenges with efficiency—achieving up to 40% higher compute capacity per rack. These robust processing engines increase throughput and accelerate applications—packaging multiple GPUs, Intel Xeon Scalable processors, and up to 1.5TB of DDR4 ECC memory in a smaller footprint and using less power. TESLA® GPUs optimize single- and double-precision processing for high demand workloads, while GRID® offloads graphics processing from the CPU to the GPGPU in virtualized environments. Themis RES-NT2 delivers dramatic performance for the most aggressive mission critical workloads.

# Themis RES Servers

A part of Mercury's EnterpriseSeries™ suite of powerful processing solutions, Themis RES servers are designed from the ground up for mission critical applications where performance, reliability, and uptime are crucial.

Dedicated to providing reliable computing platforms that maximize performance for military, aerospace, energy, and rugged commercial use; Mercury products feature leading-edge components such as Intel processors, NVIDIA graphic cards, Mellanox switches, and Supermicro motherboards while providing superior resilience to shock, vibration, and temperature extremes.



## COTS Technology

Quick and affordable adoption of leading commercial technologies to deliver cutting-edge performance.



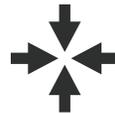
## Enhanced Reliability

Proven performance and availability in the most stringent environments.



## Size, Weight and Power (SWaP)

Specialty packaging designed to meet systems engineering constraints.



## Composability

Built in composability to give you what you want in a more cost effective purchase.



## Security

Security that can be integrated as the threat dictates with "built in" not "bolted on" secure solutions.



## Lifecycle Obsolescence Management

After sale support for obsolescence management at product EOL for current and future deployments.



## Interoperability

Seamless integration of popular applications and software across multiple platforms.



## Simplified Logistics and Upgrades

Modular systems that relieve the challenges and costs associated with logistics and upgrades.



## Extensive Customer Market Experience

Over three decades of experience delivering reliable solutions best suited to customer needs.



## Quick Turnaround

Dedicated technical support and faster or equal lead times comparable to other well-known competitors.



ACQUIRE



DIGITIZE



PROCESS



STORAGE



EXPLOIT



DISSEMINATE

# Modular and Composable High Density Servers

RES HD

2X

Compute  
Density

6

Module  
Types

1/2

the Rack  
Space

100%

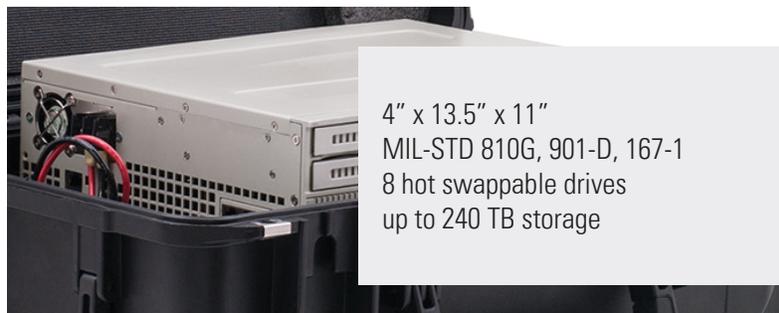
Scalable &  
Flexible

MIL-STD 810G, 461F  
configurable rear or front I/O  
2666MHz DDR ECC Memory  
6+ Interchangeable Modules  
4 Chassis Options

Delivering high-compute density and low-latency access to big-data storage, the composable RES HD systems save space, simplify technology upgrades, and streamline logistics. Users achieve optimum performance and precise functionality for a multitude of applications by mixing over six “plug and play” compute, storage, networking, PCIe expansion, management, and GPGPU modules. Multiple chassis options include the 10” wide HDslim and 17” wide Themis RES-HD 2U/3U chassis that integrate the latest Intel Xeon Scalable processors, and the 10” deep HDversa that holds up to twelve low power Intel Xeon D processors. With RES HD the possibilities and cost savings are endless.

## Datacenter in a Briefcase

RESmini XR6

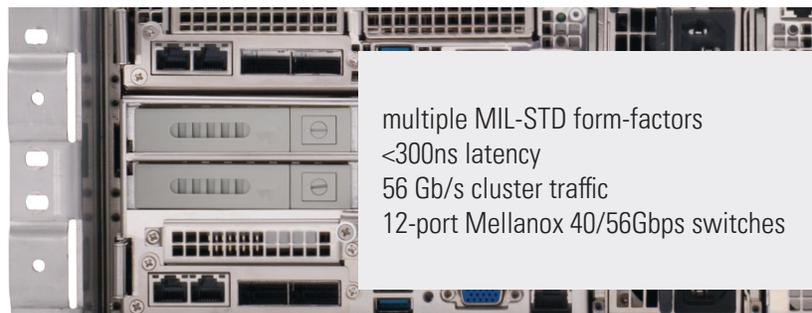


4" x 13.5" x 11"  
MIL-STD 810G, 901-D, 167-1  
8 hot swappable drives  
up to 240 TB storage

A tactical cloud that can host sensitive missions in theater and operate on almost any power source, the RESmini XR6 packages one Intel Xeon scalable processor socket with up to 28 cores in a 15lb subrack form-factor. An optional FAA compliant UPS power case provides over 100min of autonomous operation, while expansion slots and multiple I/O offer operators maximum configuration versatility for current and future operations.

## Hyperconverged Infrastructure (HCI) Platform

Hyper-Unity

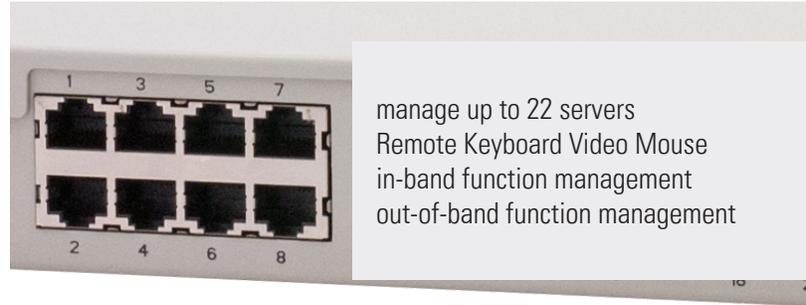


multiple MIL-STD form-factors  
<300ns latency  
56 Gb/s cluster traffic  
12-port Mellanox 40/56Gbps switches

Hyper-Unity® seamlessly integrates multiple RES form-factors, ethernet switches, and software-defined storage(SDS)/ hyper-converged infrastructure (HCI) software to deliver all-flash performance for virtualized applications at less than half the cost of traditional storage. It brings the advantages of a Public Cloud to operations on the tactical edge—optimizing efficiency through dynamically provisioned resources, streamlining IT management, and providing a robust scalable and turn-key infrastructure that can be immediately deployed.

# Resource Management

## Resource Manager



Remotely administer, monitor, configure, and manage servers securely with the Mercury Resource Manager. Monitor critical in-band functions including system health, CPU utilization, memory capacity, software, storage, and network usage; as well as out-of-band functions such as power, temperature, fan speed, BIOS, and O/S. Remote keyboard video mouse (KVM) functionality enables users to change BIOS and setup operating systems with a local machine such as a laptop, tablet, or mobile phone, over the network.

## Small Form-Factor Tactical Systems

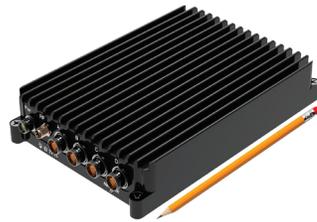
### Nanopak i7, Themis NanoSWITCH

Designed for man-wearable, unmanned air vehicle (UAV), helicopter, ground vehicles, shipboard, and military robotics applications, Mercury's small form-factor systems offer tremendous space, weight, power and cooling (SWaP-C) advantages.



#### Themis NanoSWITCH

The only VICTORY integrated switch in a DOD program of record, the IP67 sealed Themis NanoSWITCH® is a rugged 10/16 port Gigabit Ethernet switch with an embedded x86 CPU.



#### Nanopak i7

Weighing only 1.6lb, the NanoPAK® i7 computer packs an Intel Core i7 processor, 32GB DDR4 memory, and multiple I/O in a noiseless, conduction cooled chassis.

**[For more information visit: TMS.mrcy.com](http://TMS.mrcy.com)**



## *Innovation That Matters.*

### **Rely on Us**

Trusted worldwide, Mercury has a 30-year track record of providing enhanced-reliability computing platforms for mission-critical applications. Our robust product lines are known for their long life cycles, high-performance, thermal resiliency, compatibility with industry standards, and SWaP optimization. We partner with customers to design solutions that they can rely on for years to come.

### **Committed to Quality**

An ISO 9001 certified company, Mercury practices total quality management (TQM) in all areas of our business, from engineering and manufacturing to customer service.



*INNOVATION THAT MATTERS™*

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