DATASHEET

RES AI XR6 4U

22.5" deep, 8 drive, rear I/O rugged High Performance Computing (HPC) rack mountable server

- **Up to eight NVIDIA® Tesla® or Quadro® GPGPUs**
- **Up to two Intel® Xeon® Scalable processors**
- **Up to 2TB DDR4 ECC memory**
- **Up to 120TB of storage and 9 PCIe cards**
- **MIL-STD: 810G, 901D, 167-1, 1474D, 740-2, 461F**
- **Manufactured in AS5553 compliant, AS9100D facilities**

Engineered to handle massive workloads anywhere, Mercury's ***EnterpriseSeries***™ RES AI 4U server employs the latest NVIDIA® Tesla® GPUs and Intel® Xeon® Scalable processors to accelerate compute-heavy mission-critical applications such as Signal Intelligence (SIGINT), cryptography, deep learning, Artificial Intelligence (AI), surveillance, sensor fusion, visualization, image processing, tracking and big data analytics.

Tackle Challenging Workloads at the Edge

Powered by the latest NVIDIA Volta, Pascal™ and Turing™ architecture GPUs, the RES AI 4U harnesses parallel processing to maximize throughput, boost productivity and push the boundaries of compute-heavy applications at the edge. To optimize performance in a small footprint, it densely packs multiple expansion slots, **two Intel® Xeon® Scalable processors**, **2TB DDR4 ECC memory** and eight disk drives in a **49.5lb**, **22.5" deep** rugged form-factor.

Fully Configurable to Your HPC Application

Equipped with numerous PCIe 3.0 slots that accommodate a mix of GPUs, FPGA accelerators and other expansion cards, RES AI accelerates an array of High Performance Computing (HPC) workloads by tailoring to unique performance, speed and storage requirements.

Supercomputing Designed for the Field

Built from the ground up to provide edge computing capability previously reserved for the datacenter, field-deployable RES AI servers incorporate innovative patented technologies and design features to withstand shock, vibration, dust, sand, and temperature extremes.

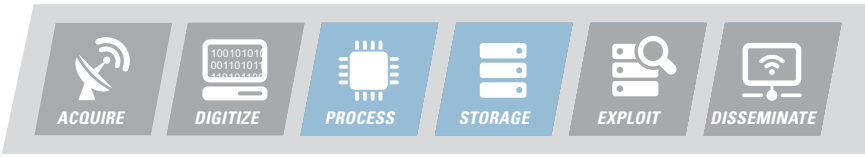
To ensure uptime, availability and sustained optimal performance in almost any environment, servers feature hot swappable AC power supplies with **2+1 redundancy** and are certified to multiple military (MIL-STD) and commercial (IEC) environmental specifications including **airborne and structural noise**. Compatible with multiple operating systems, applications and software, RES AI scales supercomputing from the Cloud to the Edge.

Proven Performance from a Trusted Partner

Mercury's EnterpriseSeries RES Servers are trusted worldwide for their high-performance, **long life cycles**, thermal resiliency, compatibility with industry standards, and **SWaP optimization**. With over 30 years of technical expertise, Mercury Systems works closely with customers to design computing solutions that are easy to integrate, affordable and reliable for years to come.

Our AS5553 compliant, AS9100D and ISO9001 facilities maintain quality and compliance to meet customer expectations.

Mercury Systems is a leading commercial provider of secure sensor and safety-critical processing subsystems. Optimized for customer and mission success, Mercury's solutions power a wide variety of critical defense and intelligence programs.



www.mrcy.com/servers

Technical Specifications

2 Intel® Xeon® Scalable CPUs with up to 28 cores per processor
Bronze, Silver, Gold, or Platinum
Up to 8 double-wide NVIDIA Tesla or Quadro GPU accelerators
Up to 2TB 2933MHz memory with 12 DIMM slots

Patented Technologies

Memory stabilization
Aeroloc baffle system
System control module for acoustic and remote management

Management and Operating System

Windows®, Linux®, VMWARE® and other hypervisors
IPMI v2.0, Redfish option available
TPM 1.2 or 2.0 support

Expansion and Modular Maintainability

9 PCIe card options:
8 PCIe 3.0 x16 GPU slots + 1 PCIe x16 high speed networking slot

Input/Output Versatility

Front Access
Up to 8 removable, hot pluggable, 2.5" SATA/SAS3 drives, U.2 NVME option available
can configure with up to (4) 15mm or (8) 7mm (SATA) high drives
1 Power/Reset Switch
1 CFM Switch (optional)
1 Power on LED
1 Blu-Ray or DVD/CD ROM drive (optional)
2 USB 3.0
1 Quick Change CMOS battery

Rear Access
2 1GBaseT ethernet ports (RJ45) with 1 port shared with IPMI 2.0
1 Display port with adapter to convert to VGA and 2 USB 2.0 ports

Power Supply Options

2000W 110 VAC power (2+1 redundancy)
3200W 220 VAC power (2+1 redundancy)
MIL-STD 461, 704F, 1399-300B

Modified COTS Expertise

For customized space, environmental, and performance requirements email tms@mrcy.com

Additional Options

Front door filter
Slide rails
CAC card reader
Read/Write switches to prevent accidental rewrite

MIL-STD / Industrial Specifications

MIL-STD 810G
Shock: MIL-STD 901D Grade A, IEC 60068-2-27
EMI/RFI: MIL-STD 461F, CE102 standard
Vibration: MIL-STD 167-1, MIL-STD 810G, IEC 60068-2-64
Airborne noise: MIL-STD 1474D
Structure borne noise: MIL-STD 740-2
Temperature: IEC 60068-2-2 test Bb, 60068-2-1 test Ab

Environmental*

Operating
Temperature: 0°C to 50°C
Extended Temperature: -20°C to 55°C
Humidity: 5% to 95% (non-condensing)
Shock: 3 axis, 35g, 25ms
Vibration: 4.76Grms, 4Hz to 2000 Hz (SSD)
Altitude: 10,000 ASL

Non-Operating
Temperature: -40°C to 80°C
Humidity: 5% to 95% (non-condensing)
Altitude: 40,000 ASL

Conformal Coating: IPC-CC 830 (optional)

Mechanical

Height: 4U or 7" inches (177mm)
Width: 17 inches (431.8mm)
Depth: 22.5 inches (571.5mm)
Weight (Typical)*: 49.5lbs (22.5kg)
dip brazed welded aluminum chassis
Cooling: Internal fan-cooled (rear vent) front to rear
19" rackmountable

* Mercury Systems designs all products to meet or exceed listed data sheet specifications. Some specifications including I/O profiles, weight, and thermal profiles are configuration dependent. Contact Mercury for information specific to your desired configuration requirements.

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INNOVATION THAT MATTERS™

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