mercury

RESX08-1U22R
22" Depth, Rear I/O Rugged Rack Server

Most robust and scalable, short-depth rugged rack server

- Dual Intel® 4th Generation Xeon® Scalable processors up to 56 cores
- Designed, tested and manufactured in the U.S. with a trusted supply chain
- Configurable – up to three expansion slots; up to sixteen SATA/SAS SSDs or up to eight NVMe PCIe gen5 SSDs
- Supports up to one NVIDIA H100 GPUs with NVLink

Mercury's RES X08 rugged rack servers feature the latest, highest-performing, industry-leading COTS technologies in a short-depth chassis for space-constrained applications at the edge. Integrating dual Intel® 4th Generation Xeon® Scalable processors, PCIe 5.0 and up to one powerful NVIDIA H100 GPUs, RES X08 servers are the densest edge computing platforms on the planet, ready to handle challenging workloads in the most extreme environments.

Highlights

- Designed to ingest, process, store and move at never-before accomplished speeds for real-time decision-making and data inferencing
- Built-in workload accelerators and the latest PCIe 5.0 technology for maximum throughput
- Supports up to one NVIDIA H100 GPUs connected via NVLink and up to four additional peripherals in a short-depth chassis
- Supports fast DDR5 memory and Compute Express Link (CXL) memory expansion
- Scalable designs for increased performance in less rack space
- Interoperable and compatible with common rack architecture for simple integration and minimized disruption to operations
- Ruggedized for extended temperature, shock, vibration, acoustics, humidity and EMI for military, aerospace and industrial applications

GET HIGHER PERFORMANCE WITH RES X08

2.5×	6×	50%	2×	15%
increased total compute per rack unit	greater GPU performance	increased memory bandwidth	faster PCIe throughput	improved power efficiency

* Compared to previous generation servers

TECHNICAL SPECIFICATIONS

Features

Dual Intel 4th Generation Xeon Scalable processors (formerly Sapphire Rapids), up to 56 cores**

Up to 16 DIMM slots, up to 8 TB DDR5–4800 MHz; CXL memory expansion

Intel Trusted Execution Technology (TXT) with integrated TPM 2.0

Management and and Operating Systems

Windows, Linux OS

IPMI 2.0 management

Expansion and Modular Maintainability

Up to three expansion slots:

- Slot 1: PCIe 5.0 x16 full-height, half-length w/RIO
- Slot 2: (a) PCIe 5.0 x16 full-height, half-length w/RIO (b) PCIe 5.0 x16 dual-width, full-height, 10.5" depth w/RIO
- Slot 3: OCP 3.0 gen 5.0 x16 w/RIO

Up to sixteen, 2.5", 7 mm SATA/SAS solid state drives, including FIPS 140-2 encryption options

Up to eight, 2.5", 15 mm NVMe PCIe gen5 SSDs**

Up to two NVMe M.2 slots

Power Supply Options

Single or redundant 100/240 VAC

Single 12-14 VDC redundant PSU*

MIL-STD-461**

Environmental**

Servers Rugged Level 1
(MIL-STD-810H temperature, humidity, altitude, shock, MIL-STD-167 vibration, MIL-STD-461 EMC)

Additional Options

Shock pins

Slide rails

Cable accessories

Mechanical

Height: 1U or 1.75" (44.5 mm)
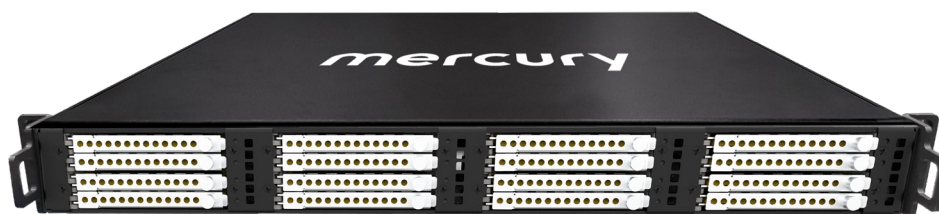
Width: 17.06" (433.3 mm)

Depth: 22" (558.9 mm)

Weight (typical)*: 23 lb

19" rackmountable

 *Final design characteristics to be determined at configuration

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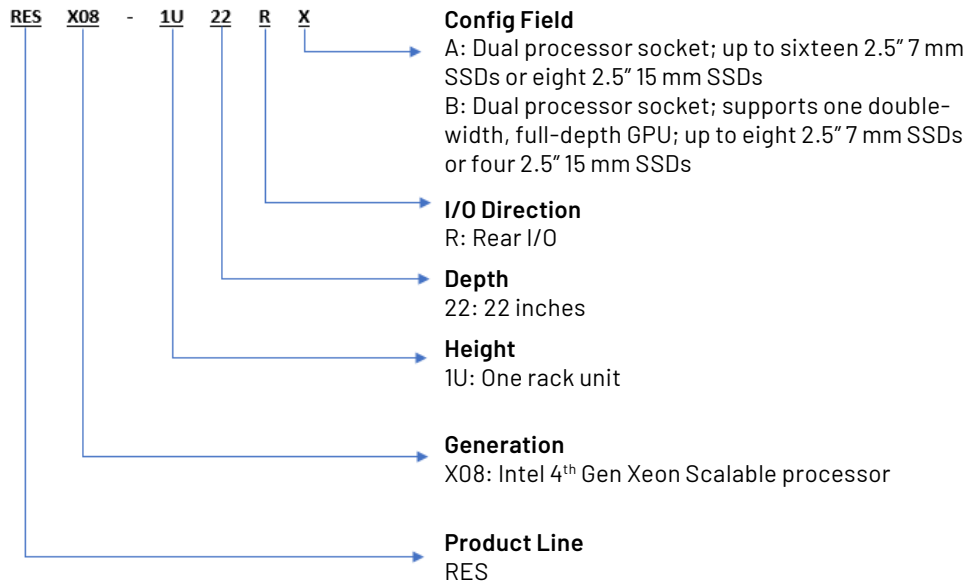

Front View

Rear View

APPLICATIONS

- High-performance computing (HPC)
- Sonar/radar signal processing
- Sensor processing
- Artificial intelligence (AI)
- Machine learning/ deep learning (ML/DL)
- Virtual reality (VR)
- High performance simulation
- Signals intelligence (SIGINT)
- Industrial automation
- Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR)
- Heterogeneous domain-specific processing (GPUs, FPGAs)
- 5G-based workloads
- Big data analytics
- Data management
- Electronic warfare (EW)
- Image processing
- Sensor fusion
- Virtualization

CONFIGURATION MODEL CHART

RES X08 - 1U 22 R X

Config Field
A: Dual processor socket; up to sixteen 2.5" 7 mm SSDs or eight 2.5" 15 mm SSDs
B: Dual processor socket; supports one double-width, full-depth GPU; up to eight 2.5" 7 mm SSDs or four 2.5" 15 mm SSDs

I/O Direction
R: Rear I/O

Depth
22: 22 inches

Height
1U: One rack unit

Generation
X08: Intel 4th Gen Xeon Scalable processor

Product Line
RES

Partnering with

intel. XEON GOLD

intel partner Titanium IoT Solutions

NVIDIA. PREFERRED PARTNER

mercury

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