

# 1U Rugged Server | 5<sup>th</sup> or 4<sup>th</sup> Gen Xeon<sup>®</sup> SP

A highly scalable, compact, secure, rugged rack server with the latest in high-performance computing technologies to ensure peak performance and adaptability for a variety of ever-changing applications across the defense and enterprise sectors.



## MAXIMUM CONFIGURABILITY, FLEXIBILITY, AND SCALABILITY

Quickly adjust your system's performance to meet the constantly fluctuating demands of diverse data environments and ensure operational efficiency.



## ENHANCED COMPUTE + CONNECTIVITY

Process, analyze, store, retrieve, and transfer large amounts of actionable intelligence in seconds to improve decision-making and reduce response times.



## RUGGEDIZED FOR EXTREMES

Tested to meet the toughest military and industrial standards to ensure the quality and reliability of our solutions within harsh and austere conditions.



## Overview

A configurable, SWaP-C optimized 1U rugged server supporting various option cards that delivers maximum processing, AI/ML/DL, networking, security, and storage alongside evolving workloads on premises or at the edge.

Designed in consultation with our team, this server meets and exceeds the most complex technical, performance, and environmental requirements of your application or program.

### SOLUTION HIGHLIGHTS



**Intel<sup>®</sup> TME, TXT, and Boot Guard** create a secure computing platform and enhance software/firmware resilience.



**Strict revision control** is achieved through approved vendor list (AVL), ensuring engineer-vetted parts.



**In-house engineers** (hardware, software, mechanical, and electrical) control the design of your system down to the board and chip level.



**Next-gen PCIe slots** enable you to easily expand your board's capabilities to meet the demands of your application or program.



**Counterfeit Protection Program (CPP)** helps detect, remove, and destroy counterfeit parts and components.



**TAA compliance** is achieved because servers are manufactured in the United States.



**Intel<sup>®</sup> QAT** accelerates data compression and cryptography, freeing up the host processor and enhancing data storage/transfer.



**Vetted supply chain** helps protect your system from potentially compromised counterfeit electronic parts and components.



**CSfC, ITAR, ISO9001, and AS9100 adherence and compliance** allow consistency to provide secure, high-quality computing solutions.

# Technical Overview

SPECIFICATION	DETAILS
CPUs	Dual Intel® 5th Gen Xeon® or Dual Intel® 4th Gen Xeon®
Memory	32x DDR5-4800 ECC RDIMM slots (16x per CPU)
Storage	Can support internal M.2 drives (FIPS 140-2/3 available)
Form Factors	1U rack server (19" x 1.75" x 22"   48.26cm x 4.45cm x 55.88cm)
Network Interface	1GbE port supporting IPMI
PCIe Interconnect	1x OCP x16 slot, 3x PCIe 5.0 x16 slots via MCIO connectors
Power	2x 1200W, redundant, removable

## PROCESSORS (UP TO 32 CORES PER CPU)

Dual Intel® 5th Gen Xeon® SP CPU or dual Intel® 4th Gen Xeon® SP CPU up to 250W TDP

Chipset: Intel® C741 Emmitsburg

*\*If an SKU higher than 250W is needed, contact a member of our team.*

## MEMORY (UP TO 8 TB)

32x DDR5-4800 ECC RDIMM slots (16x per CPU)

## SLOTS (CAN SUPPORT FHFL GPUs)

1x OCP x16 slot, 3x PCIe 5.0 x16 slots via MCIO connectors

## I/O

- ▶ **USB:** 3x USB ports: 2x USB2 ports via I/O riser, 1x USB3 header
- ▶ **IPMI:** IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
- ▶ **Graphics:** Intel® Integrated Graphics & ASPEED AST2600 BMC
- ▶ **Video:** 1x VGA port
- ▶ **LAN:** 1GbE port supporting IPMI

## SECURITY

- ▶ **TPM 2.0**

*\*For a comprehensive list of cybersecurity features, please contact one of our team members.*

## COOLING (BMC Controlled)

8x 6 pin system fan headers, 2x 4 pin CPU fan headers

## SYSTEM BIOS

- ▶ AMI SPI 256 Mbit BIOS
  - Plug and Play (PnP)
  - PCI 2.2
  - ACPI 1.0 / 2.0
  - USB Keyboard Support
  - SMBIOS 2.3
  - UEFI

## SYSTEM MANAGEMENT (BMC)

ASPEED AST2600 baseboard management controller: rKVM, system monitoring, out-of-band management

## OS COMPATIBILITY

- ▶ Windows Enterprise, Server
- ▶ Linux
  - RHEL
  - Ubuntu
  - SUSE

*\*Contact us for the full compatibilities list*

## DIMENSIONS

**Board:** 17" x 11.5" (43.18cm x 29.2cm)

**Chassis:** 19" x 1.75" x 22" (48.26cm x 4.45cm x 55.88cm)

## ENVIRONMENTAL SPECIFICATIONS

- ▶ Operating Temperature: -40°C - 50°C
- ▶ Storage Temperature: -40°C - 85°C
- ▶ Operating Humidity: 5°C-95°C relative
- ▶ Non-Operating Humidity: 5°C-95°C relative
- ▶ Shock: 3 axis, 15g, 11ms (MIL-STD-810)
- ▶ Vibration: 5Hz to 2,000Hz (SSD)
- ▶ Altitude: -300ft to 10,000ft
- ▶ Non-Operating Altitude: -300ft to 40,000ft

*\*Preliminary numbers noted. Final numbers expected to outperform current specifications.*

*\*Conformal coating available upon request.*

## COMPLIANCE

**Designed to meet the following standards/certifications:**

- ▶ MIL-STD-810H
- ▶ MIL-STD-461G
- ▶ DO-160F
- ▶ MIL-STD-704

Our 1U rugged servers are customizable per your most complex application or program requirements. Designed to support additional customer-specified option cards including NVIDIA H100 multi-instance GPUs.

Contact us for pricing and availability. [Greg Jones GJones@SourceCode.com](mailto:GJones@SourceCode.com) 206-397-7908