



MOSA Annex - RMS Range of Rugged 1-4U Servers

Raven Tactical Computing | TAA Compliant | Made in the USA

1. Modular Open Systems Approach (MOSA) Compliance Overview

The RMS server range architecture aligns with the DoD's MOSA principles under Title 10 U.S.C. § 2446a-c, incorporating modular hardware design, open and widely supported standards, and well-defined interfaces that enable competition, rapid technology insertion, and lifecycle affordability.

2. Modular Design (4U Description)

- Dual Intel Xeon SP processors (LGA-4710) with scalable CPU options
- Six PCI Express Gen 5 expansion slots (4 × x16, 2 × x8) for GPU, FPGA, or network modules
- Eight front-removable 2.5" U.2/U.3 NVMe/SATA drive bays for configurable storage
- Field-replaceable cooling fans, power supplies, and storage modules
- Short-depth (20") lightweight aluminum chassis for integration across multiple platforms

3. Open Standards and Designated Interfaces

Interface	Standard	Version / Body
System Bus	PCI-SIG PCI Express Gen 5	Rev 0.9 / PCI-SIG
Storage	NVMe / U.2 / U.3 / SATA III	NVMe 2.x / SATA 3.4
Networking	IEEE 802.3 10GBASE-T / RJ-45	IEEE 802.3an
System Management	DMTF Redfish / IPMI 2.0	DMTF DSP0266 / PICMG
Power	MIL-STD-704 / 1275 compliant input range (18-36 VDC)	DoD-STD

4. Conformance & Verification

All modules undergo environmental and interface verification per MIL-STD-810H, 901E, 461G, and RTCA/DO-160G. Conformance testing includes PCI-SIG and NVMe interoperability certification, Redfish/IPMI schema validation, environmental testing (shock, vibration, thermal, humidity), and OS functional tests across Windows Server 2022/2025, RHEL 9.4, Ubuntu 24 LTS, SLES 15 SP6, and Rocky 9.4.

5. Lifecycle, Data Rights, and Sustainment

Raven Tactical maintains complete design control and interface data rights, enabling competitive sourcing for COTS/FoS modules, technology refresh cycles without OEM lock-in, documented configuration management, and field-level maintainability. Supports secure, containerized, and virtualized deployments across approved OS environments.

6. MOSA Alignment Summary

Principle

Implementation

Modular Design

Independent modules for compute, storage, I/O, and power

Open Standards

Industry and consensus-based standards adopted

Designated Interfaces

Documented ICDs with version control

Conformance Verification

Test artifacts per DoD MOSA Verification Guide

Lifecycle Competition

Maintained data rights and supplier openness

Summary: The RMS range embodies a MOSA-aligned, U.S.-built platform engineered for rapid integration, tech insertion, and sustainment within evolving defense programs.

**Raven Tactical Computing | Rugged • Reliable • Mission Ready |
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