AI TRANSPORTABLES BUYERS GUIDE
MISSION-CRITICAL AI
HARDWARE SOLUTIONS

WHAT DOES AI TRANSPORTABLES MEAN?

Due to the increasing demand for artificial intelligence (AI) in vehicles, AI transportable hardware is gaining more and more market share. AI Transportables are high-performance computing appliances (HPCAs) designed for AI-driven autonomy in land, air, and maritime transportation. These HPCAs help provide the required computing power for AI applications while minimizing latency.

So-called AI Transportables differ from traditional edge AI infrastructure by implementing the latest technologies in high-speed data centers, input/output, networking and storage to operate in harsh environments.

AI Transportables meet stringent MIL-SPEC requirements for shock and vibration, redundancy, operating temperature range, height range, and uninterruptible power supply.

In doing so, our HPC appliances address the growing demand for AI Transportables, one of the fastest growing segments of edge computing. According to MarketsandMarkets, the edge computing market is expected to grow at a average annual growth rate of 34 percent to $15.7 billion by 2025.

Revolutionizing Military Operations with Transportable HPC Computing Power

In the world of military operations across land, sea, and aerospace, the potential of Transportable High-Performance Computing (HPC) solutions is paramount. These solutions are meticulously crafted to thrive within the demanding parameters of rugged terrains, compact dimensions, optimal weight distribution, and constrained power environments unique to the military landscape.

Unlike conventional settings, military applications face distinct challenges. Vehicle-mounted systems must harness Direct Current (DC) power with limited access to traditional grids, while combatting vehicular vibrations and unpredictable weather. Enter embedded and transport-optimized architectures, tailored precisely to adhere to military-specific and environmental requisites.

As military applications expand to encompass areas like autonomous vehicles, the demand for powerful, efficient data processing skyrockets. This calls for Graphics Processing Units (GPUs), now surpassing traditional CPUs in computation. With advancements like PCIe Gen 5.0 and the upcoming Gen 6.0, connectivity accelerates, profoundly elevating performance for critical devices such as NVMe storage.

Our Tactical HPC Solutions embody the synergy of cutting-edge technology and military resilience. They redefine military computing across diverse domains, uniting unwavering durability with unparalleled processing power. From battlefields to blue waters, and from soaring skies to digital frontiers, these solutions empower military operations with next-level data-driven insights and innovation.

BRINGING THE COMPUTE POWER OF HPC APPLIANCES INTO MILITARY AI APPLICATIONS

OSS
ONE STOP SYSTEMS
EB4400

TRANSPORTABILITY
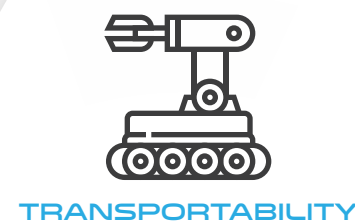
HPC Platform:
Individual
AI Ready
Compact
Modular

AI READY

REALTIME CAPABILITY

AI ACCELERATED APPLICATION FIELDS

OSS ONE STOP SYSTEMS

Natural Language Processing of Large Language Models (NLP/LLM)

Welcome to the forefront of linguistic superiority! Our advanced solutions enable the seamless processing of vast volumes of unstructured text data, unlocking invaluable insights from intelligence reports, open-source intelligence, and communications intercepted in various languages. By efficiently analyzing and understanding this linguistic data, military analysts can derive actionable intelligence, identify emerging threats, and forecast enemy activities with unprecedented precision. Moreover, our HPC appliances empower your military personnel to interact with large language models, aiding in real-time translation, sentiment analysis, and sentiment generation for diplomatic and psychological operations.

Electronic Warfare (EW)

Our state-of-the-art HPC systems greatly expand the boundaries of electronic dominance, enabling unparalleled capabilities in jamming, deception, and electronic countermeasures. Supporting advanced signal processing and machine learning algorithms, our appliances swiftly analyze vast volumes of electronic signals, detecting and identifying enemy radars, communication systems, and other electronic threats. With real-time data fusion and enhanced situational awareness, our EW-focused rugged appliances empower command centers to respond rapidly and effectively to emerging threats, preserving critical communication channels and disrupting adversaries' operations. The agility and computational prowess of our solutions place your operations at the forefront of electronic warfare, securing the tactical advantage and ensuring mission success.

Autonomous land, sea and air vehicles

Powered by the unparalleled capabilities of our ruggedized HPC servers and storage expansions, these advanced systems serve as the backbone of AI-driven technology in autonomous vehicles, enabling them to process massive amounts of data from specialized sensors like video, radar, and LIDAR. From unmanned surface ships traveling thousands of nautical miles without a crew to automated underwater vehicles (UUVs) conducting mine countermeasures, our HPC appliances play a pivotal role in ensuring seamless operations and mission success. In the skies, aircrafts harness massive data during flight and on the ground, seamlessly processing and archiving information for safer and more efficient fleet operations.

Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance, and Reconnaisance (C5ISR)

OSS HPC appliances revolutionize military operations with cutting-edge C5ISR capabilities. These advanced GPU accelerated systems serve as a formidable force multiplier, enabling military staff to process vast volumes of data at unprecedented speeds, unlocking critical insights, and facilitating real-time decision-making. From accelerating complex simulations for mission planning to rapidly analyzing intelligence data from diverse sources, our rugged supercomputers optimize battlefield situational awareness. With their unmatched computational power, these appliances bolster cybersecurity defenses, thwarting cyber threats and safeguarding sensitive information.

Signal Intelligence processing (SIGINT)

Our high-end solutions redefine the landscape of intelligence gathering and analysis, empowering military agencies to efficiently intercept, collect, and analyze vast amounts of complex signals data from various sources. With lightning-fast processing capabilities, our HPC appliances enable real-time signal detection, identification, and decryption, providing critical insights into adversaries' communications and activities. The integration of advanced algorithms and machine learning techniques enhances the accuracy and speed of SIGINT analysis, revealing hidden patterns and uncovering potential threats. Moreover, our HPC appliances support the fusion of multiple data streams, including communications, radar, and electronic warfare signals, enabling comprehensive situational awareness for strategic decision-making.

Simulation

Our advanced supercomputers reformulate the landscape of military training and preparedness, enabling realistic and immersive simulations of complex scenarios. With massive computational power and high-speed data processing, our rugged HPC appliances can run large-scale simulations involving multiple entities, such as ground forces, aircraft, and naval fleets, replicating real-world environments with unprecedented accuracy. These simulations facilitate tactical training, mission planning, and decision-making exercises for soldiers and staff, fostering critical skills and enhancing operational readiness. Moreover, our solutions optimize the development of advanced weapon systems and strategic concepts, reducing time-to-market and enhancing cost-efficiency.

CUSTOM OEM DESIGN SERVICES

Our OEM/production services are:

◆ **System engineering**, **specification**, **detailed design** and **regulatory compliance** (commercial, medical, aerospace, and military)

◆ Optimized for expedited build of **short-run**, **high-spec**, difficult to test items, and prototypes

◆ Integration with **client supply-chain** strategies (supplier-managed inventory, hot-spares, etc.)

◆ Competitively-priced with extraordinary quality (**ISO 9001/AS9100-D** process)

◆ Expertise in extreme temperature ranges for systems with challenging heat generating components using **advanced thermal design** for air & liquid solutions.
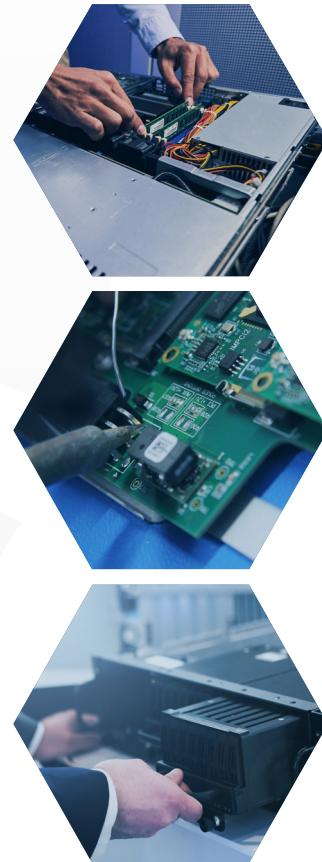
Unmatched Performance

We understand that military applications demand nothing but the best performance. Our hardware services integrate top-of-the-line data center class CPUs, GPUs, FPGAs, NVMe SSDs, and networking components into rugged edge platforms. These robust solutions are specifically designed to handle the most demanding AI workloads, ensuring that there are no compromises when it comes to performance in critical military operations.

Built for Rugged Environments

Our hardware solutions are built to withstand the harshest conditions. We specialize in shock and vibration-resistant designs that meet stringent vehicle specifications, making them ideal for deployment in harsh environments. Leveraging expertise in structural analysis and simulation, our low SWaP (Size, Weight, and Power) designs guarantee reliable performance and longevity in the field.

Versatile Power Solutions

We offer flexibility in power subsystem designs, accommodating a wide range of transportable edge system inputs. Whether it's land, sea, or air applications, our hardware can handle it all. With compatibility for inputs ranging from 48VDC to 3Ø (Phase) and 400Hz AC, our systems can power 6000W GPU systems, making them perfect for high-demand AI workloads in any military setting.

Our hardware services don't stop there. We also excel in PCIe and NVLink designs, providing next-generation switched fabric solutions with exceptional signal integrity, allowing for seamless communication between devices in the system or rack level. Furthermore, our expertise in thermal design ensures that even systems with challenging heat-generating components remain cool in extreme temperature ranges, with advanced air, liquid, and immersion cooling solutions.

In addition to outstanding hardware capabilities, we offer flexible system management and software solutions, including scale-out BIOS and SAN/NAS storage software. Through intuitive user interfaces, our software enables efficient management and RDMA data flows, utilizing NVMeoF and GPU Direct capabilities. No compromise, no limits - just exceptional military-grade technology.

CERTIFICATIONS AND STANDARDS

AS9100 CERTIFIED

ISO 9001:2015 CERTIFIED

AS9100 quality management

Manufacturer One Stop Systems has received ISO 9001:2015 and AS9100D certification from SAI Global. This covers the following scope of certification: design, manufacture and supply of industrial computers for the media and entertainment, financial, oil and gas, medical, aerospace, defense and other industries requiring similar products and services worldwide.

AS9100 is a quality management system developed to fill the gaps that aerospace companies have identified in the ISO 9001 standard in terms of how they conduct business for their customers. It was originally approved in 1999 and has since undergone four revisions, culminating in our current version, AS9100D.

A quality system is a formal system that documents procedures and processes to meet customer requirements. When you have a quality system, your customers know that you have a complete system in place to produce the product or service you provide in a high-quality, repeatable manner while meeting all regulatory requirements. Through the risk and opportunity assessment conducted as part of the AS9100 process, there are always opportunities to improve your business or enhance your customers' experience. When companies like OSS have AS9100 in place, the world knows that we are looking at those risks and opportunities and proactively address them.

The idea of continuous improvement is difficult to integrate into a corporate culture, but AS9100 helps accelerate the process and engage team members around these issues. For OSS, the journey began many years ago with the ISO-9001 standard and the company's commitment to this quality management system. We moved from ISO-9001 to AS9100, started in 2020, completed in 2021, and received SAI Global accreditation in early 2022. In a short period of time, the company has made significant progress in becoming compliant with the standards throughout the organization. You can clearly see how the company culture has changed and how continuous improvement has become a way of life.

What do the MIL-STD standards mean?

Standard	Meaning and scope
MIL-STD-810	A set of standardized test methods for the U.S. military, defining, among others, the compatibility of equipment in dealing with high temperature fluctuations, atmospheric pressure, humidity, vibration, or solar radiation.
MIL-STD-461	Specification of electromagnetic compatibility requirements for military products and solutions.
MIL-STD-464	Establish environmental electromagnetic interface requirements and test criteria for air, sea, space, and ground systems, including associated ordnance.
MIL-STD-704	Ensure compatibility between the aircraft electrical system, external power supply, and airborne equipment.

Military and Civilian Aircrafts

◆ Aerospace prime contractor developing an AI-based threat detection system aboard U.S. Navy aircraft
◆ Civilian „connected aircraft" that use on-board AI and SATCOM or 5G wireless links to collect data on aircraft operational performance and process it on the spot

Navy Ships

◆ AI-based maritime monitoring and analysis systems onboard ships to automate the detection of faulty systems for maintenance purposes

Army Tanks

◆ Automated targeting systems that use advanced sensors, machine-learning algorithms and touchscreen displays to enable army tank crews to detect and respond to incoming threats faster than ever before
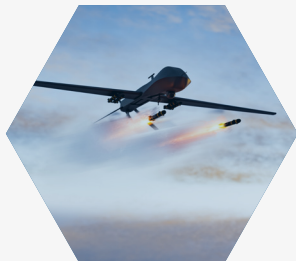
Cybersecurity and Drone Control

◆ AI cybersecurity applications monitor real-time access to industrial assets at manufacturers and utilities, track authorized access, and detect patterns indicative of cyberattacks
◆ Enabling cooperative behavior between aerial or land drones (military or civilian)

AI "in the field"

◆ Portable military command centers that use AI „in the field" - i.e., in close proximity to the battle - to quickly process a flood of tactical information into a comprehensive and intelligible picture of the battlefield

RUGGED DUAL ORIN™ SYSTEM
WITH GROUND-BREAKING
PERFORMANCE

PRELIMINARY DESIGN
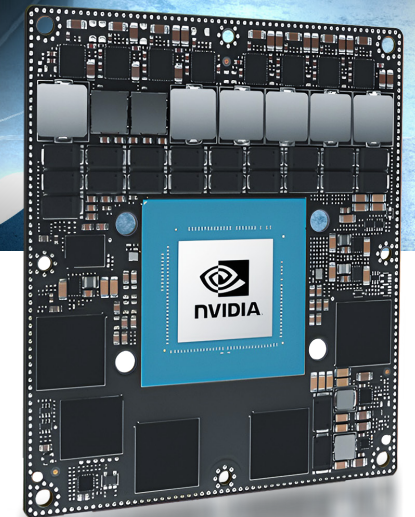
Unique Dual Orin™ System: Draco

Discover the automotive compute system for military-grade applications. This small form factor platform boasts dual NVIDIA® AGX Orin™ modules, ensuring unparalleled processing power and efficiency. Its rugged, conduction-cooled enclosure is specifically designed to withstand the harshest automotive conditions, with optional air and liquid cooling available. The platform's flexible sensor I/O routing enables seamless integration into distributed autonomous vehicle (AV) applications, providing comprehensive data collection and analysis. Furthermore, its compatibility with vehicle power (6 to 36 VDC) ensures optimal performance and adaptability in diverse operational environments. Embrace the future of military automotive computing with our Dual Orin hardware platform, where innovation meets durability.

Key Features

◆ Compute Performance: 550 TOPS Aggregate, 128GB GPU Memory, Dual 12-Core Arm Cortex CPU
◆ Thermal: -20° to 60°C via liquid cooling
◆ Size: 3.75" (H) x 15.6" (W) x 8.2" (D)
◆ Weight: < 4kg, aluminium construction
◆ Power Consumption: < 180W (liquid), < 100W (air)

I/O Listing

8x GMSL2 camera
12x 1-GbE Automotive Ethernet
3x 3-GbE Automotive Ethernet
8x CAN-FD
1x PCIe switch
2x PCIe x8 external links
2x LIN 2x A2B
6x DigOut + 2x DigInOut Wakeup
2x PPS Out (PWM)
1x PPS In
2x Input Vin
1x RS-232
7x USB (2.0/3.2)

IMMERSION OR LIQUID-COOLED
SUPERCOMPUTER FOR DEFENSE AND SECURITY

PREFERRED SOLUTION PROVIDER
NVIDIA.

WIDE TEMP

SHOCK PROOF

VIBRATION PROOF

EXPANSION SLOT

Key Features

◆ Highest performance compute server for Mobile Harsh Edge
◆ 4x NVIDIA® HGX A100 SXM GPUs with 320GB GPU memory
◆ Immersion or liquid-cooling options supporting extreme airborne, marine, or terrestrial environments (Level 100+)
◆ 2.4TB/s total GPU aggregated bandwidth
◆ Ruggedized 4U, 1/2-width, 26-inch deep compact formfactor

Rugged Edge Supercomputer: Rigel

The Rigel Edge Supercomputer is a cutting-edge marvel designed to unleash the formidable potential of the NVIDIA® HGX A100 SXM GPUs in the harshest and most demanding environments. Engineered with unwavering determination, the Rigel Edge harnesses the HGX A100 4-GPU backplane, an embodiment of innovation that yields an astounding 78 teraFLOPS of FP64 HPC performance. A symphony of technological prowess, the third generation NVLINK technology orchestrates seamless communication between GPUs, propelling computations to new heights. Seamlessly integrated with the advanced OSS PCIe Gen 4.0 expansion technology, this supercomputer seamlessly collaborates with the latest AMD 3rd Gen EPYC processors. Emboldened by four PCIe Gen 4.0 x16 expansion slots, the Rigel Edge becomes a nexus of high-speed network interconnects, NVMe storage, or FPGA sensor capture, all united to conquer the challenges of the modern battlefield.
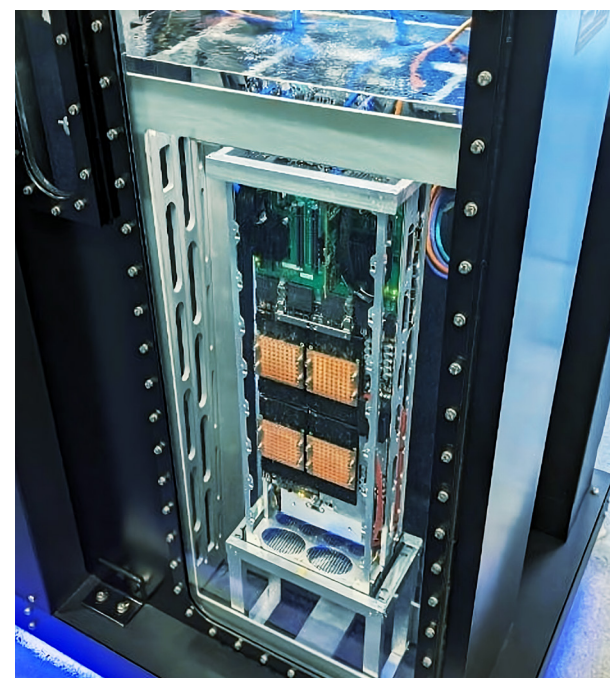
Two-phase immersion cooling demo of the Rigel Edge Supercomputer at West 2023 & SAS 2023

PCIe 5.0 Rugged Server: 3U SDS Gen5

Introducing the PCIe Gen5 version of the 3U Short-Depth Server, a formidable and feature-packed solution designed to meet the most demanding military requirements. This cutting-edge server houses two Intel® or AMD scalable processors, delivering exceptional compute power for GPU or FPGA accelerated computing, U.2/U.3 NVMe storage, or PCIe Gen5 expansion slots. Its compact 3U height and 20" depth make it ideal for edge deployments, providing an edge-optimized, rugged chassis that can operate as a stand-alone hyperconverged PCIe Gen5 server or serve as the core CPU and memory resources for a scalable and composable solution in shallow racks. With up to seven PCIe Gen5 x16 full-height slots, the 3U SDS Gen5 offers unparalleled flexibility for various expansion needs. Additionally, the server supports up to 2TB of memory, complemented by a resource-expanded BIOS, enabling efficient scale-out device enumeration and large memory mapped I/O capabilities, perfect for GPUs and accelerators.

AVAILABLE Q4/2023

SHOCK PROOF

EXPANSION SLOT

Key Features

◆ Ground up design focused on AI Transportable requirements
◆ Liquid-cooling options (external HX or internal HX)
◆ System monitoring, management and control
◆ Rugged chassis design, qualified to MIL-STD-810G category 10
◆ Supports both software and hardware RAID storage
◆ Hot-swap bulk removable canisters with 380TB+ NVMe storage
◆ CRPS power supplies for flexible capacity and inlet options

I/O Listing

5x PCIe Gen5 x16 expansion slots (w/ Tyan Tempest HX S8050)
4x PCIe Gen5 slots with GPU support (w/ Tyan Tempest SX S5652)
6x PCIe Gen5 x16 expansion slots (w/ Gigabyte MS73-HB1)
7x PCIe Gen5 x16 expansion slots (w/ Gigabyte MS03-CE0)
2x LAN
5x USB 3.0, 4x USB 2.0

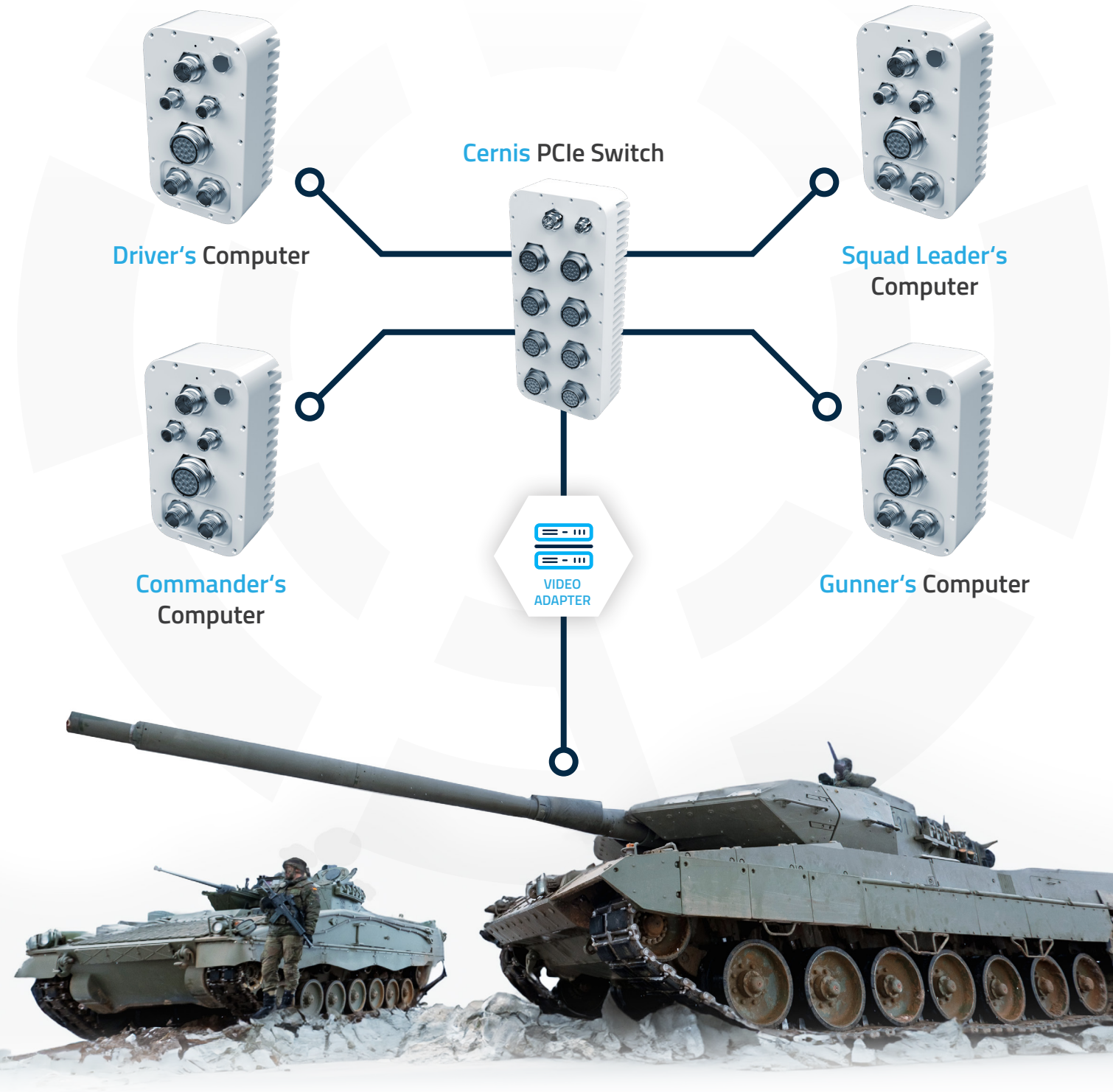# UPGRADE YOUR APPLICATIONS WITH LIQUID-COOLED 3U-SDS GEN5

www.onestopsystems.com

MIL Rugged PCIe Intelligent Switch: Cernis

Cernis represents the pinnacle of ruggedized PCIe intelligent switches. This advanced 8-port switch boasts an embedded ARM processor, providing incredible intelligence and efficiency in military networking. With PCIe Gen4 on individual connectors, Cernis achieves an impressive cut-through latency of 105 ns, guaranteeing swift and reliable data transfer. The switch's software configurability enables seamless customization of lanes, devices, and functions, with options for 80-lanes or 60-lanes total. Combining low-power Broadcom Atlas 1 switch technology with a conduction-cooled, hermetically sealed design, Cernis ensures sturdiness and reliability in the harshest operational conditions. Additionally, MIL-STD-810G ground vehicle compliance testing further validates its performance and durability. Experience the power of Cernis, where compact design meets ruggedness, equipping your military operations with a high-performance, low-latency, and adaptable PCIe switch, engineered for exceptional reliability and mission success.

PRELIMINARY DESIGN

COMING SOON

MIL Rugged AGX Orin™ Compute: Donati

Donati is an upcoming MIL Rugged AGX Orin™ HPC system, which stands at the forefront of military innovation, boasting PCIe Gen4 accelerated performance on a D38999 connector for seamless data transfer. Its segregated D38999 connector hosts local CDU video, 1-Gigabit Ethernet, and I/O, ensuring efficient communication and connectivity. Powered by the latest NVIDIA® AGX Orin™ 64GB ARM CPU with GPU, Donati guarantees unmatched processing power for the most demanding military applications. With a 12-36VDC input power range, this computer is engineered for adaptability in diverse operational environments. Its rugged, conduction-cooled, and hermetically sealed design ensures reliability and durability under extreme conditions. The appliance has also been successfully tested for MIL-STD-810G ground vehicle compliance. Due to its transportable, compact form factor the Donati perfectly fits into any contraint space within defense and security applications.

PRELIMINARY DESIGN

COMING SOON

Application Example - Army AI Program

◆ 360° Situational Awareness with PCIe Interconnect
◆ Sensor Concentator & AI Applications for manned and unmanned army vehicles
◆ PCIe Network to reduce latency 1000x versus Ethernet

Driver's Computer

Cernis PCIe Switch

Squad Leader's Computer

Commander's Computer

VIDEO ADAPTER

Gunner's Computer

Rugged GPU servers | PCIe and storage expansions

Model	EOS 4a with EB4400	GAS-R	FSAn-4	EB4400	Centauri	Gen5 4U Pro	
CPU	AMD EPYC™ 7002 Series (Rome) LGA 4094 Single Socket SP3	AMD Epyc 7002 up to 64 cores or Dual Intel® scalable processors	Dual Intel® Xeon® Skylake, Cascade Lake, Cascade Lake-X, LGA 3647	–	–	–	CPU
GPU	Half Height, Full Length, Rear GPU power connectors	8x NVIDIA® A100 SXM4 GPUs (NVLink 3.0)	Half-Height, Full-Length, GPU connectors on rear side	–	–	–	GPU
RAM	DDR4, ECC, 4TB Max., 64Gb, 128Gb, 256Gb, 512Gb, 1TB, 2TB 2933MHz, 2666MHz, 2400MHz, 2133MHz	Up to 4TB DDR4 ECC RAM	Up to 4TB DDR4 ECC RAM	–	–	–	RAM
Storage Capacity	24x hot-swap configurable SATA-3, SAS-3 or NVMe x4 2.5" x 15mm drive carriers, 12GB SAS-3, 6GB SATA-3 SFF-8680, NVMe x4 32GB slots	Up to 200TB U.2 PCIe 4.0 NVMe flash	Supports 32x PCIe 3.0 x8 HH/HL PCIe NVMe flash, up to 400TB usable	–	Up to 8x U.2/U.3 PCIe 3.0 or 4.0 NVMe SSDs with 128TB per 3U system (15.36TB NVMe drives)	–	Storage Capacity
PCIe Expansions	5 x PCIe 4.0 x16 HHFL slots 1 x PCIe 4.0 x16 HHFL slot or 2x M.2 (2230/2242/2260/2280) + 2x miniSAS-HD + 2x Oculink by jumper 1 x PCIe 3.0 x16 HHFL slot	4x PCIe 3.0 x16 HH/FL Double-Width 2x PCIe 3.0 x16 HH/HL Single-Width 1x PCIe 3.0 x4 HH/HL with physical x8 connector 32x PCIe 3.0 x8 HH/HL (removable)	4x PCIe 3.0 x16 HH/FL Double-Width, 2x PCIe 3.0 x16 HH/HL Single-Width, 1x PCIe 3.0 x4 HH/HL with physical x8 connector 32x PCIe 3.0 x8 HH/HL (removable)	Backplane Dual OSS-538: 1x Single-Width PCIe 4.0 x16 FHFL 4x Dual-Width PCIe 4.0 x16 FHFL Backplane Dual OSS-521: 1x SIngle-Width PCIe 4.0 x16 FHFL 6x Single-Width PCIe 4.0 FHFL 1x Dual-Width PCIe 4.0 x16 FHFL	1x PCIe 4.0 x16 SFF-8644 host uplink for connecting several Centauri systems	Backplane Single / Dual OSS-580: 1x or 2x Single-Width PCIe 5.0 x16 (Up) 4x or 8x Dual-Width PCIe 5.0 x16 (Down) Backplane Single / Dual OSS-581: 1x or 2x Single-Width PCIe 5.0 x16 (Up) 6x or 12x Single-Width PCIe 5.0 x16 (Down) 1x or 2x Dual-Width PCIe 5.0 x16 (Down)	PCIe Expansions
I/O	2x RJ-45 10GBASE-T LAN 1x RJ-45 Dedicated IPMI LAN port 4x USB 3.1 Gen 1 3x USB 3.1 Gen 2	2x RJ-45 (10-Gigabit Ethernet) 4x Ethernet & Infiniband up to 200GB/s 4x FibreChannel up to 32GB 5x USB 3.0, 2x rear, 2x front, 1x internal 4x USB 2.0 (2x rear, 2x internal)	2x RJ-45 (Intel® X550) 10-GbE slots 5x USB 3.0, 2x rear, 2x front, 1x internal	1x PCIe 4.0 x16 host-to-target uplink kits (32GBit/s) 2x PCIe 4.0 x16 host-to-target uplink kits (64GBit/s) SmartNIC host	2x RJ-45 Ethernet ports (for web server GUI access)	Standard: Modifies 1x Dual-Width PCIe 5.0 x16 FHFL (Down) slot to two per backplane Riser: Adds 1x Single-Width PCIe 5.0 slot per backplane Linked: Links two backplanes together	I/O
Chassis	Rackmount steel chassis	Black anodized aluminium chassis (8U)	Rackmount aluminium chassis (4U)	Rackmount steel chassis (4U)	Aluminium chassis (3U)	Rackmount aluminium chassis (4U)	Chassis
Cooling	Four 80mm x 38mm PWM hot-swap cooling fans	80mm fan, 92mm fan, 80dB(A) at 1-meter distance	4x 70 x 38mm PWM hot swap fan	3x 92mm (180CFM) fan standard PWM controlled Optional IPMI system monitoring Optional Quadrafoam 45 PPI removable fan filters	BMC and fan control	3x 120mm (180CFM) fans Default PWM controlled based on built-in temperature sensors Optional IPMI system monitoring and control	Cooling
Power Supply	Dual 1000W 90-264VAC, 47-63Hz Input	100-250VAC (47-63Hz or 400Hz) 200-370VDC 2+1, hot swap power supply up to 1600W	Power input rear: 100-250VAC (47-63 or 400Hz) or 200-370VDC 2+1, hot swap power supply up to 1600W	Single / Dual AC 2600W power supply Single / Dual AC 1600W power supply Single / Dual DC 1600W power supply	Dual 1600W redundant power supplies: 100-240VAC full range 48VDC 50/60Hz	Single / Dual AC 2600W power supply Single / Dual AC 1600W power supply Single / Dual DC 1600W power supply	Power Supply
Temperature	Operation: 5° ~ 35°C Storage: 20° ~ 60°C	Operation: 0° ~ 35°C Storage: -40° ~ 71°C	Operation: 0° ~ 35°C Storage: -40° ~ 71°C	Operation: 0° ~ 35°C; short-term: -5° ~ 40°C Storage: -40° ~ 71°C	Operation: 10° ~ 50°C Storage: -40° ~ 71°C	Operation: 0° ~ 35°C Storage: -40° ~ 71°C	Temperature
Weight	33-48lbs (14.7 - 21.8kg)	132.9lbs (60.3kg)	70.1lbs (31.8kg) to 85.1lbs (38.6kg)	24.9lbs (11.3kg) - w/o GPUs	13.0lbs (5.9kg)	38.0lbs (17.23kg) w/o GPUs	Weight
Dimensions	436.9 (482.6 w/ rack ears) x 711.2 x 87.6mm	368.3 x 431.8 x 622.3mm	431.8 x 177.8 x 609.6mm	271.8 x 177.8 x 470mm	215.9 x 133.4 x 508mm	435.8 x 177.8 x 470mm	Dimensions
Regulations	FCC Class A	Canada ICES-003, issue 4, Class A	CE Mark	CISPR 22, Class A	MIL-STD-810G, MIL-STD-461E, MIL-STD464A, MIL-STD-704E, IEC 61000-4-2	MIL-STD-810G, MIL-STD-461E, MIL-STD-464A, MIL-STD-704E	FCC Class A, CE, UL, cUL, RoHS3	FCC Class A, ICES-003, UL/IEC 60950-1, CE, CISPR 22, WEEE & RoHS 3	Agency certifications: FCC Class A, CE Safety & Emissions, UL, cUL, RoHS3	Regulations
Use Cases	Data Science, Visualization, High Performance Edge Computing	Airborne "Datacenter in the sky", Transportable High-End Edge Computing	Surveillance Aircrafts, Broadcast Trucks, Ground Stations, Real-time HPC, High-Speed Data Recording, Analytics, Big Data	Airborne, Naval or Ground-Based Transportable Semi-Rugged AI Applications	Transportable Data Capturing, Mobile Storage Expansion	Airport Ground Support, Mining, Aviation, Oil and Gas, Autonomous Buses	Use Cases

OSS
ONE STOP SYSTEMS

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