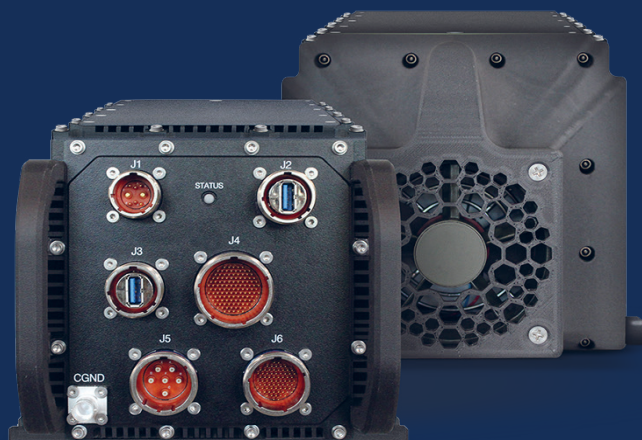# ADVANCED VPX BASED GPGPU MISSION COMPUTER

eXpando

Designed for mission-critical defense and aerospace applications, the mission computer delivers an unbeatable combination of GPGPU computing power, comprehensive rugged I/O, and extreme environmental tolerance. Manufactured in Europe and compliant with military standards.

This high-performance VPX-based rugged computer is purpose-built for mission-critical defense and aerospace applications.
Powered by an 8-core Intel Xeon W-11865MRE (Tiger Lake-H) processor running at 2.6 GHz and backed by 32 GB of ECC DDR4 memory, it delivers the computing power needed for real-time processing, AI inference, and deep learning in the field.

It features the NVIDIA Ampere RTX A2000 GPU with 2,560 CUDA cores and 8 GB of GDDR6 memory, capable of handling intensive graphics and video encoding tasks.

It's advanced video capture capabilities includes three 3G-SDI inputs and three outputs, complemented by a VGA port.

It integrates a comprehensive suite of military-grade I/O options, including four Gigabit Ethernet ports, twelve ARINC-429 channels, dual-redundant MIL-STD-1553 interfaces, multiple USB and serial ports, audio in/out, isolated discrete I/Os, and dedicated maintenance ports via RS232 and LAN.

Storage is both secure and expandable, with a 64 GB onboard SSD and a 2.5″ SATA SSD bay. A hardware-triggered Secure ERASE function is included for data sanitization in sensitive missions.

Its conduction-cooled chassis is complemented by a modular fan assembly.

Compact at 184×354×159 mm and weighing under 8.5 kg, the mission computer provides an exceptional balance of ruggedness, modularity, and high-performance computing

FEATURES

- **CPU: Intel Xeon W-11865MRE**
- **32 GB DDR4 ECC memory delivers robust, reliable processing.**
- **NVIDIA Ampere RTX A2000 GPU handles AI workloads and H.264/H.265 encoding with ease**
- **Includes 64 GB onboard SSD chip and slot for a 2.5″ SATA SSD**
- **IP65 sealed enclosure with MIL-grade connectors**
- **Conduction Cooled System**
- **DO160G, MIL-STD-810G**
- **MIL-STD-1553, ARINC-429**
- **ITAR free**

TECHNICAL SPECIFICATIONS

SYSTEM

CPU	8-Core Intel® Xeon® W-11865MRE Tiger Lake-H @ 2.6 GHz
Memory	32GB DDR4 ECC SDRAM
Ethernet	4x Gigabit Ethernet (10/100/1000Base-T, Copper)
Video Processing Module	NVIDIA Ampere RTX A2000 GPU with 2560 CUDA cores and 8GB of GDDR6 graphics memory
Video ports	3x 3G-SDI inputs & 3x 3G-SDI outputs 1x VGA output
Audio	2x Audio Stereo Inputs 1x Audio Stereo Output
Storage	64GB SATA III On-Board SSD Chip Internal 2.5" SATA SSD w/ Secure ERASE option (hardware trigger)
Serial	8x serial ports (RS232/RS422/RS485)
USB	3x USB 2.0 ports, 2x USB 3.0 ports
Operating System	Windows® 11, Windows® 10, Linux

POWER SUPPLY

Power Supply	20-36VDC Single Power Supply
Power Consumption	Estimated Maximum Power consumption < 300W

MECHANICAL

Dimensions	184 mm x 354 mm x 159 mm (W x D x H)
Weight	< 8.5 kg
Cooling	Forced air cooling via removable fan module

ENVIRONMENTAL - (DESIGN TO MEET)

Operating Temperature	Standard: -40 C / +70 C Extended: -20 C / +60 C (depending on the configurations)
Operating Humidity	5% to 95% non-condensed (depending on the configurations)
Storage Temperature	-45C / +85 C (depending on the configurations)
Vibrations	According to RTCA/DO-160G S8 CAT. U Curve G (Rotary Wings) According to RTCA/DO-160G S8 CAT. R Curve Y (Fixed Wings)
Altitude	Max 35.000 feet
Operating Shock	6g shock, 11ms (RTCA/DO-160G S7 CAT. B)
Certifications	Compliant to RTCA/DO-160G, MIL-STD-704F

Servers and workstations are designed in accordance with the environmental specifications indicated.
Some parameters depend on the configuration. Equipment may be subjected to dedicated test profiles.