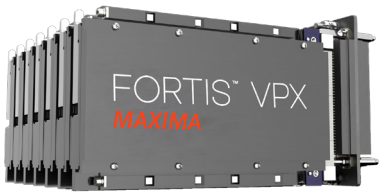
# Fortis™ VPX

## AI-Powered Command and Data Handling (C&DH) System


**Fortis™ VPX is a compact, ruggedized command and data handling (C&DH) system designed for extreme environments and size-constrained applications.**

Fortis™ VPX suite includes the following product line options:

- Sidus Single Board Computer (SSBC)
- FeatherEdge™ AI/ML Processor
- Position, Navigation, and Timing (PNT)
- Global Positioning System (GPS) Receiver
- Custom Input/Output (I/O) Card
- Power Converter Card
- Third Party Software Defined Radio (SDR)




## Key Features

- **Designed for Autonomous and Mission-Critical Systems -** Compact, ruggedized and built for multi-domain operations across air, land, sea, and space
- **Powered by NVIDIA® Jetson AGX Orin™ Industrial -** Provides high-performance compute capabilities for embedded edge applications, enabling advanced multi-sensor perception, situational awareness, and data fusion in a compact, power-efficient form
- **Optimized for Size, Weight, Power, and Cost (SWaP-C) -** Tailored for unmanned platforms, cognitive electronic warfare, and C5ISR operations
- **Rugged SOSA® Aligned Design -** Featuring a 3U VPX / SOSA®-Aligned architecture, Fortis™ VPX ensures seamless integration, rapid deployment, and mission scalability across defense and commercial sectors

## Applications


### Air

- Aerial Drones
- Ballistic Missiles
- Commercial and Civil Aircraft

### Land

- Command and Control (C2) Network
- Electronic Warfare (EW)
- Intelligence, Surveillance, and Reconnaissance (ISR)
- Unmanned Ground Vehicles (UGVs)

### Sea

- Submarines
- Surface Ships
- Underwater Drones

### Space

- Counterspace Operations
- Satellites
- Space Defense
- Space Situational Awareness

**FOR MORE INFORMATION**
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# Fortis™ VPX

## AI-Powered Command and Data Handling (C&DH) System

### Fortis™ VPX C&DH System Specifications

| | | |
|---|---|---|
| System Architecture | Sidus SBC (SSBC) | Quad Core ARM® Processor, Rad-hard PolarFire® FPGA, 8 GB DDR4, 512 MB QSPI, 4 TB NOR Flash |
| | Position, Navigation, Timing (PNT) | GPS, Atomic/Rubidium Clock, 120 MHz OCXO, 125 MHz OCXO |
| | Software Defined Radio (SDR) | Software Defined Radio (S / X Band) |
| | Payload Processor Unit (PPU) | Quad Core ARM® Processor, Rad-hard PolarFire® FPGA, 8 GB DDR4, 512 MB QSPI, 4 TB NOR Flash |
| | FeatherEdge™ AI/ML Processor | NVIDIA® Jetson AGX Orin™ Industrial |
| | Microcontroller I/O Card | 64-bit ARM® Cortex® M4, 3x H-Bridge, 8x Analog I/O |
| | Power Card | 28 VDC / 12A, 330 W Max Power |

| | | |
|---|---|---|
| I/O | LVDS | 4x SpW + Camera Link + 16 LVDS Pairs |
| | Ethernet | 4× 1 GbE, 2× 10 GbE |
| | USB | 1x USB 3.1 Gen 1 (5 Gbps) |
| | UART | 14x RS-422 + 2x RS-232 |
| | PWM | 3x DC Motor (Roll, Pitch, and Yaw -X, Y, and Z) |
| | Other I/O | 2x SPI, 2x I²C, 16x GPIO, 16x Analog I/O |

| | | | |
|---|---|---|---|
| Environmental | Operating Temperature | Mln. | -55° C |
| | | Max. | +125° C |

| | | |
|---|---|---|
| Power | Input Power | 28 VDC / 12 A |
| | Power Consumption | 330 A Peak |

| | | |
|---|---|---|
| Properties | Size | 3U OpenVPX - SOSA® |
| | Operating System | Linux-based |
| | AI/ML Model Type | TensorFlow Lite |
| | Rad-hard | Up to 100 krad |


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