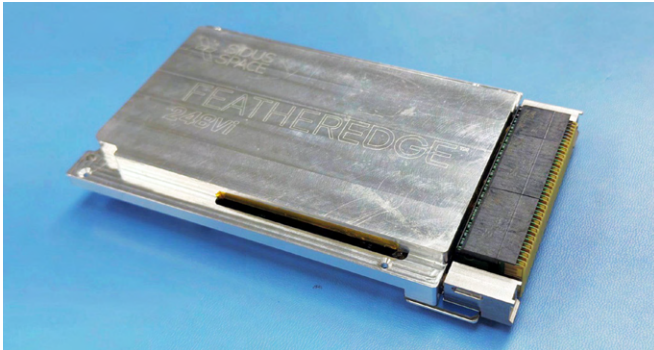


FeatherEdge™ 248Vi

VPX 3U AI/ML Processor Module



FeatherEdge™ 248Vi is a standalone modular 3U VPX Artificial Intelligence (AI) and Machine Learning (ML) processor designed for extreme environments and size-constrained applications.

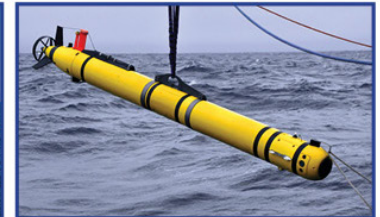
FeatherEdge™ 248Vi is a part of the Fortis™ suite, which includes the following product line options:

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

Key Features

- » **Designed for Autonomous and Mission-Critical Systems** - FeatherEdge™ 248Vi delivers reliable near real-time data processing, rapid decision-making, and system resilience in demanding operational environments
- » **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 across air, land, sea, and space
- » **Rugged SOSA® Aligned Design** - Industry standard form factor with enhanced environmental resilience for seamless system integration

Applications



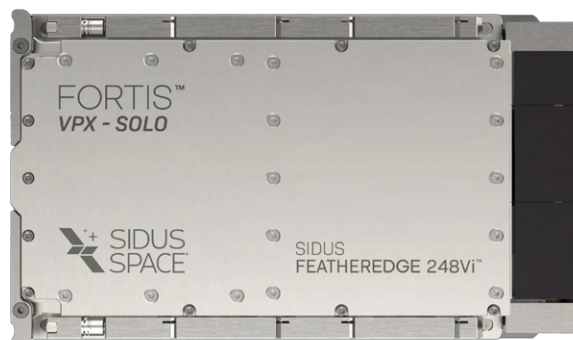
Land

- » Active Protection Systems
- » Command and Control (C2) Network
- » Degraded Visual Environment Processing
- » Ground Support Equipment
- » Integrated Visual Augmentation Systems (IVAS)
- » On-platform Cognitive Electronics Warfare (EW)



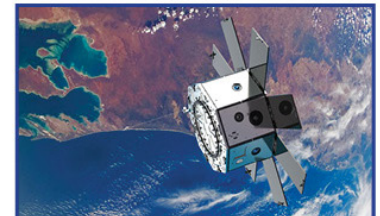
Air

- » Airborne Drones
- » Airborne Optronics
- » Intelligence, Surveillance, and Reconnaissance (ISR)
- » Unmanned Systems



Sea

- » Submarines
- » Surface Ships
- » Underwater/Subsurface Drones



Space

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



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SIDUSSPACE.COM
+1 (321) 450.5633

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Headquarters and Mission Control Center
400 Imperial Blvd, STE 201
Cape Canaveral, Florida, USA 32920

Satellite Production and Manufacturing Facility
400 West Central Blvd,
Cape Canaveral, Florida, USA 32920



FeatherEdge™ 248Vi

VPX 3U AI/ML Processor Module



FeatherEdge™ 248Vi 3U Specifications

System Architecture	SoC	NVIDIA® Jetson AGX Orin™ Industrial	
	Coprocessor	248 TOPS	
	Microcontroller	Rad-tolerant ARM® Cortex® M7	
	FPGA	PolarFire® SoC	
	RAM	64 GB LPDDR5	
Power	Input Power	12 VDC	
	Power Consumption	» 15-25 W under typical load » Max 75 W when board is fully utilized	
Mechanical	Dimensions	3U VPX Slot (100 mm x 160 mm)	
	Weight	480g	
I/O	Gigabit Ethernet (GbE)	1	
	10 Gigabit Ethernet (10GbE)	1	
	USB 2.0	1	
	USB 3.2	1	
	RS422	1	
	UART TTL	1	
	PPS Input	1	
	LVDS/SpaceWire	4	
	CANbus	1	
	PCIe®	1x PCIe® Gen4 x4	
Memory Resources	User Flash	» 680 GB pSLC NVMe SSD (with ECC) » 64 GB eMMC 5.1	
Environmental	Cooling Method		Conduction-cooled
	Operating Temp	Min.	-40° C
		Max.	+85° C
	Vibration (3 Axes) MIL-STD-810H		0.024G / 25 Hz
			0.15G / 150 Hz
	Random (Freq)		0.15G / 1 kHz
	Sine (Freq)		0.02G / 0-2 kHz
Software	Shock (3 Axes)		10G / 0-500 Hz
			20G / 5 mS
Software	» Linux OS		
	» TensorRT		
	» PyTorch		
Orbit Type		Terrestrial	LEO
Radiation Tolerance (TID)		N/A	~ 25 krad* *Estimated Radiation Tolerance
Relative Humidity		0-95%	-
Part Selection		MIL-SPEC	Rad-tolerant
SEU Rate		N/A	<2.00 × 10 ⁻³ NA



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