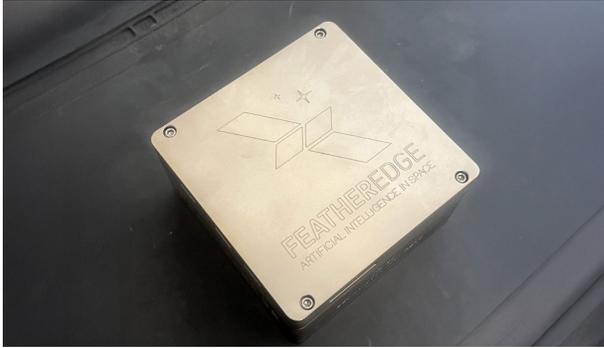


FeatherEdge™ 100i

AI/ML Processor Module



FeatherEdge™ 100i is an Artificial Intelligence (AI) and Machine Learning (ML) processor designed for extreme environments and size-constrained applications.

- » Enhance situational awareness and response times
- » Technology Readiness Level (TRL) - 9
- » Optimize data-driven decision-making
- » Improve operational efficiency and autonomy
- » Reduce costs and latency associated with data transmission

Key Features

- » **Powered by NVIDIA® Jetson Orin™ NX:** Delivers high-performance compute for multi-sensor perception, situational awareness, and advanced data fusion.
- » **Optimized for Extreme Missions:** Engineered for space satellites, high-altitude balloons, and drones, ensuring resilience in the most demanding environments.
- » **Real-Time Edge Intelligence:** Enables near real-time processing and rapid decision-making, significantly reducing latency and satellite downlink costs.
- » **Radiation-Tolerant Reliability:** Features a space-grade design with an ARM® Cortex® M7 coprocessor for dependable operation in high-radiation and extreme-temperature zones.
- » **Compact & Efficient:** Provides advanced autonomous capabilities and system accuracy in a power-efficient, small-form-factor package.

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)

Sea

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



Air

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



Space

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



NASDAQ | SIDU
SIDUSSPACE.COM
+1 (321) 450.5633

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Headquarters and Mission Control Center
150 N Sykes Creek Pkwy, STE 200
Merritt Island, Florida, USA 32953

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



FeatherEdge™ 100i

AI/ML Processor Module



FeatherEdge™ 100i Specifications

System Architecture	SoC	NVIDIA® Jetson Orin™ NX
	Coprocessor	100 TOPS
	Microcontroller	Rad-tolerant ARM® Cortex® M7
	RAM	16 GB 128-bit LPDDR5

I/O	Connectors	Nano-D, Micro-B USB
	Ethernet (GbE)	3
	USB 3.2 (Gen. 1 5 Gbps)	3
	TTL	2
	RS-232	2
	RS-422/485	1
	SPI	1
	I2C	2
	CAN	1
	Other I/O	GPIOs

Power	Power Consumption	Input Power	5 VDC
		Idle	9.3 W
		Typical	20 W
		Peak	30 W

Mechanical	Dimensions	100 mm x 100 mm x 55 mm
	Weight	<1.5 kg

Memory Resources	User Flash	680 GB pSLC NVMe SSD (with ECC)
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Environmental	Operating Temp	Min.	-25° C
		Max.	+85° C
	Storage Temp	Min.	-40° C
		Max.	+85° C
	Radiation Tolerance (TID)	LEO	25 krad
		GEO	100 krad

Software	» Linux OS
	» TensorRT
	» PyTorch



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