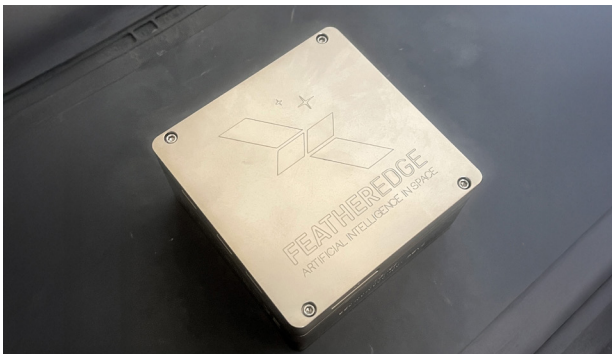
FeatherEdge™ 100i

AI/ML Processor Module



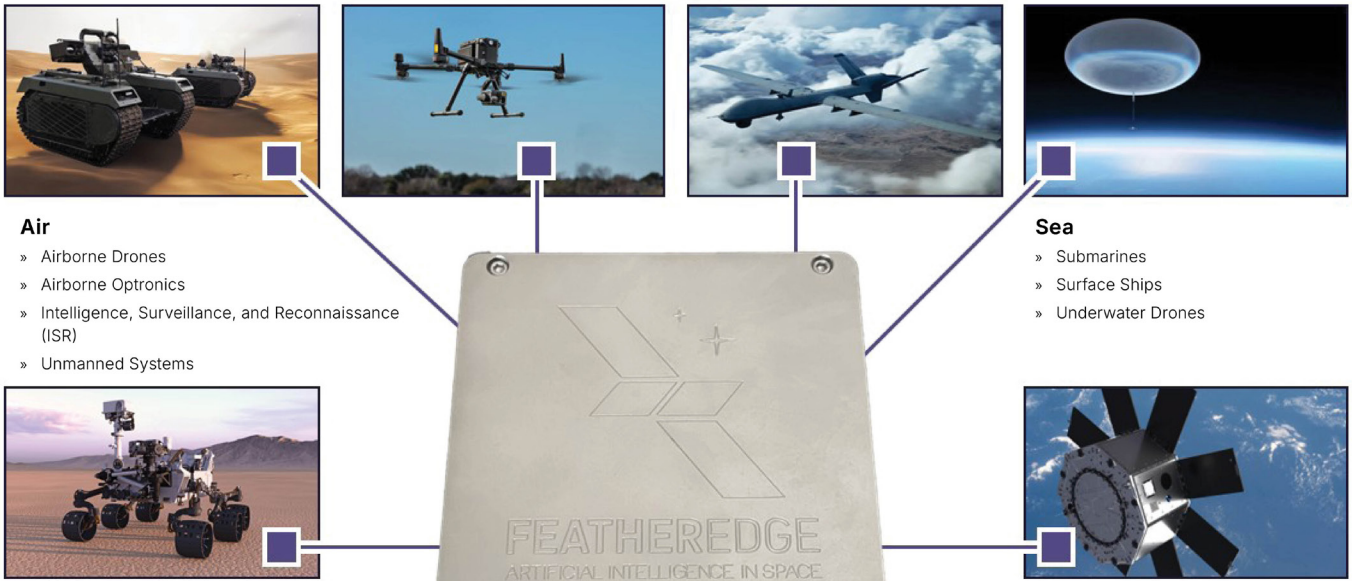
FeatherEdge™ 100i is an Artificial Intelligence (AI) and Machine Learning (ML) processor designed for extreme environments and size-constrained applications.

- Enhance situational awareness and response times
- Optimize data-driven decision-making
- Improve operational efficiency and autonomy
- Reduce costs and latency associated with data transmission

Key Features

- **Optimized for Space, Aerial, and Autonomous Missions -** FeatherEdge™ 100i delivers reliable near real-time data processing, rapid decision-making, and system resilience in the most demanding operational environments, enabling increased autonomy, efficiency, and accuracy in space satellite platforms, high-altitude balloons, aerial drones, and autonomous systems
- **Powered by NVIDIA® Jetson Orin™ NX -** 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
- **Unparalleled Edge Computing and Insights -** Empowers space satellites, high-altitude balloons, and aerial drones with unparalleled edge computing capabilities, enabling real-time processing and decision-making, reduced latency, accelerated response times, and lower downlink costs
- **Radiation-Tolerant Space-Grade Reliability -** Ensures reliable operation in extreme temperatures, harsh conditions, and high-radiation environments with space-grade design and rad-tolerant ARM® Cortex® M7 coprocessor

Applications



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

Sea
- Submarines
- Surface Ships
- Underwater Drones

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)

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

FOR MORE INFORMATION
EMAIL US AT:
SALES@SIDUSSPACE.COM

400 W. CENTRAL BLVD.,
CAPE CANAVERAL, FLORIDA,
USA 32920

SIDUSSPACE.COM
+1 (321) 450.5633

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		Input Power	5 VDC
	Power Consumption	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)

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

SIDUS SPACE

FOR MORE INFORMATION
EMAIL US AT:
SALES@SIDUSSPACE.COM

400 W. CENTRAL BLVD.,
CAPE CANAVERAL, FLORIDA,
USA 32920

SIDUSSPACE.COM
+1 (321) 450.5633