AICRAFT

EDGE COMPUTING HUB

NEO-1

Introducing the ultra-compact system companion for all artificial intelligence (AI) applications in a low-power, high-speed portable device.

This computing hub will deliver a powerful 90 TOPS peak, meeting the demands of many fielded systems with limited lift-off capacity, power or endurance.

Install custom libraries and use the software API to rapidly load and run AI models. Over 20 leading-edge AI frameworks are supported. The processor also supports various RTOS, useful for any real-time navigation while applying AI-inference on sensor data, all in one device.

Execute multiple neural networks in parallel and process high-resolution multi-sensor data simultaneously with four high-speed USB connectors.

With dual Ethernet ports, the device can simultaneously be networked and connected to other NEO-1 hubs and computing systems.

Product applications

- Autonomous surface vessels
- Drones
- Autonomous underwater vehicles
- Rovers
- Visual recognition & tracking
- Industrial inspection system
- Signal classification
- Smart IoT

More info
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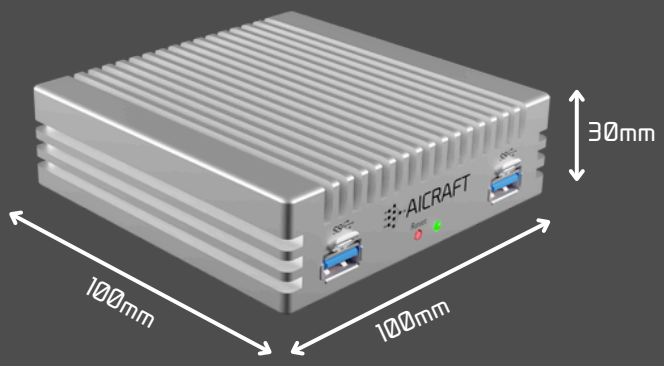

Key benefits

- → Compact size and lightweight
- → High performance computing with AI
- → Multi-gigabit Ethernet options
- → 16 performance levels for extended operations
- → Fanless and ruggedised.

Technical specifications

Computing performance	
Processor	Multi-core ARMv8, 64-bit operations
ML co-processor	90 TOPS peak performance
RAM	4 GB DDR4 SDRAM with ECC (up to 8 GB)
Storage	64 GB eMMC with ECC (up to 512 GB)
Interfaces	
USB	2x USB 3.0 Type-A, 2x USB 3.0 Type-C
Ethernet	2x 1 Gbps (options: 2.5 Gbps, 10 Gbps)
Networking	Real time clock with leap year adjustment
Software	
Operating system	Linux (Option: RTOS)
ML compiler	Supports common frameworks (e.g., Keras, Pytorch, Darknet)
Sensors	
Vibrations	3-axis lateral and 3-axis longitudinal
Temperature	Device, processor, co-processor
Power monitors	Device (total power), processor, co-processor
Properties	
Input voltage	12VDC (4-pin connector)
Power consumption	7W (nominal)
Mass	400g
Dimensions (L x W x H)	100mm x 100mm x 30mm
Operating temperature	-20°C to +55°C