

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 AI performance combined with 20 Gbps internal data bandwidth, meeting the demands of many fielded systems with limited liftoff, power or endurance capacity.

Install custom libraries on the Linux operating system and use the software API to load and run AI models. Over 20 leading-edge AI frameworks are supported.

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 smart systems and cameras that use this interface.

Product applications



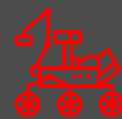
Autonomous
surface
vessels



Drones



Autonomous
underwater
vehicles



Rovers



Visual
recognition &
tracking



Industrial
inspection
system



Signal
classification



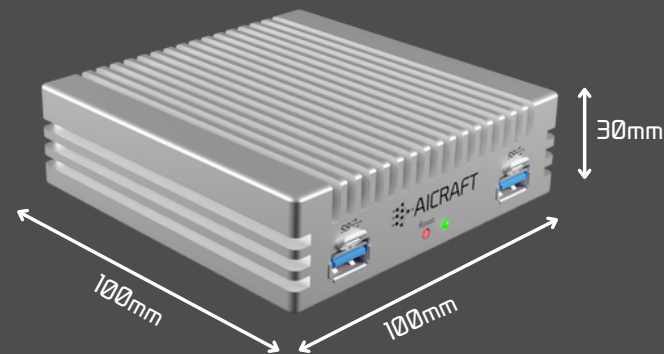
Smart
IoT



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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 | 4x USB 3.0 Type-A (15 Gbps max) |
| Ethernet | 2x 1 Gbps (options: 2.5 Gbps, 10 Gbps) |
| Networking | Real time clock with leap year adjustment |

Software

| | |
|------------------|-----------------------|
| Operating system | Linux |
| Video codec | H.264, H.265 (HEVC) |
| ML compiler | All common frameworks |

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 | 12V (4-pin connector) |
| Power consumption | 5W (nominal) |
| Mass | 300g |
| Dimensions (L x W x H) | 100mm x 100mm x 30mm |
| Operating temperature | -40°C to +85°C |