# Sitle

# EC-01 - Satellite edge computer

Based on the Nvidia Jetson series System on Modules, EC-01 is a **TRL 9** onboard computing system for satellites.

EC-01 utilises Nvidia modules to maximise processing power, whilst maintaining manageable power draw. It is the hardware behind Australia's first commercial satellite edge computer. Customisations and add-ons available.

## Specifications

| Processing | |
|---|---|
| **Chip architecture** | Nvidia Jetson Xavier NX<br>*Compatible with Orin NX* |
| **Processing power** | 6 TFLOPS |
| **GPU** | 384 core Volta |
| **CPU** | 6 core Carmel |
| **RAM** | Compatible with 8GB and 16GB modules. |
| **Design parameters** | |
| **Size** | 0.25U (25x96x90mm)<br>*Fits cubesats and smallsats* |
| **Weight** | ~250g<br>*Depends on heat sink design* |
| **Power usage** | 3W idle, 20W peak, 7W avg. |
| **Radiation** | Research paper available |
| **Software** | |
| **Operating system** | Nvidia JetPack V4/5<br>*Ubuntu Linux based* |
| **Utilities** | Utilities to support Sitle carrier board monitoring features |

| Storage | |
|---|---|
| **Storage options** | Supports standard PCIe SSDs, 1TB included. |
| **Interfaces** | |
| **Ethernet** | 1x Gigabit Ethernet |
| **UART** | 3x UART, including 1 debug |
| **CAN** | 1x 2 Megabit CAN |
| **USB** | 2x USB3.1<br>1x USB2.0<br>1x USB2.0 device mode |
| **Serial** | RS485 transceivers can be installed on UART lines as required. 1 installed by default. |
| **GPIO** | Direct access 8 GPIOs from Jetson module |
| **Debug** | Debug available on UART line |
| **Availability, costs, extras** | |
| **Availability** | In stock<br>*Large orders, 8 weeks lead time* |
| **Flight Model cost** | $75,000 AUD |
| **Engineering Model cost** | $7,500 AUD with FM<br>$37,500 AUD standalone |

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Newcastle, NSW, Australia

*May 2025*

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## What’s included

- 40 hours engineering support
- Jetson module
- Carrier board
- SSD
- Ground test interface cabling
- Ground test heat sink
- Attaching hardware and stand

## Add-ons

- Onboard software
- AI/ML applications
- FM enclosure
- FM heat sink
- Other customisations and extras

## Space heritage

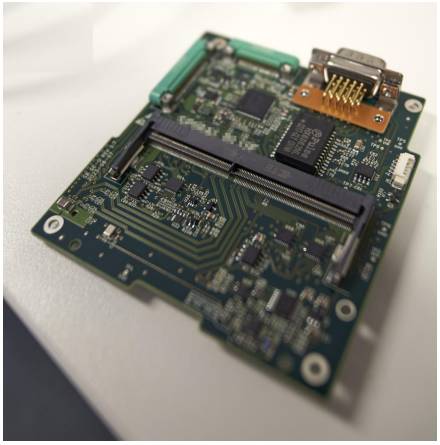
The Sitle edge computer gained flight heritage in the first half of 2023, flying with Satellogic for a 6 month mission.

Since then, the EC-01 has been integrated and launched on three 3rd party missions, with a major US customer operating one in orbit.

## Enquiries

Sitle can help with more than the edge computing hardware too!

Find out more by contacting info@sitle.space



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