Powerful controller for low-cost, attritable UAS

Skynode™ S is the all-in-one solution to power any small UAS system with the Auterion software platform and turn it into a connected autonomous system. Its compact design allows easy integration even on space-constrained vehicles.

Powerful and compact, Skynode™ S provides access to upgraded performance with a flight control software running on the latest FMUv6x, and a custom designed mission computer with upgraded compute power and hardware acceleration to deploy AI and computer vision applications at scale.

Skynode™ S unlocks the full functionality of Auterion's software solutions, including immediate access to Auterion T&I (Track and Intercept) App for automated terminal engagement.
It is flexible and extensible with compatible software and hardware components from the rich Auterion ecosystem.

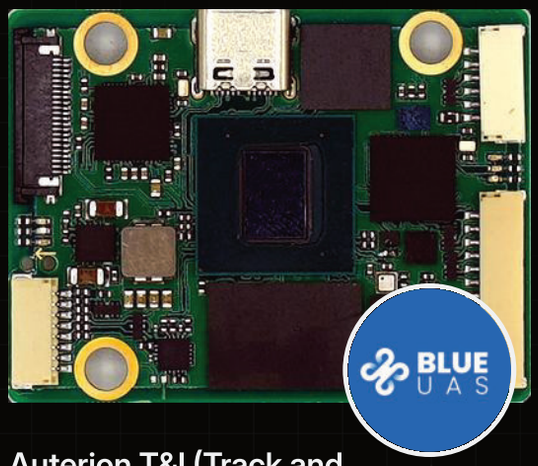
Benefits

- **Faster go to market**
  With tested and validated hardware and software, you can quickly field UAS running AI and computer vision applications at quantities that can make a strategic level impact

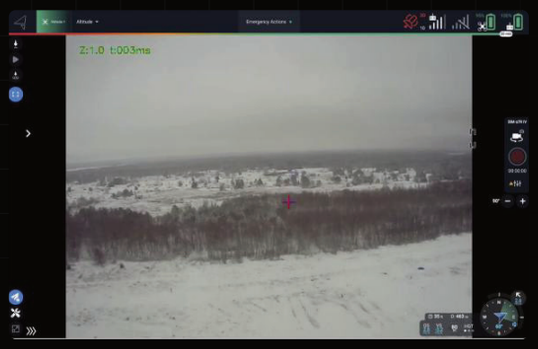
- **Simple and intuitive UX/UI**
  Offer solutions that require minimal training: easy and confident mission planning, efficient execution, live video stream and camera controls in Auterion Mission Control

- **Tracking & terminal engagement capabilities**
  Auterion T&I App (Track and Intercept) runs onboard Skynode S to enable precise tracking and guidance, bringing capabilities of expensive loitering munitions to attritable systems

- **AI and apps onboard**
  Easily deploy apps and algorithms in Docker containers and extend Skynode™ S with additional functionalities



Auterion T&I (Track and Intercept) workflow:



Minimally trained operators can identify object and place tracker near the object



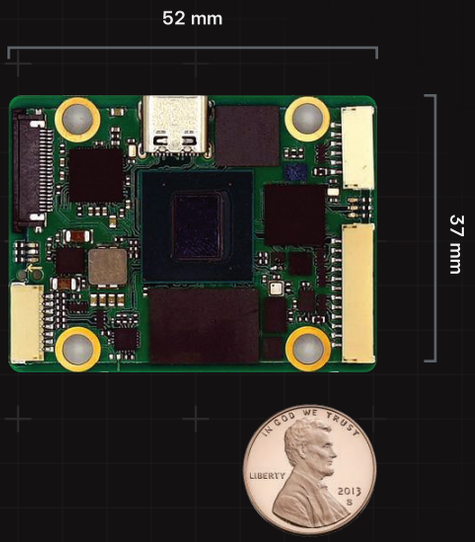
Zoom in and refine tracker placement. The tracked object will stay in the center of the screen when zooming and enter Precision Delivery flight mode



The drone will fly to the object with no manual piloting required, and even if link is lost (operator configurable)

Chip-down, compact, versatile

Single connection to most Quad ESCs (signals and power) and up to 8 motors/servos in total.



Specifications

Full software capabilities

- Auterion Enterprise PX4 (on dedicated HW)
- ROS2 (in Docker containers)
- Payload / camera control
- Port for USB Radios

Power interface

- Voltage input: 4s-8s (12-34 V)
- Max power input: 5W-30W (25W for peripherals)
- Max power output: 25W (input voltage dependent)

Radio

- Default: Doodle Labs Mini OEM (HEX band version)
- Still supports existing radios in partner ecosystem like Silvus, Persistent Systems, and Trellisware

External interfaces: Mission computer

- Quad core ARM Cortex-A53 1.8 GHz
- 2.3 TOPS Neural Processing Unit
- 4 GB RAM
- 32 GB EMMC
- USB-C (USB 2.0 host and device, USB3.0)
- USB 2.0 connection with high current supply (up to 5A*) for radio links like OpenHD
- 2x MIPI CSI with image processing unit
- 1080p60 H.265 and H.264 hardware encoding
- Secure element with NFC (for authentication and out-of band radio pairing)
- Other IO: SPI, GPIO

**shared with other peripherals connected to Skynode S*

Flight management unit (FMUv6x class)

- Cortex M7 Core
- 1x GPS + I2C for mag sensor
- 1x CAN
- 1x UART
- SBUS input
- 8x PWM channels
- ESC telemetry input
- ADC Input for current measurement
- 2x GPIO pins