Auterion

— SKYNODE X

Power a fleet of autonomous robots

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

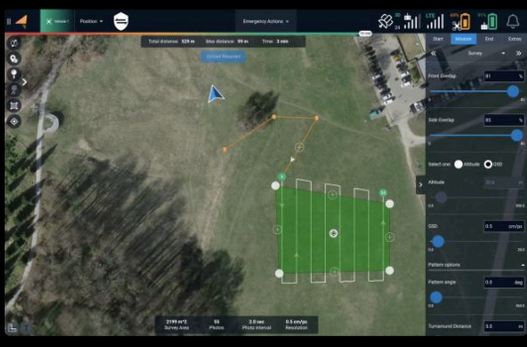
Powerful yet lightweight, Skynode™ X provides access to upgraded performance with a flight control software running on the latest FMUv6x, a mission computer and built-in connectivity.

Built on open standards and made in the U.S., Skynode™ X is flexible and extensible with compatible software and hardware components from the rich Auterion ecosystem. Easily develop your own computer vision applications with the Auterion SDK, or install existing third-party apps that add new functionalities.

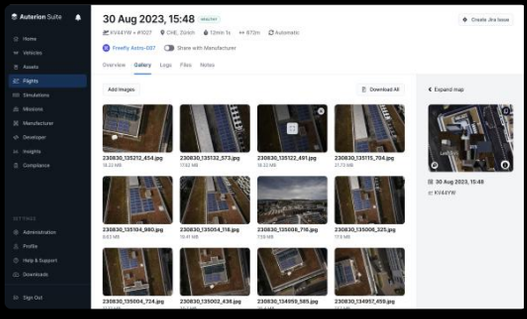
Benefits

- **Faster go to market**
  With tested and validated hardware and software, you can accelerate every step of your development cycle
- **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
- **Real-time data delivery**
  Enable connected drones to send images and stream real-time video from the field to the cloud, via 4G and soon 5G
- **AI and apps onboard**
  Easily deploy apps and algorithms in Docker containers and extend Skynode™ X with additional functionalities, including computer vision applications

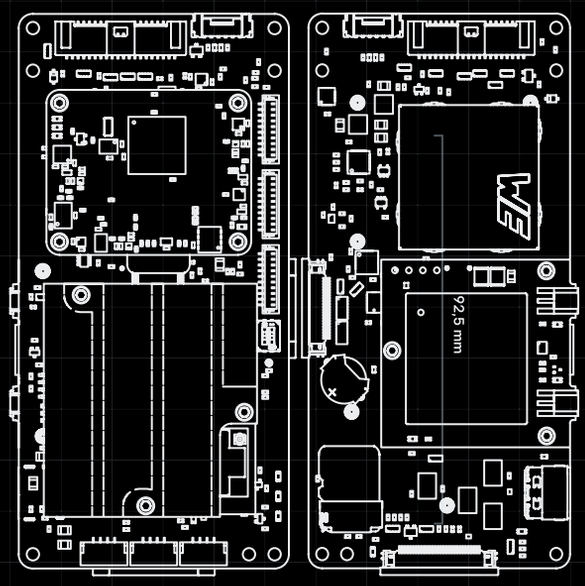
Auterion Vision Kit S - Enhance Skynode X's capabilities by developing computer vision applications



Auterion Mission Control - Simple and confident mission planning and execution



Auterion Suite - Automatic and real-time data transmission from vehicle to cloud



Specifications

Full software capabilities:

- Auterion Enterprise PX4 (on dedicated HW)
- ROS2 (in Docker containers)
- Auterion Enterprise Software Distribution
- Payload / camera control

Power interface

- Voltage: 5 V DC
- Typical current at 5 V: 3.5 A
- Maximum current at 5 V: 5 A
- Redundant power supply

Pixhawk Payload Bus

- 100Base-T Ethernet
- USB 2.0 (high-speed)
- UART
- CAN
- Trigger
- GPS PPS

Mission computer

- 1.8 GHz ARM A53 Quadcore
- 4 GB RAM
- 16 GB eMMC storage (+upgrades)
- 32 GB data partition
- 1080p60 H.264 hardware encoding
- RTC

Flight management unit
(Based on FMUv6x)

- Cortex M7 Core
- Triple-redundant sensors
- 8 kHz sensor readout
- Follows the Pixhawk reference design standard

External interfaces - Flight control

- 2x GPS + I2C for mag sensor
- 2x CAN
- 2x UART (one with flow control)
- SPI with DRDY, reset and sync
- SBUS input and output
- 16x PWM channels
- Safety switch, LED and buzzer

External interfaces - Mission computer

- OTG USB 2.0 (Type-C)
- MIPI camera interface
- WiFi / Bluetooth
- 4G / LTE with external antennas
- 100Base-T Ethernet
- 2x USB 2.0 (high-speed)