



Vector™ AI

The ultimate 2-in-1 ISR system

About us

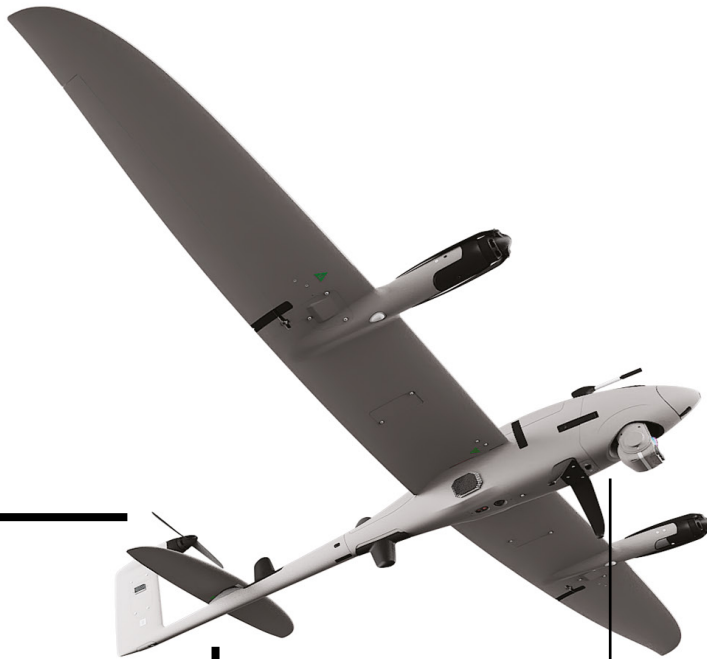
Quantum Systems is at the forefront of AI-powered aerial robotics, developing a family of smart systems that go far beyond traditional drones. Our advanced electric vertical take-off and landing (eVTOL) unmanned aerial systems (UAS), combined with our Nexus Drone Port solution, are designed to deliver automated actionable aerial intelligence.

Built on a foundation of in-house software and AI, our systems transform aerial data into critical insights, empowering decision-making across security, defense and public safety, as well as for the commercial, industrial and GIS sectors.

Featuring cutting-edge technology like edge computing and real-time AI-driven data processing, Quantum Systems enables operators to make informed decisions with unmatched speed and precision. Our solutions bring aerial intelligence to your fingertips, automating the entire process – from deployment to data analysis.

Founded in 2015 and headquartered at Special Airport Oberpfaffenhofen near Munich, Quantum Systems operates globally with locations in the United States, Australia, the United Kingdom, Ukraine and Romania. Our German-engineered technology is trusted worldwide, paving the way for a new era of data-driven solutions.

The Ultimate 2-in-1 ISR System

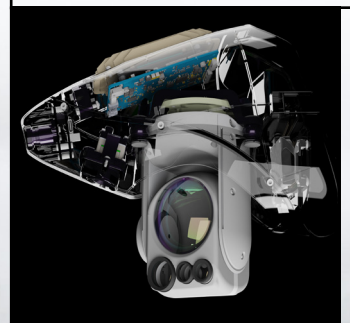


Vector AI eVTOL Fixed-Wing sUAS

Autonomous Group 1 sUAS designed for mobile disconnected military and security operations. Vertical take-off and landing in confined areas.

Equipped with AES-256 encrypted mesh network radio, tactical hand controller and laptop (optional).

Wingspan	2.8 m
MTOW	9.5 kg
Wind	10m/s during hover phase 12m/s during cruise



Advantages of the 2-in-1 system

- Max. efficacy
- Expandable sensor suite
- Easy-to-use
- Max. launch altitude 3000 m MSL
- Max. operating altitude 4000 m MSL
- Edge AI capabilities

The 2-in-1 Vector AI shares a common main fuselage, ground controller, data link, sensors, and AI capabilities.

IP54 Low audio and visual footprint



AI board

Onboard AI Processing with
2x NVIDIA Jetson Orin

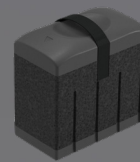


Vector AI Multicopter sUAS

Multicopter variant of Vector sUAS ISR platform that uses the same center fuselage to enable toolless change within minutes between the two platforms. Vector AI Multicopter excels in providing persistent surveillance in confined urban environments with the ability to hover in place. The gimbaled sensors, encrypted data link and control link remain.

Wingspan	1.37 m
MTOW	8.0 kg
Wind	10 m/s

Smart Battery



- Self heating
- Self monitoring
- Certified according to UN 3480

Multicharger



Rugged simultaneous charging and discharging of all system batteries (Smart Battery, GCS, and Silvus batteries)

One person
set-up

No tools
needed

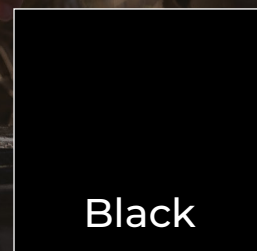
Easy to
carry

- Tactical backpack carrying case
- Fast deployment – less than 3 mins

Backpack



Multicam



Black

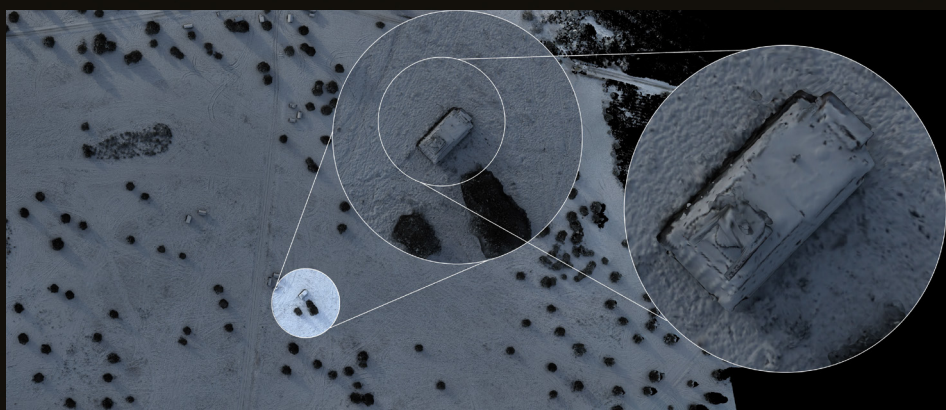
Compact portable carrying for the whole tactical deployment system.

Gimbaled Sensor



Raptor-360

- IR 1280 x 720 px
8x Digital
LWIR uncooled 8 – 14 μ
17.5° W.FOV – 2.2° D.FOV
- EO 1280 x 720 px
40x Optical
2x Digital
60° WFOV – 1.5° NFOV –
0.75° DFOV
- Image Stabilization
- Laser option
- +45° to 135° tilt
- 360 ° continuous pan



Visible Channel

Person

Detect 10 km

Recognize 6 km

Identify 3 km

Vehicle

Detect 40 km

Recognize 10 km

Identify 6 km

Thermal Channel

Person

Detect 4.5 km

Recognize 1.3 km

Identify 0.6 km

Vehicle

Detect 6 km

Recognize 1.6 km

Identify 0.8 km

Datalink



Technical Specifications

- Encrypted AES-256
- Silvus Mesh Network
- Latency 7 ms average
- In-motion usability
- MIMO Beamforming Technology

Handheld

Quickly deployable handheld link



Battery
12 hours



C2 & Video Range
15 km



IP Rating
IP68

Matrix

Mechanically steered long-range tracking antenna



Battery
10+ hours



C2 & Video Range
60+ km



IP Rating
IP55



Ground Control System



Interoperability

- MISB ST 0902 (STANAG 4609)-compatible live video stream with KLV metadata
- Battle Management System (TAK, Sitaware, Telepak)
- Cursor-on-Target (COT) protocol
- C4ISR-capable
- Robust plug-in architecture

SRoC



Touch Display
7"



Hot swappable



Battery
2x swappable
battery module



IP Rating
IP65



Toughbook



Touch Display
14"



Hot swappable



Battery
up to 38 hours



IP Rating
IP53



Mission Control Software



MOSAIC UXS

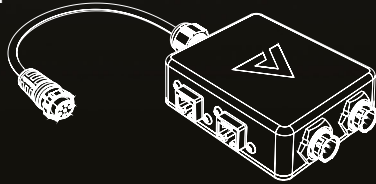
- 360° Link: Seamless Interoperability
- Intelligent Mission Control: AI-Supported Mission Planning & Execution
- Multi-Domain by Design: Orchestrated Collaboration
- Sensor Data Fusion: Coordinated Data Flow
- Scalable Command Interface: For Every Mission Layer
- Open & Modular System: Coordinated Data Flow

Add-Ons



Datalink Switch

- Multiple GCS simultaneously
- Portable and rugged
- Safest transmission due to cable connection



Handheld Mount

- Attachable on every flat surface



Data Extension Cable

↔ Connection to extend the connection between GCS and Datalink



12 m





A Versatile Solution for Mission-Critical ISR and Public Safety Operations

Vector AI is a cutting-edge platform designed for mission-critical applications in military, defense, and public safety sectors, excelling in Intelligence, Surveillance, and Reconnaissance (ISR) with unmatched automation and data capture.

It supports surveillance, artillery fire optimization, border protection, search and rescue, disaster management, and law enforcement, making it essential for enhancing decision-making and operational success.



