



# Vector™ AI

## Next-Gen Mid-Range eVTOL sUAS

ISR platform for land and maritime operations



### Technical Specifications

Wingspan	2.8 m / 9.2 ft
Length	1.5 m / 4.9 ft
IP Rating	IP55
Packed Size	80 x 54 x 34.5 cm (31.5 x 21.3 x 16.6 in)
Data Link Range	60+ km
Data Link Freq.	2.2 - 2.5 GHz 4.4 - 4.9 GHz
Data Encryption	AES 256
AI Processing	2 x NVIDIA Jetson Orin

### Flight Performance

MTOW	9.5 kg
Flight Endurance	180+ min
Speed Range	15 - 20 m/s
Wind Tolerance	10 m/s (ground) 12 m/s (air)
Max. Take-Off Altitude (MSL)	3000 m
Max. Operating Altitude (MSL)	4000 m
Operating Mode	eVTOL

Vector AI is a cutting-edge eVTOL sUAS platform for critical military, defense, and public safety missions, **excelling in ISR** with advanced automation and data capture. It supports multiple applications such as, artillery fire optimization, border security, search and rescue, disaster management, and law enforcement, **enabling better**

### Payloads

- Next Vision Raptor EO/IR 360°
- SIGINT payloads
- CRPA modules

### decision-making and operations.

At Quantum Systems, we innovate drone technology by integrating hardware, software, and AI to **redefine aerial intelligence**. Our Vector AI sUAS delivers exceptional solutions for **Multi-Domain Operations (MDO)** and **Software Defined Defense (SDD)**.

- Tethering for multicopter version
- Acoustic sensor
- Additional data links (e.g. for RVT/ROVER)





### Easy to carry

Compact backpack carries the whole tactical deployment system

### One person set-up

System can be deployed by one person without any additional tools

### 2-in-1 system

Effortless and toolless transition from fixed-wing configuration to multicopter configuration

### Edge AI capabilities

Object detection, classification, and tracking (EO/IR)

### Increased flight performance

Improved powertrain design and upgraded motors

## Family of Systems (FoS)

Our family of systems, comprising four eVTOL drones and a drone-port solution, integrates hardware, software, and AI to deliver innovative aerial intelligence for Multi-Domain Operations and Software Defined Defense. Our scalable and functional solutions are the key to efficient and networked situational awareness in dynamic environments.

## Digital Battlefield Capabilities

### Gather Aerial Intelligence

- High-resolution EO/IR **visuals in real-time**
- **Tactical insights** and mission-critical information powered by onboard AI



### Data Capturing

#### EO/IR Gimbaled Video Sensor

- High-resolution imaging for **mission-critical intelligence**
- Advanced encoding formats: H.265, AV1

#### Navigation and Awareness Systems

- Precision landing and obstacle avoidance in **day/night conditions**
- ADS-B In and optional TSO-certified ADS-B Out for **air traffic awareness**

#### Expandable Sensor Suite

- **Auxiliary bays** support SIGINT, CRPA, tethering, and additional payloads
- USB-C Multiconnector - modular **third-party payload capability** for operational flexibility

### Operate Anywhere

- Absolute & relative referencing for **uninterrupted GNSS-denied operations**
- Autonomous navigation and minimal footprint



### Data Processing

#### ISR Tactical Edge

- Advanced **visual and acoustic intelligence** for surveillance and reconnaissance
- **Real-time decision-making** in dynamic environments

#### Platform Flexibility

- Modular ROS/Docker architecture for **scalability** and future-proofing
- Powered by 2x NVIDIA Jetson Orin NX for **onboard AI** processing

#### Receptor AI Unified Software Suite

- **Sensor Fusion** for improved flight operations, tactical insights and predictive maintenance
- AI Capabilities
  - Advanced image processing (EO/IR)
  - Scene analysis for **immediate threat assessment**

### Secure and Future-Ready System

- Scalable, modular design **adaptable** to evolving threats
- **Blended and modular training** concepts for efficient user enablement



### Data Sharing

#### Unified Operational Picture

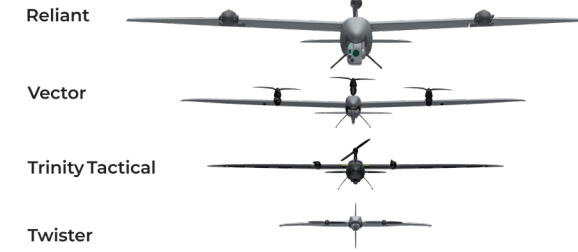
- Integrated data streams for **real-time situational awareness**
- Comprehensive, actionable insights across domains

#### EW-Resilient Communications

- Dual-band connectivity with automated frequency changes and **AI-driven anti-jamming algorithms**
- **Interoperable APIs** for battle management systems like SitaWare, FacNav, and Kropyva

#### Autonomous and Flexible Operations

- Swarm missions and distributed planning with **minimal user intervention**
- Enables **distributed mission planning** and swarm operations (MUM-T)



**QUANTUM  
SYSTEMS**

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