Vector™ & Scorpion™

The ultimate 2-in-1 ISR system

About us

Quantum Systems is more than just a drone manufacturer; we are an aerial data intelligence company that provides multi-sensor data collection products to government agencies and commercial customers. Our electric vertical take-off and landing (eVTOL) systems boast industry-leading endurance, ease of operation, and reliability.

We believe in dual-use, bringing commercial innovation and speed to the defense industry, field-proven robust systems to the business world. Customers in the public and private sectors alike use our versatile UAS for defense, security, humanitarian, and geospatial operations.

With a world-class team and nearly a decade of experience in drones, robotics and imagery collection, Quantum Systems has a proven technology stack and a strong track record of building best-in-class sUAS that provide mission-critical data to operators.

The ultimate 2-in-1 ISR system

Vector
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 | 9.2 ft
Weight	< 8.5 kg
Wind	12 m/s | 23 kn

Advantages of the 2-in-1 system

- **Max. Efficacy**
- **Anti block airspeed sensor**
- **Easy to use**
- **Max. launch altitude 3000 m MSL**
- **Max. operating altitude 4500 m MSL**

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

IP54

Low audio and visual footprint

Scorpion Multicopter sUAS

Multicopter variant of Vector sUAS ISR platform that uses the same center fuselage to enable quick change between the two platforms. Scorpion 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 | 4.5 ft
Weight	< 8.0 kg
Wind	10 m/s | 19.4 kn

AI board

Onboard AI Processing
with NVIDIA Jetson Orin

Smart Battery

- Self heating
- Self monitoring
- Adaptable to aviation regulation

3h

2h

Multicharger

Rugged simultaneous charging and discharging of all operating system.

One person set-up

No tools needed

Easy to carry

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

Backpack

Compact portable carrying for the whole tactical deployment system.

Gimbaled Sensors

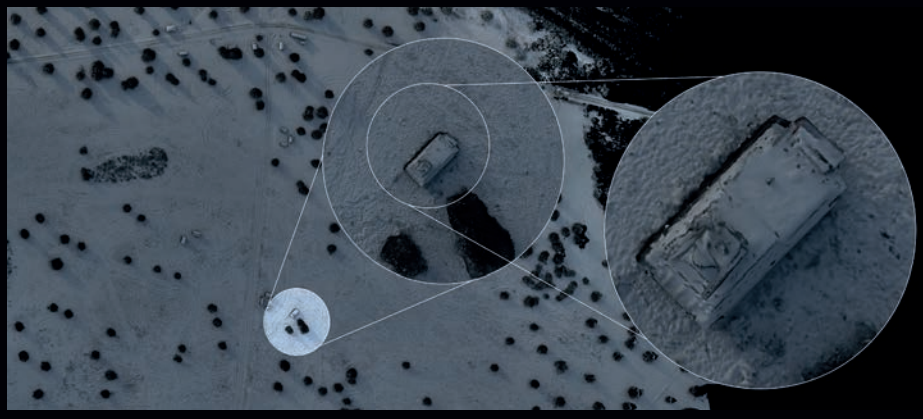
Raptor

- **IR 1280 x 720 px**
  8x Digital
  LWIR uncooled 8 – 14 um
  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**
- **+45° to 135° tilt**
- **Laser option**

Other available sensors

HD40

- **IR 640 x 480 px**
  4x Digital
  18.2° W.FOV - 4.6° D.FOV
- **EO 1280 x 720 px**
  10x Optical
  2x Digital
  54° WFOV – 4.9° NFOV – 2.5° DFOV
- **Image Stabilization**
- **360° pan rotation**



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

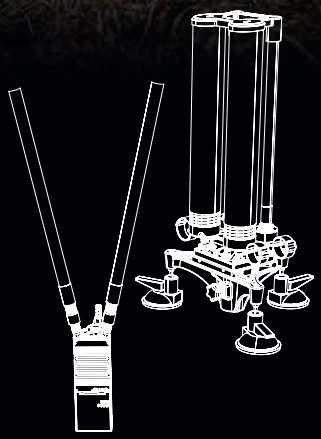
Datalinks
- **Encrypted AES256**
- **Latency 7 ms avarage**
- **In motion usability**
- **MIMO Beamforming Technology**

Handheld

Battery
12 hours

Rugged
IP 68

C2 & Video Range
15 km



Stationary

Battery
12 hours

Rugged
IP 68

C2 & Video Range
35 km

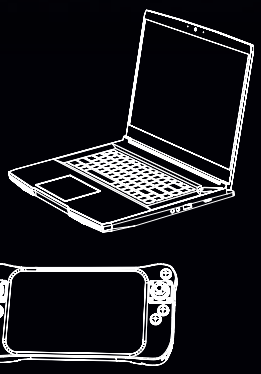
Ground Control System

Interoperability

- MISB ST 0902 (STANAG 4609) compatible live video stream with KLV Metadata
- Combat Management system (ATAK, Sitaware, Telepak)
- CursorOnTarget (COT) protocol
- C4IS capable
- Extreme plug in architecture

Skynav

- Touch-Display 7″
- Hot swappable
- Battery 8 hours
- Rugged IP 65



Toughbook

- Touch-Display 14″
- Hot swappable
- Battery up to 38 hours
- Rugged IP 53

Mission Control Software

Vector can be operated using QBase Tactical or Auterion Mission Control.

QBase Tactical

- Intuitive workflow
- Real-time reconnaissance
- Inflight changes
- Target tracking
- GeoLock

AMC

- Pixhawk based
- Highest proof of safety thanks to outstanding flight hours

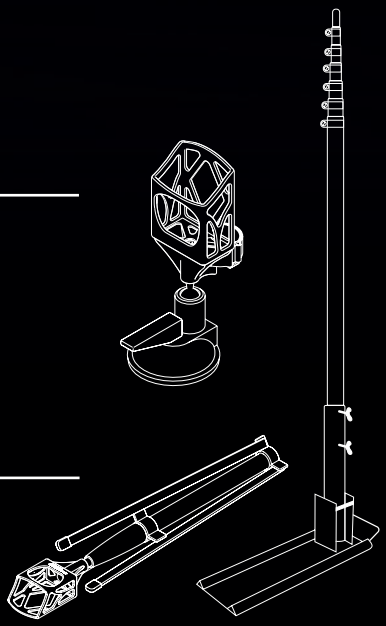
Add-Ons

Mount

- Attachable on every flat surface

Tripod

- Up to 2.20 m
- Packable
- Tactical & lightweight solution

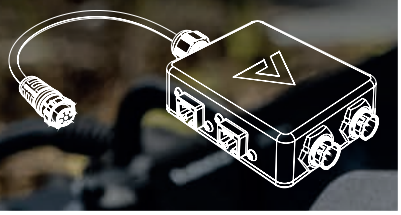


Mast

- Up to 6 m
- Maximum range increase
- Rugged & fast deployment

Datalink Switch

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



Data Extension Cable

⟷ Connection
12 m

QUANTUM SYSTEMS

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