VECTORTM
eVTOL FIXED-WING

SCORPION™
TRI-COPTER

VECTORTM
• Take-off weight: < 6.5 kg / < 13.2 lb
• Flight time: 120 minutes
• Cruise speed: 15 – 20 m/s 29 – 39 kn
• Wind speed: 12 m/s / 23 kn
• Wingspan: 2.80 m / 9.2 ft

CENTERPIECE
• EO/IR gimbal
• Mesh IP encrypted data link
• Quantum-Systems autopilot

SCORPION™
• Take-off weight: < 5 kg / < 11 lb
• Flight time: 45 minutes
• Cruise speed: 0 – 15 m/s 0 – 29 kn
• Wind speed: 10 m/s / 19 kn
• Wingspan: 1.37 m / 4.5 ft

In cooperation with
Flexible and enduring, the Vector Vertical Take-Off and Landing (VTOL) Unmanned Aerial System (UAS) provides capabilities to both military and security forces that exceed the performance of current tactical UAS platforms in service all over the world. It is a military grade UAS built to last and bring capabilities to the battlefield not available today.

The ability to operate in the most difficult terrain and in urban environments combined with extremely low noise emission makes Vector the perfect UAS for a wide range of military and security applications.

A military grade encrypted mesh IP data link provides a radio range for both control sends video streams up to 15 km. A flight time of up to 120 minutes speaks for itself. All combined in a compact and robust electric VTOL UAS.

The 2-in-1 system design opens up further applications with the Scorpion configuration. By removing the wings and attaching a separate set of copter arms a dedicated tri-copter platform becomes available for an even wider variety of mission applications. The centerpiece is identical to the fixed-wing Vector UAS housing gimbal, autopilot and data link.

The Scorpion impresses with the same HD data link with an operating range of up to 15+ km. As a tri-copter, it is ideal for smaller-scale and stationary use, for example in densely built-up urban areas. With a flight time of 45 minutes, it can cover a wide range of applications.

Either use a VTOL fixed-wing or a conventional copter - in both cases you only need one system to train-on, and deploy it on site.

**PAYLOAD**

- **NightHawk2**
  - EO: Zoom: 20x optical, 2x digital
  - Resolution: 1280 x 720
  - IR: Zoom: 4x digital
  - 640x480
  - Data rate: 5 Mb/s (H264)
  - Power consumption: 7 W
  - Weight: 320 g
  - MISC: KLV-Stream, GeoLock, Image stabilization, Objecttracking

- **HD40-LV**
  - EO: Zoom: 10x optical, 2x digital
  - Resolution: 1280 x 720
  - IR: Zoom: 4x digital
  - 640x480
  - Data rate: 5 Mb/s (H264)
  - Power consumption: 15 W
  - Weight: 550 g
  - MISC: KLV-Stream, GeoLock, Image stabilization

- **HD40-XV**
  - ONLY FOR SCORPION
  - EO: Zoom: 30x optical, 2x digital
  - Resolution: 1280 x 720
  - IR: N/A
  - Data rate: 5 Mb/s (H264)
  - Power consumption: 20 W
  - Weight: 800 g
  - MISC: KLV-Stream, GeoLock, Image stabilization, Objecttracking

**MISSION SOFTWARE**

- Automatically generated efficient flight paths.
- Define flight area and mission parameters with a few clicks.
- Launch Vector or Scorpion without having planned a mission beforehand.
- Dynamically adjust the mission in flight
- Mark targets on the map or in video before, during or after the mission.
- Record the full mission on the GCS (including video and aircraft data).
- Replay the mission at any time while recording is continued.
- Get support through warnings when the aircraft is about to exceed its limits.
- Overwrite warnings if needed.

**GCS**

- Ground control tablet platform (Incl. two front side joysticks and left- and right-side Toggle switches)
- Intel® Core™ i5-7Y57 Pro Processor
- Windows 10 Pro
- 7” Active Matrix (TFT) colour LCD 1280x800 (WXGA) LCD with sunlight-viewable glove-enabled capacitive touchscreen (up to 700cd/m²)
- 180 cm shock resistant
- Water and dust resistant (IP65)
- Wifi, Bluetooth, 3G, 4G, LTE, USB Connector

- **EO:** Zoom: 20x optical, 2x digital
  - Resolution: 1280 x 720
- **IR:** Zoom: 4x digital
  - 640x480
- **EO:** Zoom: 10x optical, 2x digital
  - Resolution: 1280 x 720
- **IR:** Zoom: 4x digital
  - 640x480
- **EO:** Zoom: 30x optical, 2x digital
  - Resolution: 1280 x 720
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- **HD40-LV**
  - Data rate: 5 Mb/s (H264)
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  - Data rate: 5 Mb/s (H264)
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  - Weight: 800 g
  - MISC: KLV-Stream, GeoLock, Image stabilization, Objecttracking
**VECTOR™ eVTOL FIXED-WING**

- Mission ready in less than 2 minutes
- Only one operator needed
- Payload & all general parts with quick lock mechanism
- No tools needed
- Fiber reinforced airframe
- Shock absorbing landing gear
- Sophisticated cooling system for data link & electronics
- Detachable gimbal
- Highly efficient hover & cruise propellers
- Mesh IP encrypted data link with a range of 15+ km
- Heated batteries for cold temperature operations

**SCORPION™ TRI-COPTER**

- 0-15 m/s / 0-29 kn CRUISE SPEED
- -5 kg / -11 lb WEIGHT
- 1.37 m / 4.5 ft WINGSPLAN
- 45 MINUTES
- 10 m/s / 19 kn WIND
- 45 MINUTE S

**KEY FACTS**

- Weight: <6.5 kg / <13.2 lb
- CRUISE SPEED: <6.5 kg / <13.2 lb
- WINGSPAN: 2.80 m / 9.2 ft
- WIND: 12 m/s / 23 kn
- MINUTES: 120 MINUTES

**VEHICLES**

- VECTOR™ eVTOL FIXED-WING
- SCORPION™ TRI-COPTER
OPTIONAL MISSION EQUIPMENT

LONG RANGE GROUNDSTATION

- Delivers the power of 4x4 MIMO in a ruggedized package for maximum performance.
- Rugged outdoor IP 67 rated housing.
- Pole mount and surface mount hardware.
- Up to 8W output power with sector antennas.
- Extended mission range: 25+ km / 15,5+ mi.

BACKPACK

Military grade rugged backpack with MOLLE system. When disassembled, Scorpion and Vector can be transported comfortably and safely by one person. Only a few steps are required to get the systems ready for use.

- Material: Cordura 500 (coyote / multicam)

Scorpion Backpack

- Size: 765 mm x 380 mm x 285 mm  
  30,1” x 14,9” x 11,2”
- Weight: 5,7 kg / 12,6 lb (Cover incl. foam inlay)

Vector Backpack

- Size: 800 mm x 540 mm x 345 mm  
  31,5” x 21,3” x 13,6”
- Weight: 9,2 kg / 20,3 lb (Cover incl. foam inlay)

TETHERING SYSTEM

Smart drone tethering station, offering unlimited 24/7 endurance and secure data connection.

- Cable length: 100 m / 330 ft
- Output voltage: 6s
- Power (output): 2500 W (peak)
- Data speed: 200 Mb/s
- Tensile strength: 150 daN
- Tension control: Automated / Manual
- Dimensions: 650 mm x 380 mm x 360 mm  
  25,6” x 15,0” x 14,2”
- Total weight: 26 kg / 57,3 lb