

VESPER

MILITARY GRADE MICRO UAV



Vesper provides field operators with American-made ISR, extended flight time, and a 3-axis stabilized tri-sensor payload with unmatched low light EO performance for operation in all conditions.

Our light, rugged, and highly portable stealth drone is backpack ready, easy to use, and has been delivered to thousands of demanding customers around the world. Vesper's modular propulsion, payload, and battery meet the needs of a range of missions at a moment's notice.



CAPABLE CAMERA

48x zoom, 4K starlight EO, 320p or 640p LWIR

EXCEPTIONAL ENDURANCE

Up to 59 min/ 45 km flight endurance

PORTABLE

1 kg / 2,300 cm³ in IP68 field case

STEALTHY

Unseen and inaudible at 50 m against terrain

MODULAR

Quick assembly and reconfiguration

READY FOR CONTESTED AIRSPACE

1.6 - 2.4 GHz frequency hopping, GPS denied flight to up to 50 m

SECURE

AES-256 encryption / Made in the USA / NDAA compliant/ Blue UAS cleared



VESPER

SPECIFICATIONS



+ AIRCRAFT

- 59 min/ 45 km flight with Recon Rotor Assembly
- Up to 30 min flight with Shrouded Rotor Assembly
- Continuous flight w/ tether kit
- 710 g AUW
- 18 m/s / 40 mph / 35 kt speed
- <37 dBA at 25 meter range
- 4000 m MSL service ceiling
- Operational in 35 kt sustained and 50 kt gusts
- -20° to 45° C operation range
- IP53 ingress protection
- Redundant GNSS, VIO and optical flow for position control
- GPS denied flight at 50 m AGL
- Autonomous position hold, missions, RTH/RTP, go to, orbit, tracking, precision landing

+ MODULARITY

- Battery attaches magnetically and swaps in seconds
- Modular rotor set options: Shrouded for indoor and flight near people, Recon for endurance, stealth and speed
- Field replaceable gimbal can be swapped in minutes
- Up to 64GB internal memory and external microSD up to 512GB

+ GIMBAL & CAMERA

- 3-axis stabilized gimbal
- User controllable +30° – -90° gimbal pitch control
- 320 x 240p and 640 x 480p LWIR options (30 fps)
- Dual 4K Sony 3840 x 2160p 8M P EO sensors
- 8 mlux low light capability with color EO and 2 mlux with B/W EO payload option
- 48x combined optical and digital zoom (3.5° - 63° HFOV)
- 6 mm f/1.0 navigation lens
- 25 mm f/2.4 telephoto lens
- 1080 or 4K MPEG-4 30 fps video recording format

+ PORTABILITY

- Deployable within 90 seconds
- 1 kg / 2,300 cm3 packed in IP68 hard-shell magnetically closed Field Case
- Clapsed IP68 hard-shell transport case for Vesper in Field Case, charger, multiple batteries, Vision2 GCS, Field Repair Kit, and Quick Reference Guide

+ SECURITY

- Blue UAS cleared and NDAA compliant
- Designed, sourced, and built in USA
- AES-256 encryption on all communications
- Bonded construction prevents tampering
- Remote-ID optionally available

+ COMMUNICATIONS

- 5 km max LOS range with standard antenna
- 10 km max LOS range with long range antenna
- Frequency hopping and adaptive modulation for robust link in congested environments
- Hexaband, 2.3-2.4, or 2.4 / 5.8 GHz radio options
- Selectable 4 or 8 MHz bandwidths
- Wi-Fi for short range rapid data transfer to GCS

+ COMPATIBILITY

- Supports RAS-A, MAVLink, QGC, ATAK, DroneSense, and Cape
- Compatible with Vantage Vision2 GCS and other RAS-A compliant controllers

VESPER

CONFIGURATIONS



Bundles¹

Name	Radio	Gimbal	GPS Denied Alt	Controller	Battery	Packaging
Vesper UAS - Public Safety	2.4 / 5 GHz	Greenseer 320 / Color	30 m	Vision2	2x Smart Batteries	IP68 field and transport cases
Vesper UAS - Public Safety Pro	2.3 - 2.4 GHz	Greenseer 640 / Color	30 m	Vision2	2x Smart Batteries	IP68 field and transport case
Vesper UAS - ISR	Hexaband	Greenseer 320 / Color	30 m	Vision2	2x Smart Batteries	IP68 field and transport cases
Vesper UAS - ISR Pro	Hexaband	Greenseer 640 / Color	50 m	Vision2	2x Smart Batteries	IP68 field and transport cases

¹ Custom bundle configurations available upon request

Field Swappable Gimbal Options

Name	EO 1	EO 2	LWIR	Stabilization
Greenseer 320 / Color	Color, 8 mLux low light 8 MP, f/1.0, 63° FOV	Color, 62 mLux low light 8 MP, f/2.4, 12° FOV	320x240 24° FOV 65 mK NETD	3-axis + EIS
Greenseer ² 320 / B/W	B/W, 2 mLux low light 8MP, f/1.0, 63° FOV	B/W, 11 mLux low light 8 MP, f/2.4, 12° FOV	320x240 24° FOV 65 mK NETD	3-axis + EIS
Greenseer 640 / Color	Color, 8 mLux low light 8MP, f/1.0, 63° FOV	Color, 62 mLux low light 8 MP, f/2.4, 12° FOV	640x480 50° FOV < 40 mK NETD	3-axis + EIS
Greenseer ² 640 / B/W	B/W, 2 mLux low light 8MP, f/1.0, 63° FOV	B/W, 11 mLux low light 8 MP, f/2.4, 12° FOV	640x480 50° FOV < 40 mK NETD	3-axis + EIS

² Available upon request in custom bundle

Field Swappable Propulsion Options

Name	Intended Use	Flight Endurance	Max Speed
Recon Rotor Assembly	Covert field reconnaissance, long distance flight, high wind	54 minute hover, 59 minutes forward flight	18 m/s 40 mph
Shrouded Rotor Assembly	Indoor flight, confined space operation, subterranean flight, operation near people	30 minute hover	13 m/s 29 mph

VESPER

OPTIONS



Radio Options

Name	Description	Range ¹
2.4 / 5 GHz	1 W power, AES-256 encryption, automatic channel hopping	7 km
2.3 - 2.4 GHz	1 W power, AES-256 encryption, automatic channel hopping	7 km
Hexaband	1625 - 1725, 1780 - 1850, 2020 - 2110, 2200 - 2300, 2300 - 2390, 2400 - 2500 MHz frequency options, 1 W, AES-256, auto channel hopping	7 km

¹Control ranges are based on line of sight, 400 ft altitude, and uncongested RF environments

Battery

Name	Cell	Flight Time	Charging
Smart Battery	4-cell 21700 li-ion, 16.8V	59 minutes ²	2 hours with standard USB-C charger

²Flight times are measured at 7 m/s forward flight using the Recon Rotor Assembly.

Tether

Name	Tether Length	Dimensions	Weight
Volarious V-Line Pro	25 m / 82 ft	470 × 365 × 190 mm	14.5 kg

