



Optio™ Unmanned Aerial System

UTC Aerospace Systems designs, develops and produces the Vireo™ and Optio™ families of unmanned aerial systems (UAS) used for airborne surveillance. The systems are designed as a low-cost tool to deliver actionable data to law enforcement, government agencies, agriculture producers and first responders. The UAS is capable of carrying a variety of payloads for various missions. The standard payload is a









multi-sensor precision stabilized gimbal that incorporates HD EO and IR imagers as well as a laser illuminator in a single gimbal package for day or night use. Imagery is delivered in real time through an open architecture datalink to a ground station where the data is used to assist in decision making. The electrically powered system weighs 16 pounds (7.3 kg) and has an endurance up to three hours.



High resolution live video and still imagery.

Zoom in for more detail.

Benefits & Features

-  Integrated IR laser illuminator/spotter
-  Continuous 360° stabilized multi-sensor gimbal with HD EO, IR, and Laser Illuminator
-  Full autonomous hand launch and precision landing
-  720p EO, 640 x 480 IR; H.264 digital video 10MP EO digital stills
-  OTS multi-spectral and 10MP CMOS camera payload system
-  IP-based communications with Ethernet bridge for simplified C4ISR integration
-  STANAG 4586-compliant aircraft, payload and data link control
-  STANAG 4609-compliant H.264 digital video with KLV metadata; DVR

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Performance Specifications

Gross Takeoff Weight	16 lbs. / 7.3 kg
Wingspan	10.7 ft. / 3.26 m
Cruise Speed	25 knots
Dash Speed	45 knots
Endurance	Up to 3 hours
Payload Capacity	2.5 / 4.0 lbs. typical / max.
Range	25 km (with omni antenna)

Imagers

Night	LWIR: 640 x 480 SWIR (option): 640 x 480
Daylight	HD EO: 10 MP electronic pan / tilt / zoom SD EO (option): 640 x 480, 10X zoom OTS multi spectral camera (option)

Laser Pointer

Gimbal System

Gimbal	2 axis pan / tilt
Azimuth	Continuous 360°
Elevation	0° to -90°
Rate/ Acceleration	100°/s pan and tilt / 200°/s ²
Pointing Accuracy	< 2°



Gimbal system

Gimbal Interface

Control	Ethernet or RS-232
Video Out	H.264 video with KLV metadata

Gimbal Mechanical

Size	4.7 in. W x 6.2 in. H x 4.7 in. D 119.4 mm W x 157.5 mm H x 119.4 mm D
Turret Diameter	4.7 in. / 119.4 mm
Weight	1.7 lbs. / 771 g

Ground Control Station

Open Architecture	Easy integration STANAG 4586 C2 STANAG 4609 payload products Service-oriented architecture compatible with OSD UCS core architecture Supports rapid integration of third party solutions
Intuitive UI	Tablet-style, gesture-based interface; 1-2 touches to do most tasks
Hardware	Rugged COTS solutions



Ground control station

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