



# The *Vector P* Unmanned Aircraft System

## A High Performance Small UAS Platform

The **VECTOR P UAS** is an innovative all-composite, unmanned “pusher” aircraft. Developed by aerospace engineers using (mostly) commercial off-the-shelf (COTS) components, the Vector P is an ideal tactical UAS platform for applications requiring high performance and reliability at an affordable price.

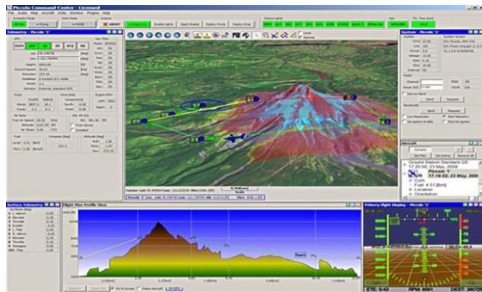
## A Wide Range of Critical Applications

The Vector P performs a wide range of scientific and surveillance missions – **day and night**. A variety of payloads, components, options and accessories are available to help you meet your mission requirements quickly. In addition, the Vector P is designed for rapid integration of customer payloads, making it an excellent choice for development programs and rapid deployment on new missions.

<b>Tactical Fire Monitoring</b>	<b>Search and Rescue</b>
<b>Range Control</b>	<b>Border &amp; Perimeter Control</b>
<b>Law Enforcement</b>	<b>Precision Agriculture</b>
<b>Environmental Monitoring</b>	<b>Training &amp; Development Programs</b>

## Performance and Value

From advanced autopilot & communication systems to sophisticated COTS payloads, the Vector P delivers high performance at an affordable price. The Vector P and its Ground Station are designed to ship by commercial air transport and are rapidly assembled in the field.



**Piccolo multifunction display integrates primary flight and 3D views for maximum situational awareness**



**The Vector P during takeoff**



**Easy access, simple integration & checkout**



**Rapidly deployed from grass or paved runways**



**A wide variety of payloads available**



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## SPECIFICATIONS

Wingspan	103 inches (2.57 meters)
Fuselage Length	60 inches (1.524 meters) Overall length 101" (2.56 meters)
Max Speed	100 knots (185 km/hr)
Engine	75cc, 7.5 hp 3W 2-stroke reverse rotation gasoline engine. Options range from 62 to 100cc, quoted on request. (Available twin ignition for increased reliability)
Max Range	280 miles (519 km), depending on fuel on board.
Cruise Speed	60 knots (129 km/hr)
Max Altitude	10,000 ft. (3 km) MSL
Max Endurance	4+ hours depending on fuel and payload on board.
Max Takeoff Weight	Max Demonstrated Takeoff weight 80 lbs. Best flying weight 55-70 lbs.
Empty Weight	~ 50 lbs. (19.7 kg) including 5-8 lbs. of ballast that can be traded for payload
Fuel on board	Standard 78 oz. (1.5 liters). Optional 1.3 gallon (5 liters) or 3.00 gallons (11.3 liters)
Fuel Per Hour	78 oz./hr. (2.3 liters/hr) nominal (highly dependent on flight profile)
Comm Links	900MHz data modems, 2.4 GHz video.
Max Payload Weight	Fuel plus payload not to exceed 30 lbs. (13.6 kg)
Payload Vol. (Internal)	9" x 9" x 27" (225 x 225 x 685 mm)
Payload Power (typ)	18.5 +2.5/-1 VDC @ 2.5 Amps, 6 Ah, distributed.
Max Comm. Range	10 miles (16 km) Line of Sight
Available Autopilots	<u>MicroPilot 2028G</u> : Up to 1000 waypoint/16 airfields. Telemetry package includes position, velocity, attitude, battery voltage. Controls up to 12 payload servos/relays.  <u>CCT Piccolo II</u> : Flexible drag and drop flight plan generation and updates, Plug and play support of peripherals including transponders, magnetometers, sat-comm modems, RTK GPS receivers, laser altimeters, and flight termination. GPS/INS with aided AHRS backup for graceful degradation in GPS denied environments.
Takeoff & Landing	RC Mode, runway <500' (150 m), depending on surface and takeoff weight. Automatic takeoff and landing capabilities optional.
Ground Station	C <sup>3</sup> for RC & autonomous modes. Includes laptop (Windows XP™), wireless modems, antennas, and complete mission support ground software. Extensive data logging capability included.

Specifications are subject to change without notice.

### Options, Payloads and Accessories

The Vector P is available in RC and autonomous configurations. A wide variety of standard remote sensing payloads and payload components are available including: EO Video, LWIR Video, dual EO/LWIR video systems, gimbals, ultra-high definition fixed-frame digital EO imagers, and specialized high definition EO wide and multi-band remote sensing systems.

Numerous options and accessories are available to target the Vector P to your specific requirements. These include extended range tanks, navigation lighting systems, transceivers, payload controllers and specialized sensors, as well as a variety of launch, landing and shipping systems.

### About Maryland Aerospace, Inc. Microsystems Inc.

Maryland Aerospace, Inc., a leader in autonomous systems technology for sea, air, and space, is a small business with roots in Aerospace Guidance, Navigation and Control Systems. And Maryland Aerospace, Inc. is leading the way in collision avoidance technology, developing solutions to enable UASs to fly legally in the federal airspace.

### Business Opportunities

Maryland Aerospace, Inc. is currently seeking qualified sales representatives, payload development and service delivery partners, as well as engineers and technicians.

### Vector P Systems and Services

For quotes and additional information on Vector P systems and services,

**Contact Maryland Aerospace, Inc. today!**