



Flight Control Solution For:



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# VECTOR-400 Autopilot

The VECTOR-400 is a cutting-edge, robust and dependable autopilot, with built-in physical and logical redundancy. Designed to comply with MIL-STD standards required by many Departments of Defense (DoD).

## Key Features:

Professional's Choice  
for Aerial Targets



Fully Automatic  
Operation



GNSS-Denied  
Navigation



Datalink  
Independent



Sea-Skimming

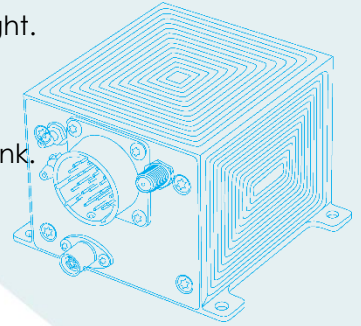


Compact and Easy to  
Integrate



## Functions:

- **Proven** on a wide variety of aerial targets around the world.
- Catapult launch (up to 25G).
- **Sea-Skimming.**
- Automatic **Evasive Maneuvers.**
- Flown up to 650km/h.
- Multi-Flight Plan Operations.
- Modify the operation in flight.
- COMM LOST Autonomous Operation.
- Optional Integrated Datalink.
- **Geofencing.**
- Automatic Stall Protection.
- **Multi-UAV Operations.**
- Parachute Recovery.



## Technical Specs:

MECHANICAL / ENVIRONMENTAL	
<b>Size (mm, H x W x L)</b>	58.0 x 68.0 x 74.5
<b>Weight</b>	210 g (No datalink) 255 g (Integrated datalink)
<b>Enclosure Material</b>	Grade 6082 Aluminium Alloy
<b>Environmental Qualification</b>	MIL-STD-810
<b>EMC/EMI Qualification</b>	MIL-STD-461
<b>Temperature Range</b>	-40°C to +85°C
<b>IP Rating</b>	Designed to conform with IP66
<b>Humidity</b>	Up to 90% RH, non-condensing
<b>Shock survival</b>	500g 8ms 1/2 sine
<b>Integrated RF Datalink Options</b>	No Datalink, 400 MHz, 900 MHz
<b>ESD Compliant</b>	IEC 61.000-4-2-level 4
<b>Main Connector</b>	Amphenol MS3112E-16-26P
<b>External Datalink Connector</b>	SOURIAU 8STA002055A
ELECTRICAL AND I/O	
<b>Voltage Supply</b>	9 to 36 V DC
<b>Power Consumption</b>	2.5W
<b>GPIOs</b>	8
<b>PWM Rate</b>	50Hz, 200Hz or 400Hz
<b>CAN</b>	1 (up to 1Mbps)
<b>Serial Comm</b>	4 x RS-232 (up to 250kbps) (No radio version) 3 x RS-232 (up to 250kbps) (Radio version)
<b>Analog Input</b>	3 ADC inputs with 12 bit resolution. Conversion extends from 0V to 3.3V
<b>GNSS Antenna Connector</b>	50 Ohm SMA Female
<b>GNSS Antenna Power Supply</b>	3.3V

ADARHS	
<b>Roll, pitch, yaw range</b>	Continuous unrestricted
<b>Pitch &amp; Roll error</b>	< 0.5°
<b>Heading error</b>	< 1°
<b>Horizontal Position Accuracy</b>	2.5 m CEP (GNSS available)
<b>Navigation Drift (Dead-reckoning)</b>	<30 m/min (continuous, not first minute only)
<b>Altimeter Range</b>	-2000 ft to +36000 ft AMSL
<b>Altimeter Accuracy</b>	± 3% Reading
<b>Airspeed Ranges</b>	15-220 kt (43-450 kt under request)
<b>Gyro range</b>	+/-300 °/s (all axis)
<b>Accelerometers range</b>	+/-8 g, all axis (+/-15 g under request)
<b>Sampling Rate (IMU+Attitude)</b>	Up to 500 Hz
<b>Internal Magnetometer</b>	3 axis
<b>Magnetometer attitude compensation</b>	Yes
<b>Multi-constellation GNSS capability</b>	72-channel receiver. GPS, SBAS, QZSS, GLONASS, BeiDou, Galileo.
REDUNDANCY AND SAFETY	
<b>Waypoint Navigation</b>	400 waypoints saved in autopilot
<b>Dual IMU</b>	Yes
<b>Dual CPU</b>	Yes. 850MIPS CPUs (each with 16MB program flash & 256MB ram)
<b>Online sensors diagnostics</b>	Yes (Continuous Built-In Test, CBIT)
<b>Dual Power Supply</b>	Yes
<b>Flight Termination</b>	Deadman Output
<b>Sensor failure tolerance</b>	All single, several multiple

**UAV Navigation**  
grupo oesía

### Headquarters:

Pirineos Ave. 7, B11  
28703 San Sebastián de los Reyes (Madrid), Spain  
Telephone: +34 91 657 2723

### Grupo Oesía Headquarters:

Marie Curie St. 19, 4th Floor  
28521 Rivas-Vaciamadrid (Madrid), Spain  
Telephone: +34 916 617 161 Fax: +34 916 619 840

[grupooesia.com](http://grupooesia.com)

[uavnavigation.com](http://uavnavigation.com)

[contact@uavnavigation.com](mailto:contact@uavnavigation.com)