



Flight Control Solution For:



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# VECTOR-600 Autopilot

The VECTOR-600 is UAV Navigation-Grupo Oesía's most advanced FCC (Flight Control Computer) for UAVs.

## Key Features:

**GNSS-Denied Navigation**



**Qualified Hardware for Cross Domain Missions**



**Fully Automatic Operation**



**Easily Configurable**



**DO-178C Oriented Software Development**



**Outstanding Proprietary ADAHRS-INS**



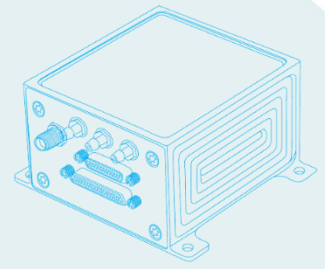
## Functions:

- **Alternative Landing Sites.**
- Flown **up to 650km/h.**
- **MULTI-UAV** Operations.
- **Multi-Flight Plan** Operations.
- Custom and **automatic actions on waypoints.**

## Technical Specs:

MECHANICAL / ENVIRONMENTAL	
<b>Size (mm, H x W x L)</b>	45.0 x 68.0 x 74.5
<b>Weight</b>	180 g
<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
<b>ESD Compliant</b>	IEC 61.000-4-2-level 4
<b>Main Connector</b>	25-pin GLENAIR MWDM2L-25P-6E5-18 & 37-pin GLENAIR MWDM2L-37P-6E5-18
<b>External Datalink Connector</b>	-
ELECTRICAL AND I/O	
<b>Voltage Supply</b>	9 to 36 V DC
<b>Power Consumption</b>	2.5W
<b>GPIOs</b>	24
<b>PWM rate</b>	50Hz, 200Hz or 400Hz
<b>CAN</b>	2 (up to 1Mbps)
<b>Serial comm</b>	3 x RS-232 (up to 250kbps) 2 x RS-422/485 (up to 1Mbps)
<b>Analog Input</b>	8 ADC inputs with 12 bit resolution. Conversion extends from 0V to 3.3V
<b>Ethernet</b>	100 Base Tx Channel according to IEEE 802.3 standard
<b>GNSS Antenna Connector</b>	50 Ohm SMA Female
<b>GNSS Antenna Power Supply</b>	3.3V

- **Camera Guided Navigation.**
- **Referenced Navigation.**
- **Geofencing allowing automatic replanning.**
- **Transponder IN for UTM (Unmanned Traffic Management).**
- **Autorotation & Stall Protection.**



ADAHRS	
<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 version is also available)
<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 CPU: 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

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