VECTORNAV

AUTOPILOT SUPPORT

OFFICIAL PX4 DRIVER
ARDUPILOT AHRS / NMEA
SERIAL AUTOPILOT INTERFACE

AUTOPILOT INTEGRATION

VECTORNAV IMU, AHRS, AND GNSS/INS FOR ANY FLIGHT STACK

VectorNav sensors integrate directly with both major open-source autopilot stacks to replace or augment the onboard IMU with VectorNav's field-proven inertial navigation solutions.

VectorNav maintains an official driver in the PX4 repository and supports ArduPilot integration through external AHRS and NMEA interfaces. Whether you're building on a Cube Orange, Pixhawk 6X, or any Pixhawk-standard hardware, VectorNav drops in.

100,000+
SYSTEMS DEPLOYED WORLDWIDE

800 Hz
MAX IMU DATA OUTPUT

<1 WEEK
INDUSTRIAL LEAD TIME

HOW IT WORKS

Sensor Input
Augment your autopilot's internal estimator

VectorNav publishes calibrated accel, gyro, mag, baro, and GNSS data into your autopilot's sensor pipeline. The autopilot's own estimator runs normally with VectorNav's superior, individually calibrated sensor data.

BEST FOR
Incremental upgrades where the internal EKF is sufficient but onboard sensors bottleneck performance.

External INS
VectorNav becomes the navigation authority

VectorNav's proven sensor fusion runs on dedicated hardware, outputting attitude, position, and velocity. Your autopilot consumes the navigation solution directly. VectorNav can also accept aiding inputs, making it the hub of a multi-sensor architecture.

BEST FOR
Maximum performance, GNSS-denied operations, multi-sensor fusion architectures, defense programs.

PLATFORM COMPATIBILITY

PX4 Autopilot	ArduPilot	Collins Aerospace	EMBENTION	UAV Navigation	MicroPilot
Supported	Supported	Compatible	Compatible	Compatible	Compatible

Supported: Official drivers, documented setup, and verified performance.

Compatible: Accepts standard VectorNav NMEA outputs via serial. Integration support available.

WHY ADD VECTORNAV TO YOUR AUTOPILOT

INDIVIDUAL UNIT CALIBRATION
Across −40°C to +85°C, not batch-averaged. Every sensor performs to datasheet specs from first power-on, giving your fusion engine accurate error models it can trust.

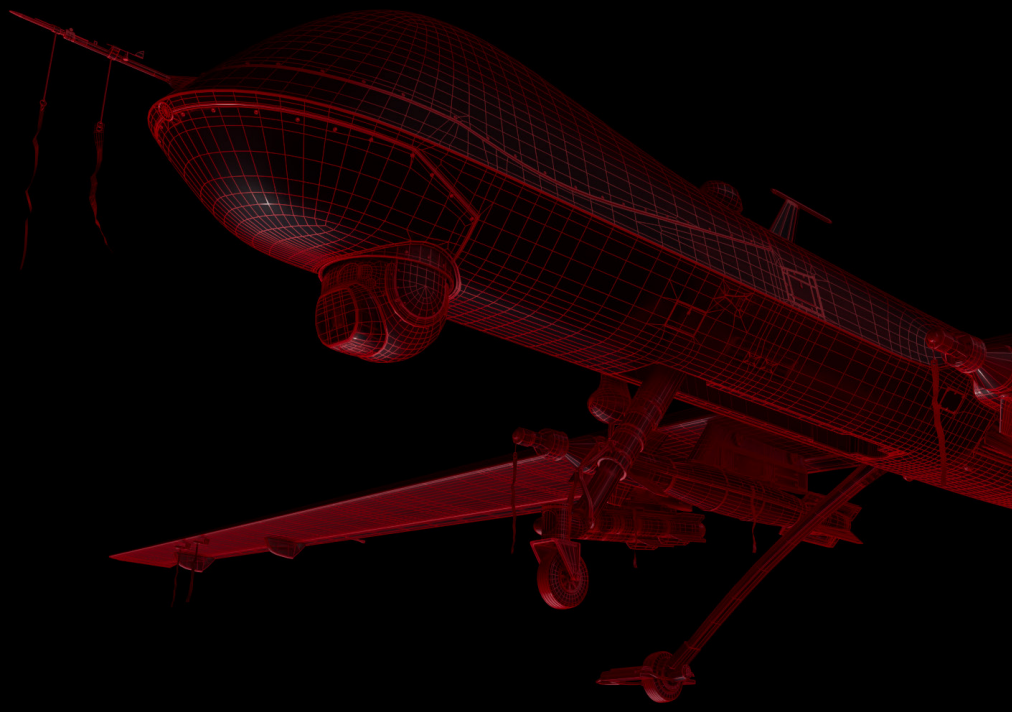
BETTER INERTIAL = MORE RESILIENCE
Tactical-grade sensors maintain position accuracy through gaps in VIO, VBN, or GNSS that would cause consumer-grade IMUs to diverge.

VERIFIED INDEPENDENT NAV SOURCE
Decoupling navigation from flight control gives system architects a verified, independent reference alongside vision and other aiding systems.

SCALABLE PRODUCT ARCHITECTURE
Prototype with industrial-grade, upgrade to tactical for production. Same interface. Works across open-source and commercial flight stacks.

RECOMMENDED PRODUCTS

PRODUCT	TYPE	GRADE	BEST FOR	INTEGRATION MODES
VN-100	IMU / AHRS	Industrial	Development, commercial drones	Sensor input, ext AHRS
VN-110	IMU / AHRS	Tactical	Defense, precision, harsh environments	Sensor input, ext AHRS
VN-200	GNSS/INS	Industrial	Fixed-wing (heading from motion)	Sensor input + ext INS
VN-210	GNSS/INS	Tactical	Defense fixed-wing, high accuracy	Sensor input + ext INS
VN-300	Dual GNSS/INS	Industrial	Multicopters, VTOL, hover platforms	Sensor input + ext INS
VN-310	Dual GNSS/INS	Tactical	Defense multicopters, precision hover	Sensor input + ext INS



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