



**EMBENTION**

Dominance in every  
domain



# VERONTE AUTOPILOT DEFENSE CAPABILITIES

# RESILIENT NAVIGATION & ELECTRIC WARFARE

## Assured positioning and navigation in GNSS Denied environments.

Modern battlefields are defined by signal denial. Veronte Autopilot ensures mission success even when satellite signals are compromised. By fusing data from diverse, non-jammable sources, the system maintains absolute tactical precision without relying on GNSS.

# VERONTE VBN

GNSS LOST

- ✓ VBN ACTIVE
- ✓ INERTIAL NAVIGATION

## TECH SPECS

**Visual-Aided Navigation:** Positioning utilizing advanced real-time video processing algorithms.

**Precision Dead-Reckoning:** Robust inertial navigation fused with real-time wind estimation.

**Tactical FOG Integration:** Native support for high-grade Fiber Optic Gyroscopes (FOG).

**Cellular positioning:** Leverages the internal 4G module inside Veronte Autopilot for triangulation.

The Veronte VBN module provides a dedicated solution for high accuracy optical navigation in GNSS-denied environments, ensuring precise positioning in mapped or non-premapped areas.

## Electronic warfare

**Anti-Jamming:** Auto-transition to inertial/visual modes upon signal loss.

**Anti-Spoofing:** Detection logic identifies falsified GPS signals.

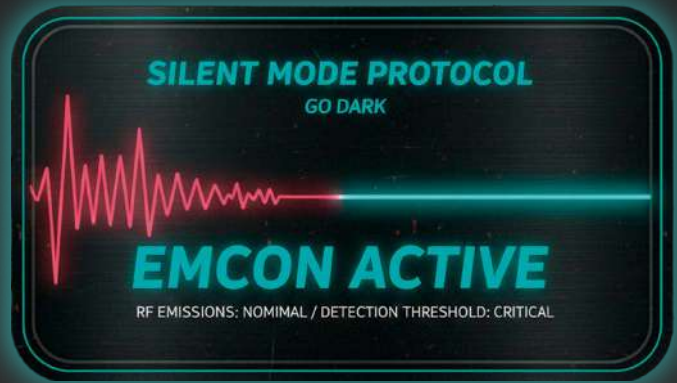
**Hardened Design:** Avionics certified for EMI/EMC resilience.

## STEALTH & ADVANCED COMBAT MANEUVERS

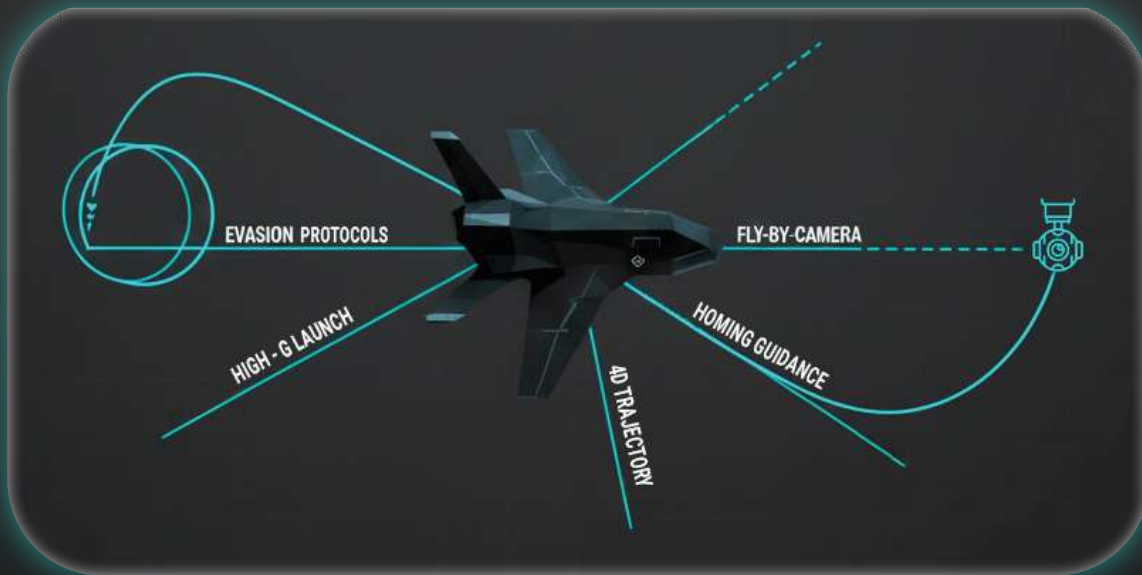
### Low observable operations and dynamic mission execution

#### Spotlight: EMCON Silent Mode

“Go dark”: Emissions Control (EMCON) mandates. The system cuts all RF transmissions to eliminate electronic signatures, capable of activating automatically based on predefined events or via operator command. Combined with Silent Glide (allows for in-flight engine cut-off and restart), this ensures total acoustic and electronic stealth



### MISSION PROFILES



**Fly-by-Camera:** Intuitive assisted flight; the drone follows the camera's pointing direction.

**High-G Launch:** Optimized control for catapult, canopy, or rocket-assisted takeoffs.

**Evasion protocols:** Pre-programmed maneuvers triggered instantly by threat detection.

**4D Trajectory:** Precise 3D path planning with "Time-on-Target" constraints.

**Homing guidance:** Vision-based target tracking for terminal guidance accuracy.

# MULTI-DRONE SWARMS & MARITIME OPERATIONS

Unified command for collaborative combat.

Veronte Ops provides a “single pane of glass” for true multi-domain operations. Operators can control heterogeneous assets (Air, Land, and Sea) simultaneously from one unified interface. Advanced logic enables coordinated swarm behaviors and formation flights, extending control across multiple displays for complex mission management.

## MARITIME CAPABILITIES



**Relative Navigation:** Executes missions with waypoints defined relative to a moving vessel, ensuring synchronization with the fleet.

**Sea-Skimming:** Specialized control laws enabling high-speed, low-altitude flight over water for radar evasion.

**Moving Vessel Recovery:** Fully autonomous landings on moving decks, actively compensating for pitch, roll, and heave in rough seas.



### Distributed control

Seamless C2 Handoff. Mission control can be transferred securely between ground stations in realtime. Whether handing off from a ship to a shore team, or between pilot and payload operators, Veronte manages role-based permissions to ensure the right person has control at the right time.

## CYBERSECURITY & INTEGRITY

Uncompromising data security and aviation-grade reliability.



**Profile Lock:** Protects proprietary control logic from unauthorized access.

**Data Sanitization:** On-demand “zeroizing” of mission-critical Data-at-Rest (DAR).

**Encrypted Comms:** High-level encryption for all C2 and payload links.

**Tactical Networks:** Operable on isolated, private military networks (Comsec).

## SYSTEM INTEGRITY & STANDARDS

System integrity is guaranteed by our status as an Approved Design Organization (APDOA) and Production Organization (POA). This ensures that every unit is developed and manufactured under strict aviation oversight.

## CERTIFIED RELIABILITY

Veronte Autopilot is engineered to meet the most rigorous airworthiness standards, ensuring the system performs flawlessly in critical conditions:

**DO-178C:** Software considerations in airborne systems.

**DO-254:** Design assurance for airborne electronic hardware.

**MIL-STD-810 / DO-160G:** Environmental hardening and test procedures.

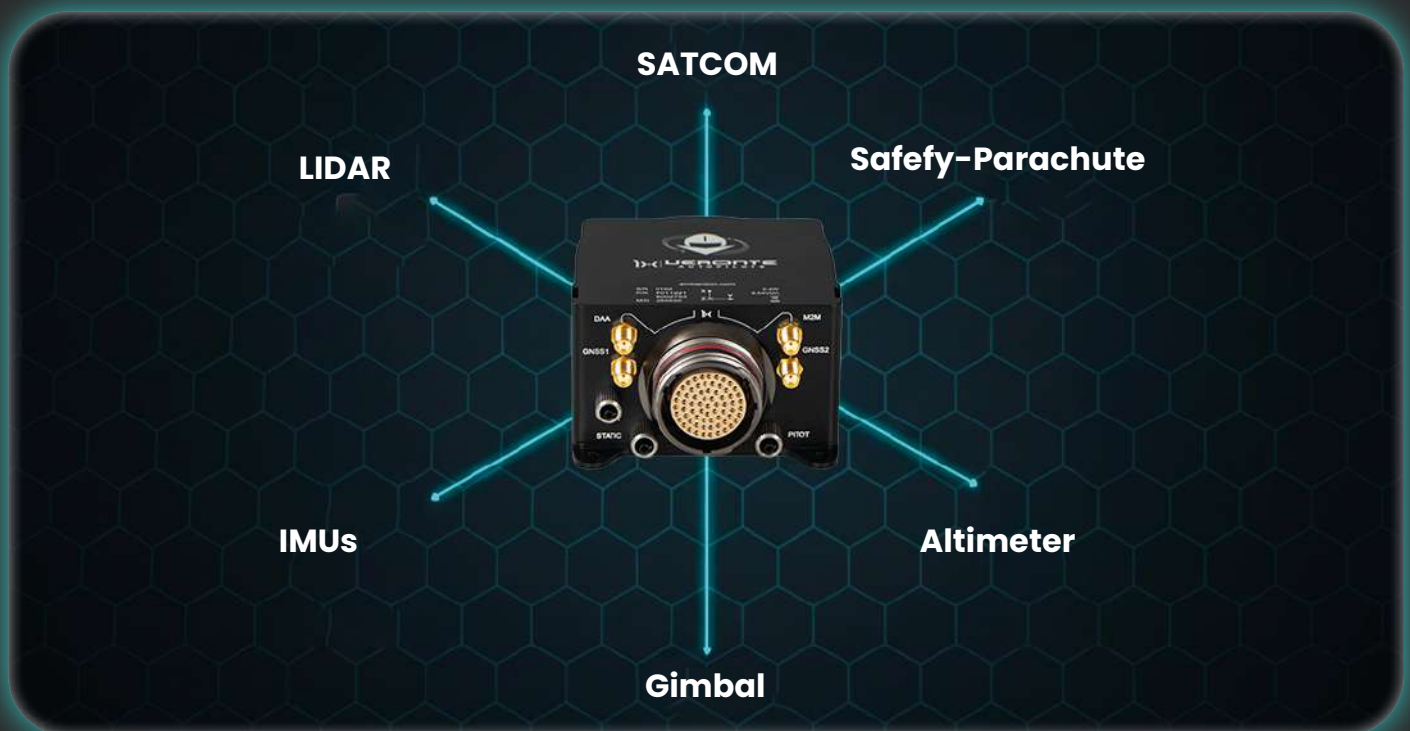


# PROGRAMMABLE AVIONICS & INTEROPERABILITY

The Adaptive backbone for modern defense.

## CORE PHILOSOPHY

Modular Standards & STANAG 4586. Built on Modular Open Systems Approach (MOSA) principles and fully compliant with NATO STANAG 4586, Veronte ensures rapid integration and future-proof compatibility, free from restrictive proprietary dependencies.



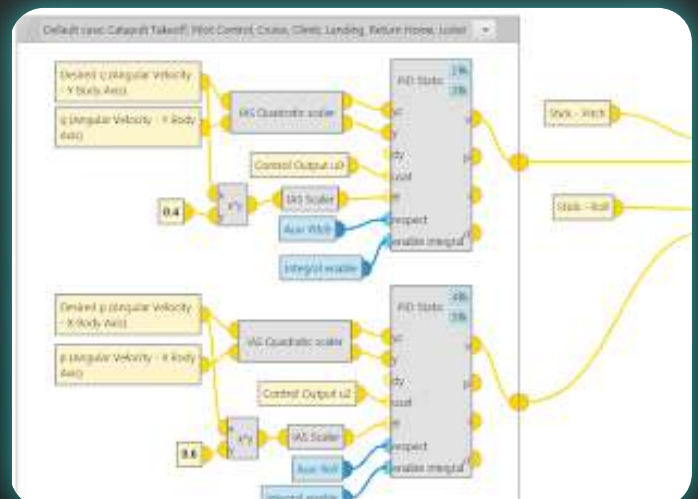
## CONNECTIVITY & PAYLOAD

**LOS & BLOS Agnostic:** Seamlessly integrates Line-of-Sight RF with SATCOM, Starlink, and 4G/LTE

**Smart Gimbal C2:** Advanced stabilization and auto-pointing.

**Detect & Avoid:** Sensor fusion (Vision/Radar/LiDAR/ADS-8) for autonomous safety..

**User Programmable:** Run custom C++ algorithms or Model-Based Design directly on the autopilot core.



# VERONTE AUTOPILOT PRODUCT FAMILY

Scalable hardware Solutions for every mission profile.

## UNIVERSAL COMPATIBILITY

Engineered for versatility, the Veronte ecosystem is platform-agnostic. It delivers unified control for all vehicle types—including Fixed-Wing, VTOL, Helicopter, USV (Surface), and UGV (Ground) assets.



### VERONTE AUTOPILOT



Compact & Sensor Redundant

**Best for:** Tactical Class I & II UAVs, USVs, UGVs, and Target drones.

**Why:** Delivers professional-grade autonomous control and sensor redundancy in a lightweight, compact form factor perfect for tactical deployments.



### VERONTE AUTOPILOT



Triple Redundant Flight Control

**Best for:** MALE/HALE UAVs and Strategic Missions.

**Why:** Provides fail-operational reliability with triple redundancy, ensuring mission continuity for critical operations over populated or hostile zones.



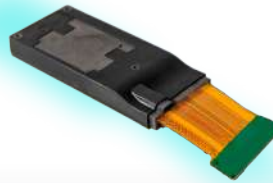
### VERONTE AUTOPILOT



Distributed Redundancy

**Best for:** MALE UAVs and Manned Aircraft.

**Why:** Features a distributed zonal architecture that survives localized damage, guaranteeing flight safety even if a specific section is compromised.



### VERONTE AUTOPILOT



FCS with computer vision

**Best for:** Loitering Munitions & Kamikaze drones

**Why:** Combines an ultra-compact footprint with embedded computer vision for precision terminal guidance and navigation in GNSS-denied environments.





**EMBENTION**

USA



SPAIN



UAE



# GLOBAL COMPLIANCE, MANUFACTURING & SUPPORT

**NDAA**

**889**



**9001**



**EN 9100**



**27001**

**DO-178C**

AIRBORNE  
SOFTWARE

**DO-254**

AIRBORNE  
HARDWARE

**DO-160G**

ENVIRONMENTAL  
QUALIFICATION