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.

GNSS LOST

☑ VBN ACTIVE
☑ INERTIAL NAVIGATION

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

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 interna/ 4G module inside Veronte Autopilot for triangulation.

Electronic warfare

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

Anti-Spoofing: Detection logic identifies falsified GPS signals.

Hardened Design: Avionics certified far EMI/EMC resilience.

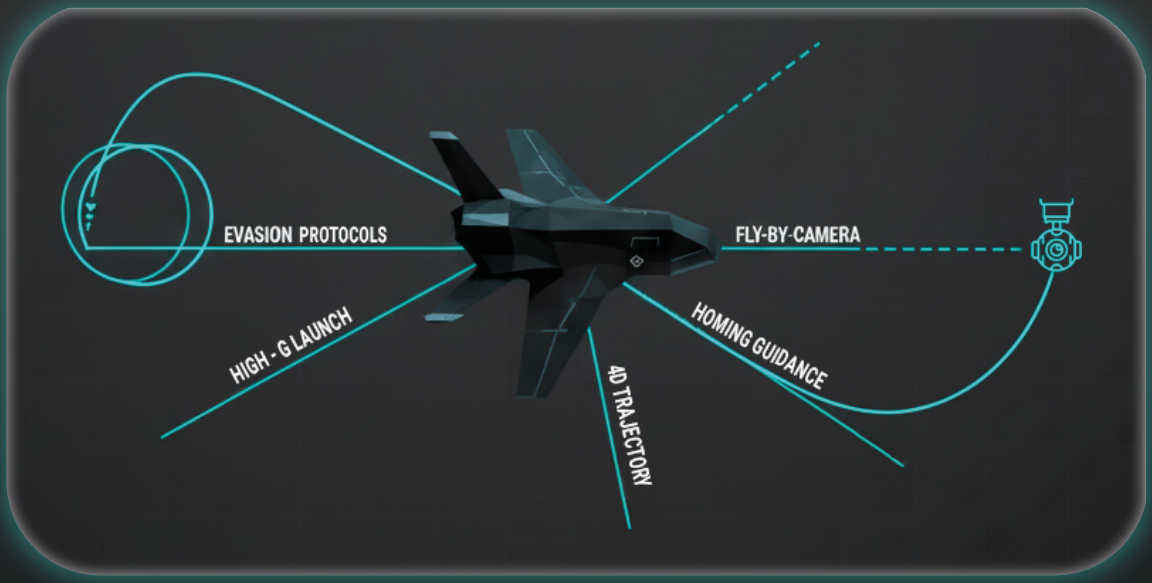
STEALTH & ADVANCED COMBAT MANEUVERS

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 far in-flight engine cut-off and restart), this ensures total acoustic and electronic stealth

MISSION PROFILES



Fly-by-Camera: Intuitive assisted flight; the drone fallows the camera’s pointing direction.

High-G Launch: Optimized control far 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 far 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 far 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 perfarms flawlessly in critica! conditions:

DO-178C: Software considerations in airborne systems.

DO-254: Design assurance far airborne electronic hardware.

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

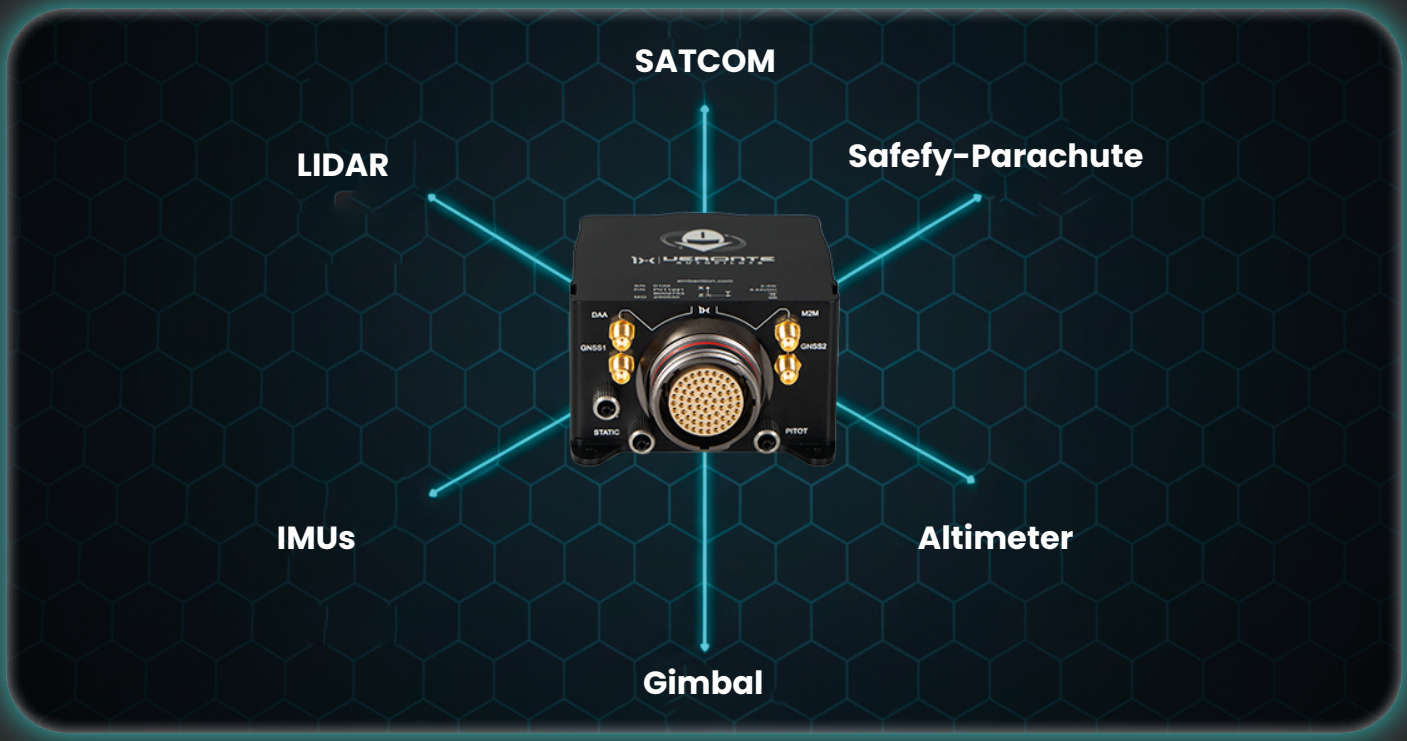
AESA AGENCIA ESTATAL DE SEGURIDAD AÉREA

EASA European Aviation Safety Agency

PROGRAMMABLE AVIONICS & INTEROPERABILITY

The Adaptive backbone for modern defense.

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



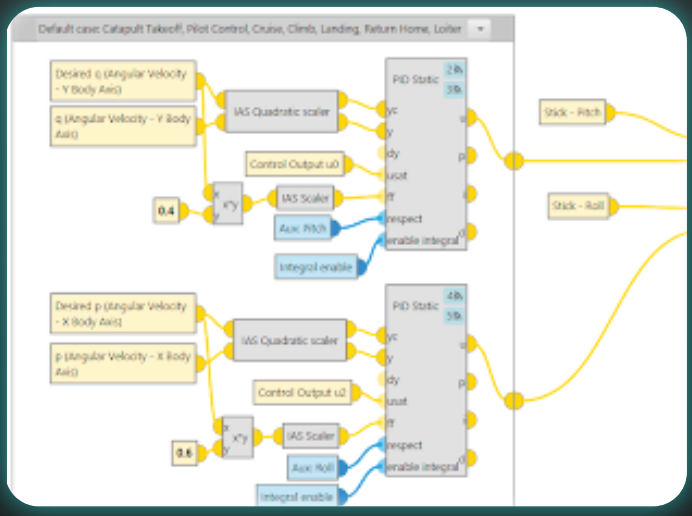
CONNECTIVITY & PAYLOAD

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 (Vison/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
1X
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
DRX
Distributed Redundancy

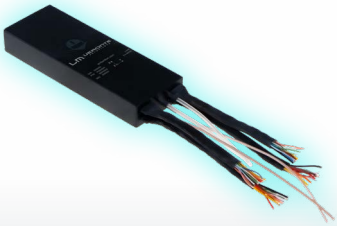
Best for: MALE UAVs and Manned Aircraft.

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

VERONTE AUTOPILOT
4X
Triple Redundant Flight Control

Best for: MALE/HALE UAVs and Strategic Missions.

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



VERONTE AUTOPILOT
LM
FCS with computer vision

Best for: Loitering Munitions & Kamikaze drones

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

NDAA COMPLIANT
VERONTE AUTOPILOTS
NON-ITAR SOLUTION

EMBENTION

GLOBAL COMPLIANCE, MANUFACTURING & SUPPORT

NDAA 889

ISO 9001

EN 9100

ISO 27001

DO-178C AIRBORNE SOFTWARE

DO-254 AIRBORNE HARDWARE

DO-160G ENVIRONMENTAL QUALIFICATION

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