

VORTEX-40

Electric Interceptor UAV



The VORTEX-50 is a high-speed, short-range electric interceptor designed for the rapid neutralization of hostile UAVs in contested electromagnetic environments. Optimized for frontline deployment, the system combines agile maneuverability with automated target acquisition and lock-on guidance, enabling efficient engagement of Group 1–3 aerial threats.

Key Performance Highlights

Max Flight Range	40 km
Max Altitude	up to 6000 m
Frame Size	8 inches
Take-off weight	6,7 kg
Fuselage length	768 mm
Max Speed	300 km/h
Cruising Speed	140 km/h

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The VORTEX is a next-generation Ukrainian electric interceptor optimized specifically for defeating Shahed-class loitering munitions using the latest battlefield-proven tactics developed across Ukraine's layered drone defense network. It represents a refined evolution of the "cheap, fast, autonomous interceptor" paradigm that has already achieved 70-90% kill effectiveness against Shahed-type threats in active combat environments.

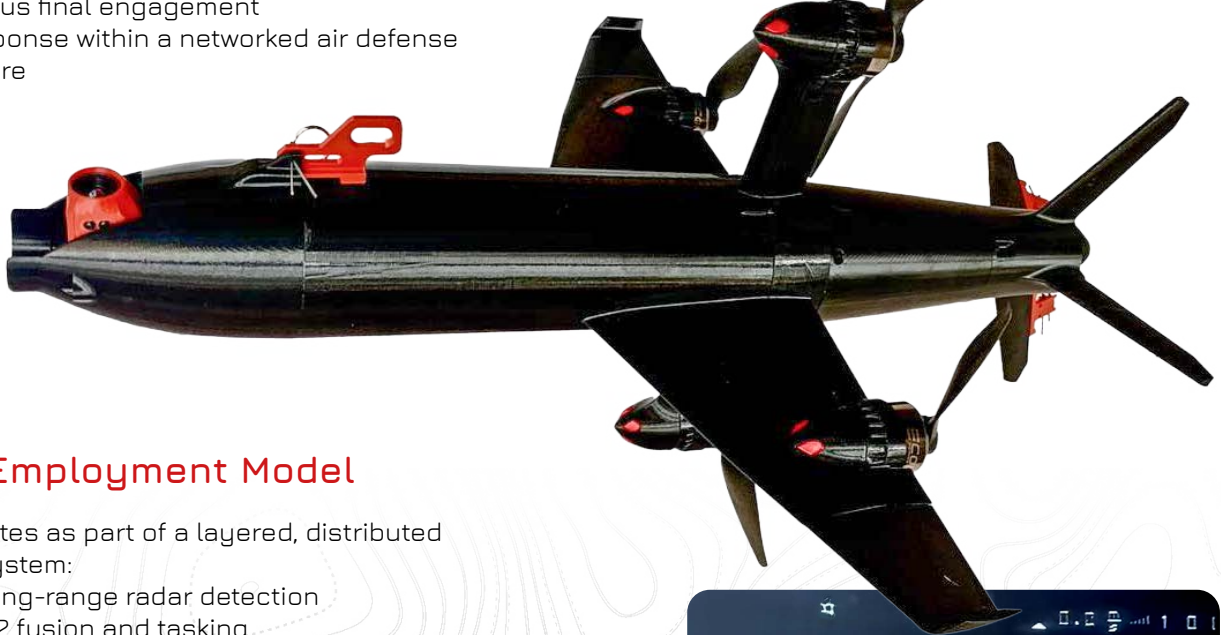
System Overview

VORTEX is a vertically loitering, electrically powered interceptor UAV combining:

- » VTOL / near-vertical hover capability for persistent overwatch
- » High-speed transition to forward flight for interception
- » Autonomous EO/AI terminal guidance
- » ~500 g fragmentation warhead optimized for proximity or direct-hit detonation

Its design philosophy mirrors proven Ukrainian systems such as Sting, Bagnet, and Shvidun, which emphasize:

- » Low cost, high volume deployment
- » Distributed sensor-shooter integration
- » Autonomous final engagement
- » Rapid response within a networked air defense architecture



Tactical Employment Model

VORTEX operates as part of a layered, distributed air defense system:

- » Layer 1: Long-range radar detection
- » Layer 2: C2 fusion and tasking
- » Layer 3: Forward-deployed VORTEX interceptors (loitering nodes)
- » Layer 4: Terminal EO-guided kill

Key Advantages

- » Persistent readiness: Vertical loiter eliminates launch delay
- » Cost-exchange advantage: Interceptor cost << Shahed cost
- » Autonomous terminal guidance: Reduced operator burden
- » Scalable deployment: Networked swarm defense
- » Combat-proven doctrine: Based on real-world Ukrainian engagement cycles



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