



HYBRID EYE

ADVANCED HYBRID DETECTION SYSTEM FOR APS



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ADVANCED HYBRID DETECTION SYSTEM FOR APS

This miniature hybrid detection system with BIRD's proprietary technology employs a multi-sensing capability to enhance the protection of armoured vehicles from wide-ranging potential threats.

BIRD Aerosystems' HybridEYE is an advanced hybrid detection system that enhances the protection of armored vehicles performing complicated missions in a dynamic battlefield. Tailored for Active Protection Systems (APS) the system provides rapid detection, confirmation and tracking of multiple threats, including anti-tank missiles, RPGs, drones and artillery shells, while maintaining a single LRU design and the smallest SWAP available on today's market.

Each HybridEYE sensor includes a Phased Array Radar, multiple IR warning detectors and Laser warning detector. These are all integrated together using BIRD's advanced in-house fusion algorithms, which compare and combine the information extracted from each detector to achieve superior multi-band detection and tracking of multiple threats - regardless of how cluttered or saturated the environment.

The HybridEYE sensor is uniquely designed to be fully compatible with any Hard-Kill or Soft-Kill system while providing the operator comprehensive situational awareness capabilities around the vehicle.

Miniature Phased Array Radar

BIRD's innovative, fully digital phased array radar employs advanced software-defined multi-beam technology to enable instantaneous early warning of multiple threats from

both long and very short distances, The radar is tailored to achieve the required angular resolution at close ranges in both azimuth and elevation axes required for the HK or SK integration.

Powerful IR and Laser Detectors

The IR detectors enable detection and validation of threats in various atmospheric conditions, improving the system's overall performance, especially in urban environments and multi-path conditions. The laser warning detector provides the capability to detect and classify various laser emitters with very high angular accuracy.

The Best of Both Worlds in One

By offering the advantages of phased array and IR in one, the HybridEYE creates optimal protection for ground vehicles of all sizes. The sensors can be configured for various operational modes, with either one acting as the leading detector.

Platform Agnostic

The compact HybridEYE is integrated into a single lightweight LRU that eliminates the requirement for boresight and enables an simple installation on a wide range of platforms, making it ideal for both perimeter protection and as an armor protection system (APS).



HybridEYE Key Technical Specifications:

Features	Benefits	Value
Compact size, weight and power, single LRU	Ideal for any vehicle, easy installation & maintenance	16cm X 16 cm X 11cm < 4 kg < 200 W
Multi spectral system with open architecture	Various threats, connects to any interceptor	Electro-optic channel - NIR & SWIR Radar operating frequency range - C-Band Laser warning detector
Practically zero FAR	Minimize alarms to the crew members	Less than 1 false alarm per thousands of activations
Full coverage and exceptional response speed	Reducing blind zones	Azimuth angular coverage (4 systems) - 360° Elevation angular coverage ±45°
Fully certified and complies with the most demanding standards.	High reliability and safety	MIL-STD-810H MIL-STD-461G

HybridEYE Unique Benefits:

- Accurate detection, confirmation and tracking of any type of incoming threat
- Optimal search and track capability with maximum Probability of Detection & minimal False Alarm Rate in all weather conditions
- Precise multiple target tracking capability based on Phased Array Radar technology
- Additional optional radar modes of operation
- Wide band high precision Laser warning detector

