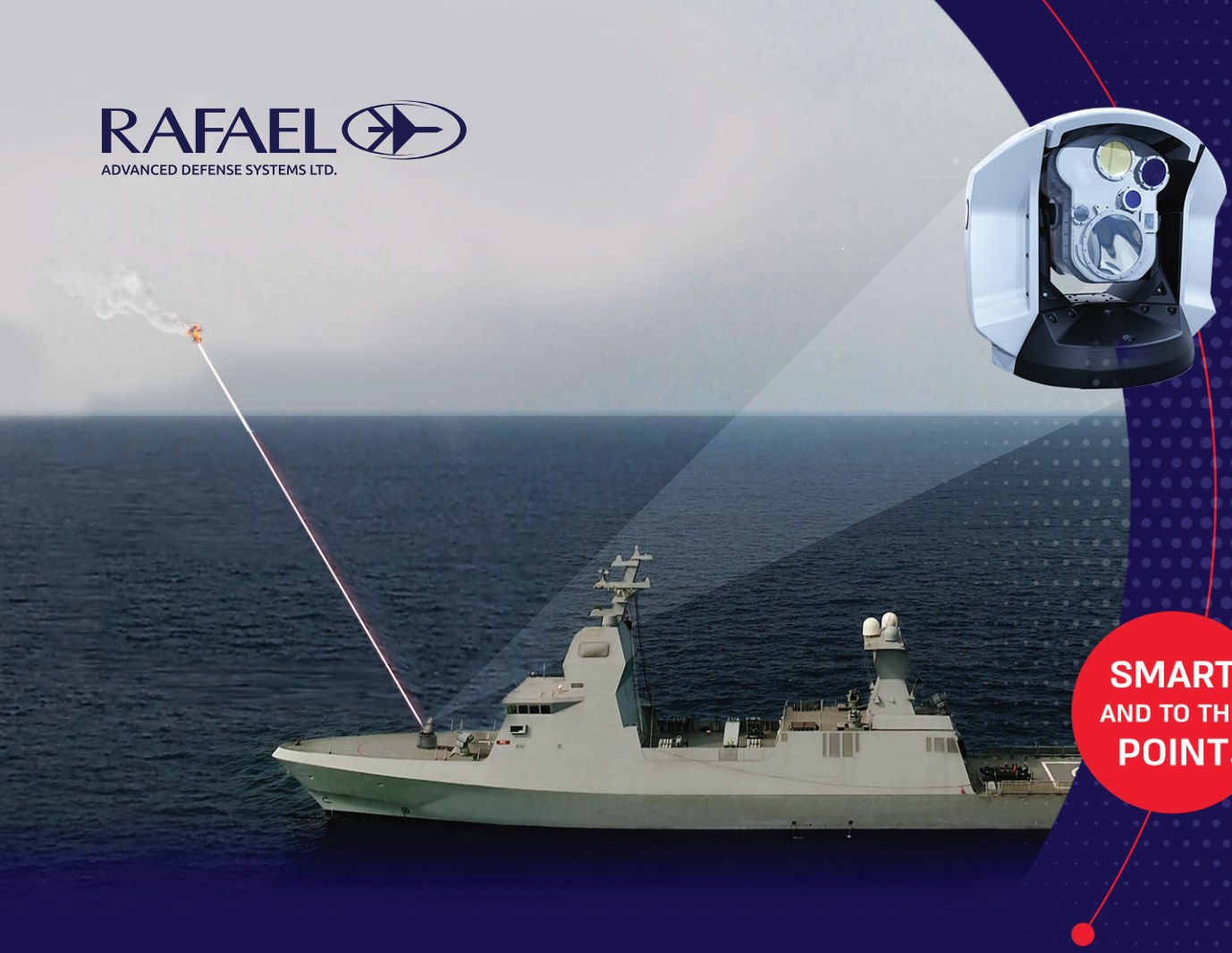
RAFAEL
ADVANCED DEFENSE SYSTEMS LTD.



SMART AND TO THE POINT.

NAVAL IRON BEAM™

A High-Power Laser Weapon System for Naval Vessels

Defending Ships against Evolving Airborne Threats

Naval ships are facing increasingly sophisticated threats including simultaneous attacks of anti-ship missiles and swarms of UAVs. Since current kinetic interceptors are incapable of providing comprehensive defense against these attacks, new solutions are required.

Addressing this critical need, RAFAEL's High Energy Laser (HEL) interceptor system – the NAVAL IRON BEAM – quickly and effectively engages and neutralizes a variety of threats including short-range ballistic rockets and UAVs of various sizes.

Benefits

- Neutralizes a wide range of threats
- Protects military forces and civilian populations
- Integrates with a variety of platforms and systems
- Causes limited collateral damage
- Costs almost nothing per intercept
- Complementary interceptor for multi-layer air defense systems

Operational Aspects

The NAVAL IRON BEAM is a 100kW HEL countermeasure that defeats a wide range of current and future threats – protecting ships and other naval assets in complex, saturated scenarios.

The interceptor engages threats with pinpoint accuracy – using an unlimited magazine while causing limited collateral damage – all at close to zero cost per interception.

Neutralizing targets from a distance of a few 100 yards to up to several kilometers, the NAVAL IRON BEAM can be used as a complementary HEL interceptor for any multi-layered air defense system. Integration of the NAVAL IRON BEAM with RAFAEL's C- DOME – the naval version of the IRON DOME – provides an ideal combination of solutions for comprehensive naval air defense.

Beam Director Optical Channels

- Thermal course tracking sensor: cooled MWIR, FLIR with changeable FOV, high frame rate, low latency, high sensitivity
- Fine tracking sensor: NIR, high frame rate, extremely narrow FOV and low latency
- Laser Illuminator Unit (LIU): fibre-coupled laser diode in NIR band
- Day sight: color zoom camera for mainly surveillance functionalities
- LRF receiver: large laser range finder receiver photodiode

Main Capabilities

- Pinpoint accuracy
- Intercepts RAMs and UAVs
- Neutralizes targets from distances of 100 yards to several kms
- Uses an unlimited magazine

Proven Interceptions

Iron Beam's interception capabilities have been thoroughly field tested – with extensively proven abilities to intercept ATGMs, Mortars, UAVs and Drones. The system was also proven to rapidly maneuver and track multiple threat types.

RAFAEL and HEL Technology

RAFAEL has amassed over 3 decades of experience in the development of Directed Energy systems – particularly High Energy Laser systems – and is considered a global leader in the area of HEL technology. The company's breakthroughs have enabled the development of complete HEL weapon systems.

RAFAEL works closely with the Israeli Ministry of Defense and serves as the HEL National Center of Excellence and the National Lethality Lab.



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