



**SMART
AND TO THE
POINT.**

SkySonic®

Innovative Solution Countering Advanced Hypersonic Threats

Who We Are and What We Offer

RAFAEL delivers an array of exceptional combat-proven systems, adapted to the evolving needs and threats in the modern battlespace. These agile and simplified solutions are based on open architecture, and allow interoperability and affordable mass. Our production lines are based on global partnerships and strategic suppliers, enabling RAFAEL to offer "Capability Now" with competitive delivery schedules.

RAFAEL, a world leader in advanced air defense systems (e.g., IRON DOME, DAVID's SLING, IRON BEAM, and more), offers an innovative approach to next-generation hypersonic defense - the SkySonic interceptor. SkySonic is a lethal, flexible, affordable interceptor that can defeat and defend against a variety of hypersonic threats. SkySonic's cost-effectiveness ensures that interceptors can be deployed and used in sufficient quantities to effectively defend against complex, rapidly escalating hypersonic threats at a fraction of the cost of traditional methods. SkySonic is effective in using available long-range air defense radar, and therefore can integrate into the customer's existing systems.





The Hypersonic Challenge:

Hypersonic threats travel at speeds greater than Mach 5, with the ability to maneuver unpredictably in flight. These projectiles typically fly at altitudes between 30-70 km, making traditional atmospheric and exo-atmospheric intercept systems ineffective.



The Solution: SkySonic - The Advanced Counter-Hypersonic Interceptor

SkySonic represents a revolutionary approach to hypersonic defense, designed specifically to counter these emerging threats. The interceptor integrates the latest technologies to address the unique challenges of hypersonic missile interception.

SkySonic is a two-stage missile that comprises a booster and a small, agile kill vehicle with a state-of-the-art solid rocket motor. By utilizing advanced energy management for long-range pursuit and precise targeting algorithms, SkySonic minimizes the time between detection and interception, offering rapid engagement of hypersonic threats, even within standard detection ranges.

• **Operational Capabilities:** The SkySonic interceptor, providing a large defended footprint, can handle maneuvering hypersonic threats such as hypersonic gliding vehicles (HGV), hypersonic cruise missiles (HCM), and maneuvering ballistic missiles (SRBM & MRBM).

- **Target Pursuit:** SkySonic has dual steering capabilities based on aerodynamic fins and is able to navigate/maneuver in high endo-atmospheric environments.
- **Standard Radar and Tracking Systems:** SkySonic is compatible with existing radar and tracking systems, allowing its integration into existing defense infrastructures. This compatibility ensures efficient operation within standard detection ranges, maximizing the potential for successful interception. This capability dramatically reduces customer expenses by using existing systems, and also saves on personnel training.
- **Cost-Effective and Scalable:** SkySonic's design allows for a significant reduction in the cost per interception, making it an economically viable solution. The cost of interception is dramatically lower than any on today's market.



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