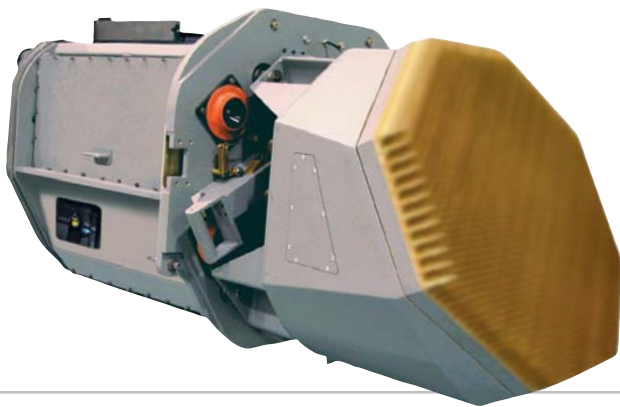




AN/APG-79 AESA

Active Electronically Scanned Array Radar



The world's only air-to-air and air-to-surface multimode AESA radar in production today, the APG-79 provides Super Hornet aircrews with incomparable detection, targeting, tracking, and protection.

Benefits

- Network-centric capabilities for close cooperation on the battlefield
- Simultaneous targeting of multiple air and ground threats
- Dramatically increased range and resolution
- Greater lethality and survivability
- Reduced aircrew workload
- Lower maintenance and upgrade costs

Agile Beam Radar Enhances Situational Awareness

As the world's most advanced tactical radar, the AN/APG-79 makes fighter aircraft more lethal and less vulnerable than ever before. Featuring active electronic beam steering — which allows the radar beam to be repositioned nearly instantaneously — the APG-79 enables image resolution, and targeting and tracking ranges, significantly greater than the radar it replaces.

With these enhanced capabilities, aircrews can now detect and identify targets beyond the reach of most missiles. The APG-79's long standoff range also allows more time for persistent target observation, information sharing, and assessment by commanders before critical decisions are made. The result: greatly increased aircraft and aircrew effectiveness and survivability.

Powerful New Functions Increase Flexibility

An advanced four-channel receiver/exciter gives the APG-79 wide bandwidth capability and the ability to generate a broad spectrum of waveforms for air-to-air, air-to-ground and electronic warfare missions. The APG-79 radar can track significantly more targets than current radar systems and can operate in multiple air-to-air and air-to-ground modes simultaneously. In response to mission requirements, its built-in resource manager automatically schedules tasks to optimize radar functions and minimize aircrew workload.

Open Systems Architecture Improves Affordability and Performance

With its open systems architecture, incorporating ruggedized commercial off-the-shelf (COTS) components

and weapon replaceable assemblies (WRAs), the APG-79 demonstrates a significant increase in reliability over its predecessors. It also offers greater affordability over the life of the radar. The ultra-thin, light antenna (the array weighs only 95 pounds) has an extremely low failure rate, with no maintenance predicted for 10 to 20 years. In addition, the modular design of the WRAs makes hardware/software module repairs faster, easier, and less expensive. The design permits built-in testing, software isolation, and easy upgrades, resulting in significantly reduced total ownership costs.

Network-Centric Capabilities and Future Enhancements

The APG-79's flexibility and versatility make it an important addition to the modern military's networked

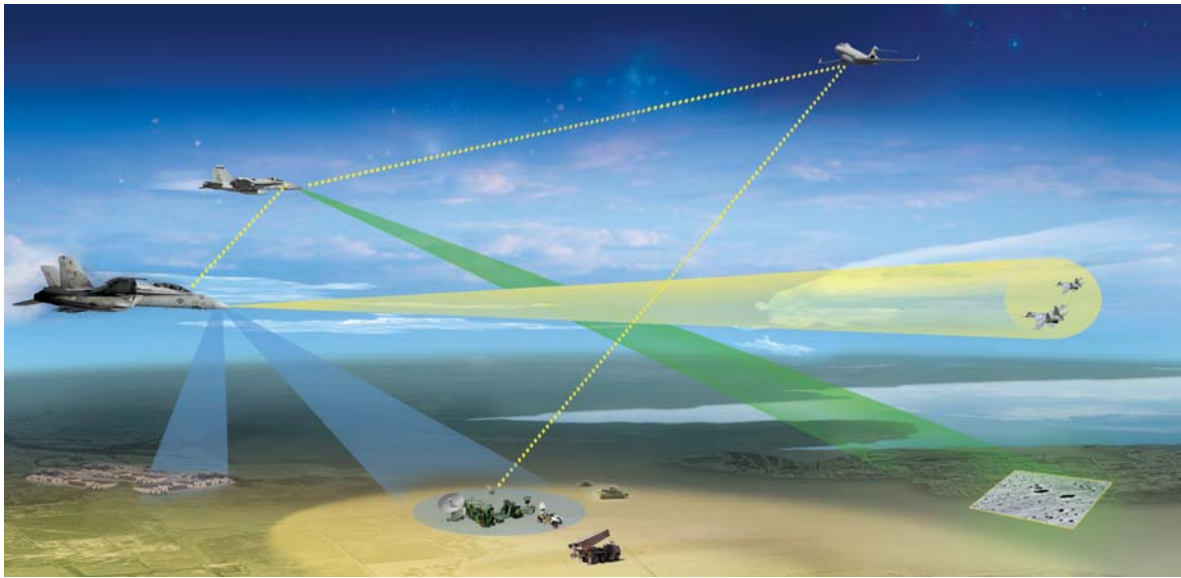


Capabilities **Design Features**

- | | |
|---|--|
| <ul style="list-style-type: none"> ■ Agile beam forming (permits thousands of beam positions per second) ■ Interleaved radar modes, including air-to-air and air-to-ground ■ Multiple radar modes, including: <ul style="list-style-type: none"> – Real beam mapping – Synthetic aperture radar – Air-to-air search – Air-to-air track – Sea surface search – Ground moving target indication/track | <ul style="list-style-type: none"> ■ Solid-state digital radar with agile moving beam ■ Lightweight, highly reliable tile array architecture ■ Modular software and hardware, including weapon replaceable assemblies ■ Ruggedized COTS-based common integrated sensor processor ■ Multi-channel receiver/exciter with programmable waveforms ■ Designed to support FORCENet, the U.S. Navy’s vision for a fully networked battlespace |
|---|--|

Specifications

Platform	F/A-18E/F Super Hornet (approved for international customers)
Reliability	>15,000 hr MTBCF array, >1,250 hr MTBCF system
Weight	95 lb array, 650 lb total system weight



- Air-to-air
- Air-to-ground
- SAR imagery
- Communication

The multimode interleaving and net-centric capabilities of the APG-79 offer substantially increased situational awareness.

battlespace. Built with secure, interoperable technology, this leading edge radar enhances the sharing of information with manned, unmanned, and ground-based systems for close cooperation on the battlefield. It offers the F/A-18E/F the capability to perform as an essential node in the air and ground global information network.

Currently deployed on the F/A-18E/F, the APG-79 offers revolutionary technology and scalability that can be adapted to other platforms. Raytheon and the U.S. Navy continue to develop enhanced sensor features through sensor fusion and sensor integration that leverage the inherent capabilities of the APG-79.

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