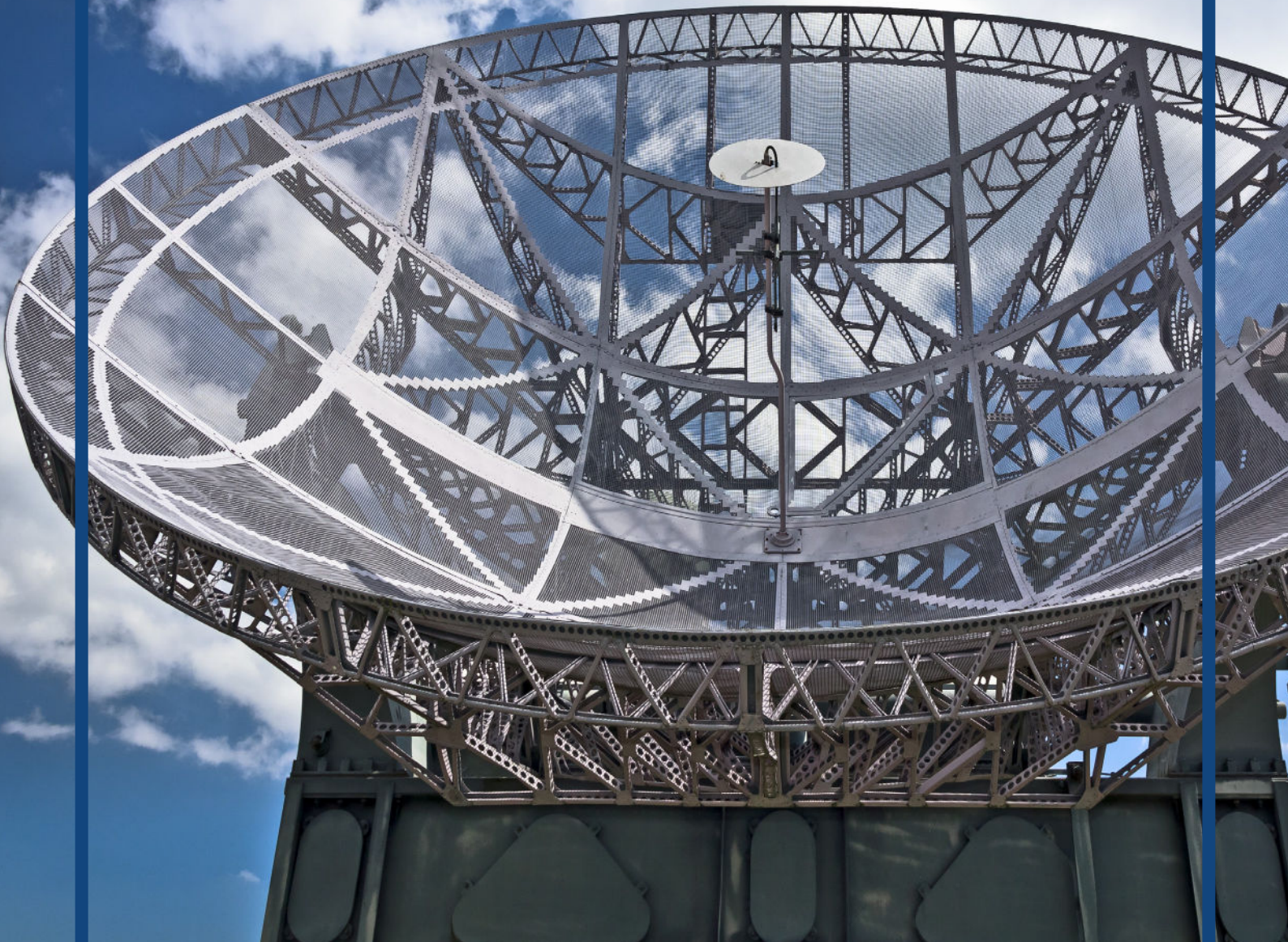


ELECTRONICS & DEFENSE



ON THE RADAR

PNT SOLUTIONS TO COMBAT GNSS THREATS TO RADAR SYSTEMS



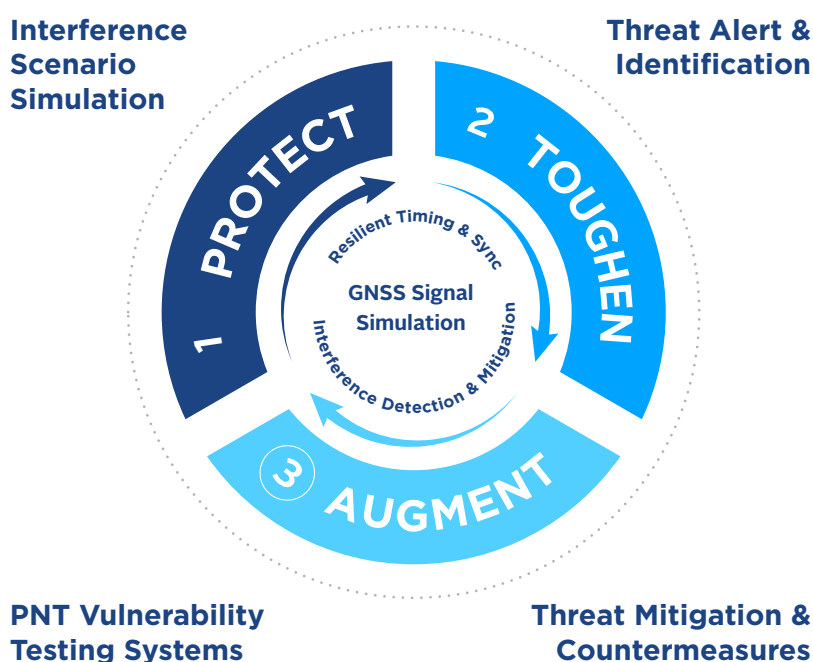
On the Radar: PNT Solutions to combat GNSS threats to radar systems

Whether for air traffic control, air and ground surveillance, early missile warning detection, or navigation at sea, Safran technologies are already on board of many radar systems to increase their efficiency, accuracy and precision.

Is your radar system resilient?

In today's world, GPS and GNSS signals are not always available or accurate. For a military radar application, that can put operations — and lives — at risk.

Safran makes your GNSS signals virtually failsafe for critical radar applications, with robust, accurate GNSS-based systems and proven technologies. Only Safran offers the full breadth and depth of solutions for radar applications, with unparalleled service after the sale and the industry's leading warranties.



Why use Safran Radar Solutions?

Atomic Clocks and Oscillators

- Meet latest low-phase noise requirements for radar applications.
- Meet latest low SWaP-C requirements.
- Holdover function for GNSS-denied environments .

IDM

- Multi-layered PNT data protection and use of alternate signals for complete protection against threats to GNSS signals.

Time and Frequency Reference Systems

- Networking leveraging NTP and PTP.
- Ability to integrate multiple sensors for specific platforms.

Where can you find Safran PNT technologies?



What radar problem can we fix for you?

- Improve range measurement precision with stable time clock
- Improve Doppler measurement precision with stable frequency
- Improve long-range performance and small target sensitivity with low-phase noise
- Own Position/North compass determination for all sensor systems in GNSS-denied environments
- Network Time Synchronization for networked sensor systems, especially in Defense Missile Platforms
- Testing/simulation of radar systems



Atomic clocks & oscillators

Timekeeping is the core of any GNSS-based radar application. Safran's expertise in high precision atomic clock technology ensures stabilization of time and sensor data reception to maintain data accuracy, even in GNSS-denied environments.

PNT data protection

To keep GNSS resilient and reliable even in cases of signal interference, Safran offers a comprehensive array of GNSS spoofing and jamming detection, suppression and countermeasure technologies.



Timing and synchronization

Synchronize radios, radars and other critical infrastructure to obtain very precise and accurate PNT data with Safran's portfolio of network time servers and solutions.

GNSS testing and simulation

Ongoing testing and simulation are essential to ensure continuous operations and smooth radar applications. Safran's software-based simulation solutions outperform traditional bespoke solutions while offering COTS hardware configuration flexibility and cost effectiveness.

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