



PSR L-Band

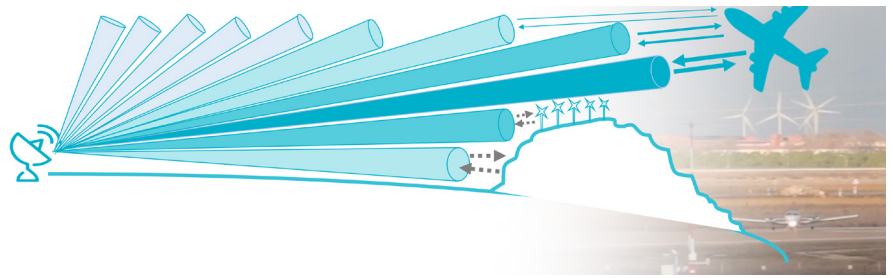
Primary 3D Surveillance Radar

Indra's PSR 3D L-Band solution represents the highest technological evolution in a radar system for the civil air traffic surveillance domain. It is a new radar concept for civil market specifically designed for approach and en-route surveillance purposes.

Based on AESA (Active Electronically Scanned Array) technology, the system also embeds the latest capacities in signal generation, demodulation and processing providing three-dimensional position of targets (height, range and azimuth) while incorporates an integrated redundant weather channel compliant with ICAO and National Weather Services.

Going a step further, the system provides the air traffic controllers with enhanced and extended information to safely monitor all the aircrafts in the covered airspace while simultaneously mitigates interferences, obstacles and undesired effects in any environmental conditions.

Fully integrated with modern human machine interface and graphical configuration and adaptation engineering tool, ensures the operator a complete access to every parameter and notification of the system for unattended system working 24 hours a day, 365 days a year.



Most modern surveillance technology integrates innovative concepts providing amazing performances ever seen and target altitude information

During the same scan, the system can illuminate an area below the horizon and then adjust the electronic tilt to the sky reducing clutter from an obstacle or high mountain, focusing the beam on relevant volumes.

This unique feature allows a perfect environment adaptation of the system (instrumented range, pulses duration and repetition, tilt and use of multiple pencil beams in elevation).

The reduced size of the AESA L-Band antenna reduces the impact of the site requirements and infrastructure cost, i.e., radome and tower.

Its reliability, demonstrated extensively in the most adverse and severe military conditions makes the system the best to ensure non-cooperative data.

Inherent wind farm mitigation

- Inherent wind farm mitigation thanks to the use of multiple pencil beams electronically tilted and managed for transmission and reception
- Mitigation techniques initiated in very early stages of video detection
- Multilayer high-resolution clutter maps for each processing type and beam (NCI, A-MTI and A-MTD)
- Improved tracking algorithms, including height information, avoiding undesired effects

Cutting-edge technology

- Monopulse techniques in azimuth and elevation
- Extended reliability and graceful degradation in case of failures
- Different selectable exploration modes
- Real frequency diversity selectable by operator
- Highly environmental adaptability
- Integrated signal injection for maintenance, adaptation and performance testing

New horizons for surveillance

- Minimized size and infrastructure requirements, optimized energy usage and configurable refresh rate
- Three dimensions technology (altitude reporting for non-cooperative targets)
- High azimuth accuracy, improved resolution and detection probabilities
- Compliance with international standards and regulations (EUROCONTROL / ICAO / FAA)
- Power consumption due to RF combination in the air means no combiner mismatch
- Improved tracking algorithms, including height information, avoiding undesired effects

Indra is positioned as the market's leading supplier of air traffic management and communications, navigation and surveillance (ATM-CNS) systems. With a complete portfolio of products in the cooperative and non cooperative surveillance domain we cover all the stages of the flight.

In the field of R&D, we are one of the leading companies in the SESAR programme, the key technology behind the Single European Sky initiative.

The core of the Indra PSR is fully compliant with latest versions of Eurocontrol specifications and ICAO regulation. This offers a quantum-leap in safety and efficiency for the provision and continuity of surveillance through the use of most advanced technology.

The use of PSR from Indra will ensure a perfect adaptation to the environment while maintaining the best coverage and performances ever seen in such kind of systems.

With more than 300 radar references worldwide Indra offers a well-reputed, reliable and modern solution, adaptable to the client's requirements and the particular needs of each site

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