



ADS-B

Automatic Dependent Surveillance-Broadcast

The Automatic Dependent Surveillance Broadcast is a surveillance system dependent on data and systems available on the aircraft.

ADS-B system is a highly flexible and high performance turnkey solution with different configurations to satisfy customer requirements.

The Indra's ADS-B ground station is an equipment which brings the benefits of the automatic dependent surveillance

broadcast with the best cost-performance ratio in the market.

The equipment is designed to fulfil the international **standards** developed by ICAO, EUROCAE, EUROCONTROL, RTCA, and is manufactured by Indra mixing proprietary developments for core elements and using COST for low criticality items.

In the SESAR ADS-B solutions, Indra is developing the following topics: **composite surveillance** with cooperative

independent systems, **secure ADS-B** and **phase overlay** technology.

Experiences with air traffic service providers from all over the world have built the good reputation and well-proven reliability of the system.

The architecture of the system integrates the experience gained by Indra in the last decades and the new features developed in SESAR

ADS-B system is a highly flexible and high performance turnkey solution with different configurations to satisfy customer requirements, and as foreseen by Eurocontrol and ICAO CNS Roadmaps. ADS-B is considered the core surveillance system in the future surveillance domain.

Indra ADS-B is an advanced system that can work together with other surveillance sensors, helping to enhance their performances, (composite surveillance).

This system has been entirely developed and manufactured by Indra in compliance with the most exigent and recognized **international standards** for the ADS-B systems, and can be adapted easily to meet the increased air traffic requirements that will occur in the future and integrated with other surveillance systems.

ADS-B ground station consists of an antenna that receives RF signals, an ADS-B receiver and processor unit that receives, processes and decodes ADS-B information and creates ASTERIX reports to be sent to the final ATM system.

The Indra ADS-B system includes multichannel reception, allowing coverage split in different sectors, improving detection performances. In heavy load environments this translates into better performances at longer distances.



ADS-B is the primary surveillance system foreseen for future provision of surveillance services in the CNS/ATM context

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.

Indra is leading within SESAR solutions for phase modulation **composite surveillance and security functionalities**, and also **surveillance performance monitoring** tool in order to assess the performance of the sensors and of the entire surveillance chain following the **performance-based approach** being developed by EUROCONTROL.

Within this context, the new features being **introduce by Indra in the market**, making its products the most advanced and competitive.

Following the new and future performance-based surveillance approach

Composite and secure ADS-B services

- Possible composite surveillance service: Synergies between ADS-B and cooperative independent surveillance technologies are maximized while an efficient use of infrastructure is maintained in order to provide a concrete surveillance service complying existing and in development standards (ED-129B, ED-142-A)
- Employment of the latest SESAR developments in the context of security improving performances and features

Features to face the future

- Service-oriented and low-cost system that can be networked to provide terminal, approach and en-route surveillance services
- Compliance with international standards (EUROCONTROL / ICAO / EUROCAE/RTCA)
- Follows the future performance-based approach following the standards (ESSASP, GEN SUR SPR)
- Use of latest-generation signal and data processors for signal processing
- High coverage volume, with more than 400 targets over 300 NM
- Local and remote control and supervision system with intuitive web-based user interface Intelligent BITE