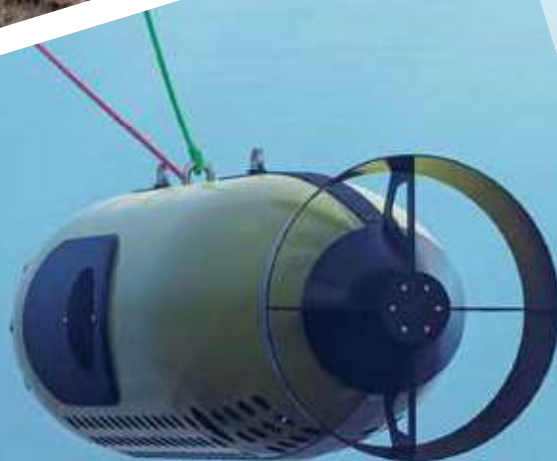


Patria

Patria Offering

Extreme conditions embedded.



Patria ARIS and ARIS-E - Real-time situational awareness is decisive on the battlefield

Patria ARIS and ARIS-E are powerful tools for electronic intelligence and electronic support measures, (ELINT and ESM), with real-time radar signal interception, recording and analysis capabilities as well as radar emitter identification, geolocation and tracking.

The ongoing race for technological dominance poses a great challenge in ELINT/ESM. Adversaries are constantly developing higher-performance radar systems that are increasingly difficult to detect - traditional receivers are not necessarily capable of detecting or analysing their faint and constantly changing signals.

Patria's response to this challenge is the ARIS product family, which provides effective tools for intelligence and surveillance - enabling real-time interception, recording and analysis of modern radar signals.

ARIS detects active radar systems effectively

ARIS is a sensitive ELINT/ESM system capable of intercepting modern radar signals with high precision and probability. It can be used for geolocating radars, gathering strategic information on their operation, and revealing signal characteristics in different operating modes. ARIS is a so-called passive sensor. The enemy thus cannot detect the system or analyse its performance.

ARIS combines all ELINT functionalities: search spectrum, real-time spectrum analyser, real-time oscilloscope, pulse analyser, modulation analyser, direction finding and wideband recorder with playback and offline analysis capabilities.

These functionalities are bundled in a single system offering a smooth user experience. The system has been developed on the basis of feedback from users.

Real-time functionalities are decisive on the battlefield

Patria ARIS detects all kinds of radar emitters: e.g., fixed surveillance radars as well as radar systems used on ships and aircrafts. Furthermore, the system can be used to search for a variety of weapon systems, such as target acquisition radars and active radar-homing missiles. Radars emit a distinctive signal in different situations. For instance, a fighter aircraft could be engaging in search operations or preparing to launch a missile - the operating mode can be identified on the basis of the signal emitted by the radar.

Real-time functionalities are vital in modern warfare. If a ship or fighter aircraft is targeted by a weapon system, it must be alerted immediately.

Computing power for heavy-duty analyses

Patria ARIS system consists of high-precision antennas, a wideband digital receiver and a high-power server that handles real-time computing.

The system must have sufficient computing power - it generates a continuous flow of several gigabytes of data per second. All this data is stored and simultaneously processed to produce real-time analyses.

ARIS is a tool for building comprehensive signal database of detected transmitters. Such databases can then be used for effective identification of targets with, for example, the ARIS-E system.

Remote use - the decisive edge provided by ARIS systems

A powerful feature of ARIS systems is that all their functionalities can be operated either locally at a sensor station or remotely from an operating centre. That is, even an entire sensor network can be operated centrally from a single location via secure connection. A sufficient number of skilled personnel can be stationed at this centre to analyse the signals - a task that calls for skilled professionals.

The software can be used manually for detailed signal analysis. It can also run predefined surveillance tasks autonomously to record signals for later analysis. The analysis results can be fed into an ELINT database.

ARIS-E creates a real-time situational picture

ARIS-E system provides operators with a real-time tactical situational picture based on active identified and unidentified emitters within the operating area.

Patria ARIS-E is an ESM (Electronic Support Measures) system that utilises signal databases to automatically identify and geolocate radar signals. Its main task is to create a situational picture either independently or aided by the operator. The display map shows a continuously updated situational picture of the modern electromagnetic battlefield.



The features of ARIS-E enable the real-time tactical geolocation and tracking of transmitters. Advanced real-time tools make it also possible to analyse signals accurately and update the signal library.

Full 4D situational awareness for the operator

ARIS-E features all the necessary functionalities from radar signal interception to visualisation of the situational picture. The system builds an illustrative 4D situational picture of the battlefield, visualising not only the location of emitters on the map, but also their temporal activity.

ARIS-E can be operated remotely and integrated flexibly into different command systems.

ARIS systems are based on long-term product development. Patria has developed related technologies since 2005. Patria's strength is managing the big picture. The ARIS system is precisely tailored to the needs of the customer - the package includes not only antennas, receiver and server, but also system software integration, deployment and training.

