



GABBIANO Radar Family

Introduction

Effective coastal, sea and ground surveillance is a key priority for civilian, military and paramilitary Forces. The GABBIANO Radar family provides a highly efficient mechanically scanned X-Band solution for surveillance over ground, along coasts and on sea in any weather condition.

Product Capability

To satisfy the demands of these surveillance missions, SELEX Galileo has developed an X-band, pulse doppler, coherent radar. It is suitable for installation on board small/medium/large fixed wing platforms and UAVs, in both nose-mounted and belly-mounted configurations.

In addition to the standard air-to-surface search modes, this radar offers high resolution ISAR modes (Inverse Synthetic Aperture Radar), which provide an automatic feature extraction allowing the early classification of intercepted targets. Synthetic Aperture Radar (SAR) modes provide a high resolution imaging capability over wide swath areas. The Sea Moving Target Indicator (SMTI) and Ground Moving Target Indicator (GMTI) modes support the detection of moving targets on the sea and on the ground respectively. Ground mapping, weather modes (compliant with civil regulation requirements) and all-beacons modes guarantee navigation aid and advanced search and rescue capability. In addition GABBIANO is capable of detecting oil spills thanks to its oil slick detection mode.

The GABBIANO radar family can offer a long range surveillance capability for:

- Protection against illegal fishing and indiscriminate destruction of living marine resources;
- Prevention and response to oil and hazardous material spills-both accidental and intentional;
- Border and territory surveillance to fight smuggling, drug trafficking, illegal immigration across borders and terrorist attacks;
- Maritime patrolling and search and rescue operations to provide aid to persons, ships or other craft which are, or are feared to be, in distress or imminent danger ;
- Detection of shot-down allied aircraft, to rescue and recover possible survivors inside enemy areas (combat search and rescue missions);
- Identify the infiltration/exfiltration of special operations forces covertly during the day or at night, in all-weather conditions and over long distances.

In all of these scenarios, a well equipped platform is essential. The GABBIANO radar is currently operational onboard Alenia Aeronautica's ATR 42MP aircraft, Agusta Westland's AW139 helicopter, the Beechcraft King Air 350 and comes in a shelterised version for a coastal surveillance station.

Future Development

Future collaboration with UAV manufacturers is currently being explored with a view to building UAV demonstrators equipped with the GABBIANO Radar. Based on Modular Radar Processor (MRP) technology, the GABBIANO radar processor is easily upgradeable.

The radar's advanced software supports the addition of new features and customised requirements solely through software upgrades, removing the need for a hardware retrofit.

Thanks to the radar's MRP architecture, the GABBIANO's growth road map is scheduled to include the introduction of new advanced modes including air-to-air (A/A) modes, height finding and a Terrain Avoidance (TA) mode. SELEX Galileo is constantly investing in the evolution of the GABBIANO Radar to enhance its performance and power consumption and to support weight/cost reduction, in order to offer customers a cutting edge solution.

Conclusion:

SELEX Galileo is a world leader in the development and manufacture of Airborne surveillance/reconnaissance radars for air forces, armies and navies, including the Italian Armed Forces and a range of international customers. The GABBIANO radar family represents the latest M-Scan surveillance radar technology and is appropriate for a number of surveillance applications. Ongoing development will ensure that it remains at the forefront of M-Scan radar.

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