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Press Note

THE GABBIANO RADAR FAMILY OF GALILEO AVIONICA

Gabbiano Radar is the latest Galileo Avionica' airborne multi-mode surveillance Radar.

This state-of-the-art radar inherits a consolidate and well proven experience dated 30 years in Surveillance, adding to the traditional A/S and navigation modes the cutting edge capabilities and performances already flight tested (e.g. ISAR and SAR).

When we speak of Gabbiano, we are not referring to a single Radar only, but to a Family of Radar operating in X band and suitable to perform surveillance over ground, along coast and over the sea in any weather condition.

Gabbiano key factors are: **flexibility, modularity, scalability and compactness.**

Surveillance Missions

In recent years Coastal, Sea and Ground Surveillance has become for most of the States, a primary need. Both civilian, military and paramilitary Forces are involved in Surveillance Missions aimed to:

- protection against illegal fishing and indiscriminate destruction of living marine resources;
- prevention and response to oil and hazardous material spills, both accidental and intentional;
- Boundaries and Territory Surveillance to fight smuggling, drugs traffic, illegal immigration across the borders and even 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 Aircrafts to rescue and recover possible survivors inside enemy areas (Combat Search and Rescue Missions);
- Help infiltration/exfiltration of Special Operations Forces covertly day or night and in all-weather conditions over long distances.

In all these situations, the role of a well equipped platform flying the area of interest is essential.

Operations prove effective only if advanced day and night surveillance equipment is used.

As a matter of fact, even if platforms devoted to Surveillance are often instrumented with an array of several devices such as TV Cameras/FLIR/ESM, the radar is the key sensor to achieve long range Surveillance capability for any mission, on wide areas, in all weather condition.

A Family:

To satisfy the several different Surveillance Missions, Galileo Avionica has developed a versatile X-band Pulse Doppler Radar, suitable for Unmanned Aerial Vehicles, as well as both fixed and rotary wing manned Platforms.

Gabbiano can be installed both in nose-mounted and belly-mounted configurations, providing respectively a 180° and 360° surveillance. Also, Gabbiano may be equipped with antennas of several sizes, tailored to the specific application.

Main Features

- Solid State Power Amplifier
- Low weight and power consumption
- High reliability
- Wide-band frequency agility
- Low antenna sidelobes

- Fast scan capability
- over 100 Targets TWS
- LPI and ECCM features (jammer avoidance, etc.)
- Short blind zone at near range
- Standard and flexible interfaces
- High resolution

The strength of experience:

Galileo Avionica has developed and manufactured for over 30 years Airborne Surveillance/Reconnaissance Radars for Air Force, Army and Navy Customers, where they are in service with the Italian Armed Forces and Customers worldwide.

GABBIANO as a Ground Surveillance Radar

Lightweight, compact, endowed with specific features for Ground Surveillance, can be employed for successful Homeland Security missions, primarily aimed to protect Country Borders against any threat, or in Combat Search and Rescue missions, to detect shot down allied Aircrafts.

High resolution modes (Spot SAR and Strip SAR) grant sub-meter resolution. GMTI mode allows detection of moving targets on ground.

Low power consumption from a single power supply source, along with standard and flexible interfaces and LPI characteristics make it perfect for installation onboard UAV and/or small/medium fixed wing Platforms.

GABBIANO as a Sea Surveillance Radar

In the same hardware configuration, Gabbiano can be installed onboard lightweight medium Helicopters and fixed wing aircraft to perform search and rescue and maritime surveillance missions. In this configuration, in addition to the conventional Air-to-Surface Search modes with TWS, this Radar provides the high resolution ISAR mode, which enable the User to classify the intercepted targets. Ground Mapping, Weather and Beacon modes provide Navigation Aid.

GABBIANO POWER / GABBIANO LongEye for more demanding surveillance missions

Gabbiano Power and Gabbiano Super are the more powerful solutions that Galileo Avionica proposes for longer range surveillance missions.

Maritime Patrolling and Coast Guard Surveillance may require detection and localization of small targets over wide surveillance areas.

Coherent Air-to-Air modes, with and without MTI algorithms, and an automatically initialised Track-While-Scan function can add aerial surveillance to the mission allowing an Early Warning capability against fighter aircrafts and sea skimming missiles to this multifunction product.

These tasks can be afforded by the same Gabbiano receiver-exciter-processing chain with Galileo Avionica's more powerful transmitters (based on robust and efficient TWT's) and wider antenna plates.

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