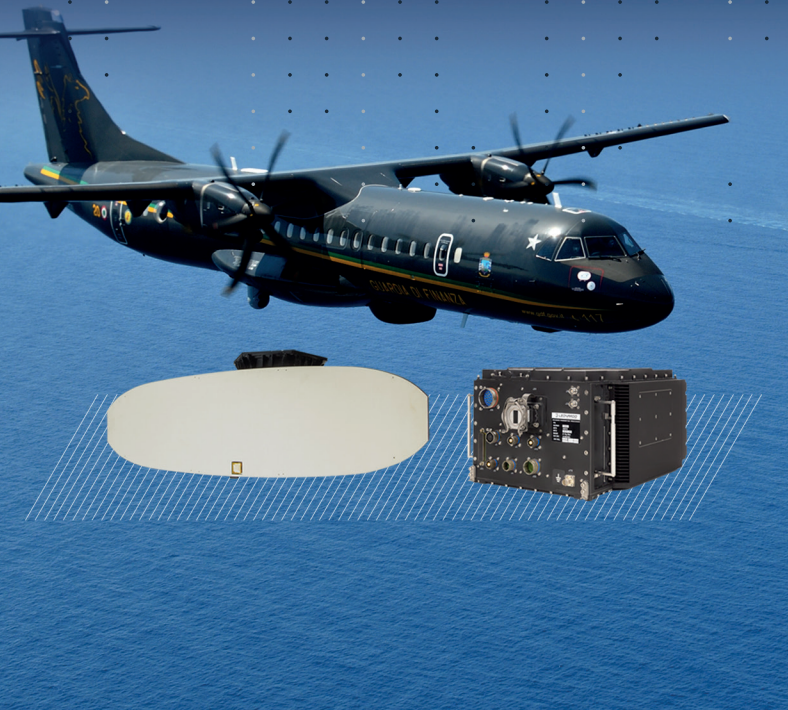ELECTRONICS DIVISION

GABBIANO

TS ULTRA-LIGHT

Gabbiano TS Ultra-Light is a cost effective X-Band radar solution for 360° surveillance at sea, on land and along coastlines in all-weather conditions.

Gabbiano TS Ultra-Light provides long range surveillance and small targets detection for civilian and military forces incorporating:
- Homeland Security - including drug trafficking, smuggling, illegal immigration and terrorism
- EEZ protection (e.g. Illegal fishing)
- Maritime Patrolling and Search and Rescue operations
- Environmental surveillance (oil and hazardous material spills, wild life protection)
- Combat Search and Rescue Missions
- Support to covert operations of Special Forces by day or night.

Gabbiano TS Ultra-Light high level of modularity and flexibility allows for operation on-board Unmanned Aerial Vehicles as well as both fixed and rotary wing manned platforms.
Three types of antenna group are in service, with 106cm and 80cm antenna plate (both with 360° Azimuth scan) and with 12" antenna plate (180° Azimuth scan).
Two types of solid-state transmitters are in service, with 80W and 20W average power.

KEY FEATURES
- Low weight, low power consumption
- LPI capability
- TWS: > 200 targets
- ECCM capabilities (frequency agility, jammer avoidance etc.)
- Digital/programmable waveform generator
- Short blind zone
- High resolution modes
- Maritime surveillance, up to 160NM
- High reliability
- Standard and flexible interfaces
- Dual channel digital receiver.

Gabbiano TS Ultra-Light is the perfect solution for UAV and small manned aircrafts, that are the most challenging platforms for payloads due to weight and space constraints.

With its low power consumption (single power source), light weight, standard and flexible interfaces, and LPI characteristics Gabbiano TS Ultra-Light is the right solution for platforms with demanding constraints.
Integration of IFF antennas is an available option for the 106cm antenna plate. Stand-alone radar control via dedicated control panel also optionally availablet.

SEA SURVEILLANCE

Gabbiano TS Ultra-Light is ideal for Search and Rescue and maritime surveillance missions. In addition to the standard air-to-surface search modes with TWS, Gabbiano provides the high resolution (ISAR) mode which enables the user to classify the intercepted targets. To complete the Search and Rescue features, SMTI and SART mode are also available. Automatic classification to class (ISAR library) available as option.

GROUND SURVEILLANCE

The Gabbiano TS Ultra-Light provides all the features for Homeland Security missions, primarily aimed at border protection, or in Combat Search and Rescue missions. High resolution modes (Spot Synthetic Aperture Radar and Strip Synthetic Aperture Radar) grant a sub-meter resolution over wide swath areas. GMTI mode allows detection of moving targets on ground. Unique patents and owned proprietary techniques have been developed for high resolution radar imaging.

AIR SURVEILLANCE

Air to Air mode (offered as option) provides detection and automatic tracking of airborne targets with accurate geolocation.

NAVIGATION AID

Navigation aid to the crew is provided through the following mode: ground mapping, DBS, Terrain Avoidance (offered as option), Weather (compliant with civil certification standard) and beacon (SART and SST-181X standards supported).

GROWTH CAPABILITY

Based on MRP (Modular Radar Processor) technology, the Gabbiano Ultra-Light processor can be easily upgraded. Since the radar modes are performed by means of high level software, any new feature or customization requires only software updates with no need for hardware retrofit. A dual channel digital receiver allows advanced and innovative radar modes to be introduced.

CONFIGURATIONS

106cm antenna plate

80cm antenna plate

12" antenna plate

RTP

SUB METRIC RESOLUTION
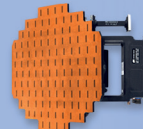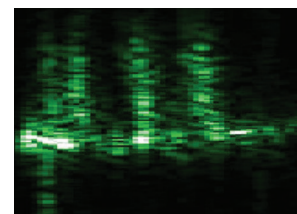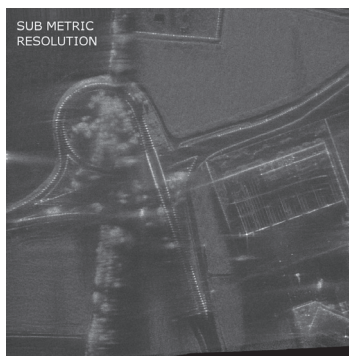
TECHNICAL CHARACTERISTICS

Frequency:	X band
Interfaces:	Ethernet plus Mil Std 1553B, ARINC 429, RS422, and USB
Weight (approx.):	from 24 to 54 kg
MTBF:	2000 hours
Input power:	from 450W to 750W (1kW for <500 ms fast pointing) single power source 28Vdc
Fully coherent transmitter:	Solid state power amplifier
Average transmitted power:	80W or 20W
Cooling:	Air cooled

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