Selex ES
A Finmeccanica Company

Radar & Advanced Targeting

GRIFO S - FIRE CONTROL RADAR
FIELD PROVEN, COMBAT READY

Selex ES has over 60 years of experience and masters all the technologies involved in radar design, development and production. A leader in the airborne radar market, the Company delivers state-of-the-art, modular radar systems.

With over 450 units sold and more than 100,000 flight hours, the GRIFO Radar family, a fourth-generation of X-band coherent pulse-doppler multimode fire-control radar, offers advanced performances to new and upgraded aircraft. Thanks to the modular architecture made by a configurable number of compact Line Replaceable Units (LRU), GRIFO can be easily integrated in modern avionic suites and fully interfaced via HOTAS command, for a cost-effective solution.

The GRIFO S is the most powerful version of the GRIFO Radar Family, featuring a unique 560W air-cooled TWT-based transmitter with wideband frequency agility, a monopulse flat plate slotted array antenna with guard channel fully processed and IFF dipoles, as well as the flight-proven suite of operative modes of the radar family.

KEY FEATURES

- Multimode pulse doppler
- Antenna tailored to the installation with guard horns and IFF dipoles
- Open architecture
- Worldwide most powerful, air cooled, TWT transmitter
- Advanced processor
- Broad suite of air-to-air, air-to-surface and navigation modes
- Full set of ECCM provisions
- Compatible with BVR missiles
- High reliability
- Ready for electronic scanning antenna
- Growth capability of the existing, field proven, set of radar modes including sensor fusion with IRST and additional Customer request.

Operational Advantages

- Comprehensive suite of operational modes supporting A/A and A/S missions
- Long range detection and tracking in all scenarios:
  - Look-up and look-down, any altitude
  - Head on and Tail Target aspects
- High Resolution imaging (sub-metric SAR) and identification capability
- Wide scan sector
- Multiple target tracking
- HOTAS and helmet designation.

Design Advantages

- Fully coherent, TWT-based, air-cooled transmitter
- Dual channel receiver
- Digital signal and data processing, adaptive pulse compression technology
- Four waveforms -LPRF, MPRF, MPRF look-up, HPRF (with ranging capability), all including range and velocity de-stagger for optimal target detection in any clutter condition
- Embedded scan converter and symbol generator
- Modular software architecture for radar modes update and customisation

Integration with Weapon System

- Compatibility with modern semi-active and active missiles:
  - Short Range IR missiles (e.g. AIM-9L-M-X, Python 4)
  - BVR (e.g. AIM-120 AMRAAM, MICA, Derby)
- Support of CCIP and CCRP through precise air-to-surface ranging
- Modern, effective, flexible, and operationally proven ECCM provisions.

The high degree of modularity, with configurable LRUs, allows for installation on various platforms, such as JF-17, F-16, Mirage V, Mirage 2000, MiG 23, MiG 25 and MiG 29.

TECHNICAL CHARACTERISTICS

Weight	< 120kg
Cooling	air cooled
Dissipation	<2.9 kW
Average Transmitted Power	560W
Frequency	X-band
Scan Coverage	± 60° both in Azimuth and Elevation
Scan Rate - Slew Rate	up to 100°/s - 400°/s
MTBF	>220 hrs

Key Parameters

Track while scan	10 targets tracked, 8 displayed
SAR resolution	< 1m
Track formation range	> 40 NM
look-up detection range	> 50 NM

MODES AVAILABLE

Air–to-air

- Single target track
- Dual target track
- Track while scan
- Range while search (normal)
- Radar while search (adaptive)
- Velocity search
- Spot
- Situation awareness mode

Air combat

- Slewable scan
- Vertical acquisition
- HUD acquisition
- Boresight acquisition

Air-to-surface

- Real beam ground map
- Doppler beam sharpening
- Spotlight Synthetic Aperture Radar
- Inverse Synthetic Aperture Radar
- Ground moving target indicator
- Sea surface search 1
- Sea surface search 2
- Fixed target track
- Ground moving target track
- Sea single target track
- Sea moving target track
- Air-to-ground ranging

Navigation support

- Beacon interrogation
- Weather avoidance
- Terrain avoidance

ECCM capabilities

- Low antenna sidelobes
- Guard channel fully processed
- Monopulse antenna
- Low peak power; pulse compression
- Random and adaptive frequency agility
- DOJ
- HOJ
- AOJ
- Provisions against:
  - Range gate/ velocity gate stealers
  - Noise jammers
  - CW jammers

For more information please email **infomarketing@selex-es.com**
Selex ES Ltd - A Finmeccanica Company
Sigma House - Christopher Martin Road - Basildon - Essex - SS14 3EL - United Kingdom - Tel: +44 (0) 1268 522822