Selex ES
A Finmeccanica Company

Radar & Advanced Targeting

GRIFO-346 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. Leader in the airborne radar market, the company delivers state-of-the-art radar systems.

With over 450 units sold and more than 100,000 operational flight hours, the GRIFO Radar family, a fourth-generation X-band coherent pulse-Doppler multimode-multirole fire-control radar, provides advanced performance to new and upgraded aircraft.

Thanks to its modular architecture based on a configurable number of compact Line Replaceable Units, GRIFO can be easily integrated in modern avionic suites and fully interfaced via HOTAS command, for a cost-effective solution.

The GRIFO-346 is the latest version of the GRIFO Radar Family, featuring a wider set of advanced and up to date capabilities proposed for the Alenia Aermacchi M-346 LCA.

KEY FEATURES

- Multimode, multirole X-band
- Multiple channels fully coherently pulse doppler processed
- Open architecture
- Air cooled, high efficiency TWT transmitter
- Advanced processor
- Broad suite of field proven air-to-air, air-to-surface and navigation modes, high resolution SAR and ISAR
- Full set of ECCM provisions
- Tracking accuracy supporting missiles release and guidance
- Monopulse flat plate slotted array antenna
- Growth capability to extend the existing features, including sensor fusion with IRST

Operational Advantages

- Comprehensive suite of operational modes supporting A/A and A/S missions
- Long range detection and tracking in all scenarios: lookup and look-down, any altitude, any aspect
- High Resolution imaging: sub-metric SAR and ISAR
- Wide scan sector
- Multiple target tracking
- HOTAS and HMD designation
- Modern, effective, flexible, and operationally proven
- ECCM provisions

Design Advantages

- Fully coherent, high efficiency TWT-based, air-cooled transmitter
- Multiple channel receiver
- High rate DSP, wideband waveform generator
- Four waveforms (LPRF, MPRF, MPRF look-up, HPRF), 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

Multiple target tracking supporting accurate weapong aiming

- Compatibility with modern IR missiles (e.g. AIM-9L-M-X, Python 4)
- Support of CCIP and CCRP through precise air-to-surface ranging

TECHNICAL CHARACTERISTICS

Weight	< 100kg
Cooling	air cooled
Dissipation	< 1.5 kW
Average Transmitted Power	Class of 200W
Frequency	X-band
Scan Coverage	± 60° both in Azimuth and Elevation

Key Parameters

Track while scan	10 targets tracked, 8 displayed
SAR resolution	< 1m
Track formation range	> 50 NM
Look-up detection range	> 60 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
- Raid assessment

Air combat:

- Slewable scan
- Vertical
- HUD
- Boresight
- Wide
- Narrow

Air-to-surface:

- Real beam ground map
- Doppler beam sharpening
- Synthetic Aperture Radar (SAR)
- Moving target indicator on SAR
- Air-to-ground ranging
- Inverse Synthetic Aperture Radar (ISAR)
- Ground moving target indicator
- Track while scan air-to-surface
- Sea surface search 1
- Sea surface search 2
- Fixed target track
- Ground moving target track
- Sea single target track
- Sea moving target track

Navigation support:

- Beacon interrogation
- Weather
- 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 S.p.A - A Finmeccanica Company
Viale Europa - 20014 Nerviano (MI) - Italy - Tel: +39 0331 587330 Fax: +39 0331 588106