

GRIFO-346

Fire Control Radar



With over 60 years of experience in radar design, development and production, leading in the airborne radar market, we deliver truly 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 Leonardo 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 withIRST

OPERATIONAL BENEFITS

- 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 BENEFITS

- 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 weapon 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

GENERAL

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

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/Item

For more information:

airborneandspace@leonardocompany.com

Electronics Division

Viale Europa snc-20014 Nerviano (MI)-Italy
T +39 0331 587330

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