



## FIRE CONTROL RADAR FIELD PROVEN, COMBAT READY

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 avionics 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.

# GRIFO-346

## 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