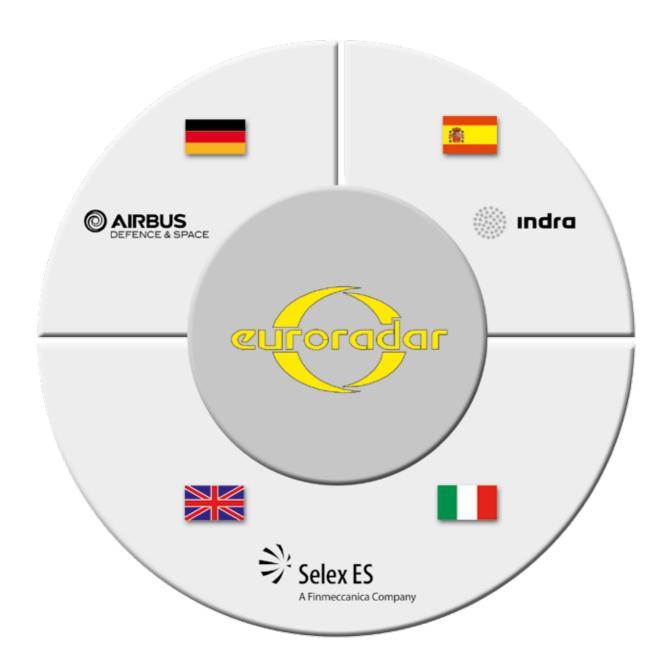




European Cooperation Partner



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CAPTOR-E

Most advanced Wide Field of Regard
Active Electronic Scanned Array Radar for Typhoon

The evolutionary approach to the proven CAPTOR radar by technology insertion

CAPTOR-E All Weather Radar Features

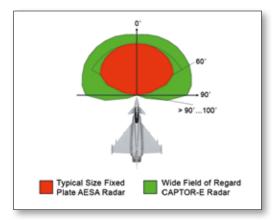
- Multimode A/A and A/G Fire Control Radar and Weapon System Support
- Wide Field of Regard re-positioner
- Increased Air-to-Air Range
- Faster Detection and Tracking of multiple Targets
- Improved Tracking Performance
- Simultaneous/interleaved A/A and A/G Modes
- Extended Missile Guidance
- Increased Operational Performance and Availability
- Reduced Life Cycle Cost
- Growth Potential for Future Enhancements







Complex Airborne Threats Multimode E-Scan Operation



The Re-Positioner for Wide Field of Regard provides an advanced angular coverage combined with optimum range performance



AESA Antenna and Re-Positioner



Transmit/Receive Module

Benefits

The Threat

- Complex scenarios with high agile airborne and ground based threats in combination with asymmetric warfare
- Detection of difficult targets with low Radar Cross Section
- Difficult electronic warfare environment

Facing the Challenge

- Active electronic beam steering with nearly instantaneously repositioning of radar beam enables faster detection and increased tracking ranges
- AESA technology with flexible radar resource management will improve tracking performance/track robustness and missile guidance for simultaneous multi target scenarios.
- Fast beam steering and high reliability of AESA will increase the operational effectiveness and mission availability of fighter aircraft
- Fast electronic scanning, combined with slow moving mechanical re-positioning enables Wide Field of Regard operation and high situation awareness

Enhancement in Mission Success

- · Optimal multirole capability
- Unsurpassed future advantages due to inherent flexibility for simultaneous additional non radar functions – more than radar
- High weapon system mission availability

Operational Benefits

- Increased operational capabilities for detection/ tracking due to high Effective Radiated Power
- Wide Field of Regard re-positioner
- Improved situational awareness through simulataneous/interleaved Air/ Air and Air/Ground operation
- Reduction of overall radar cross section
- Inherent increased reliability of AESA frontend

Radar System Benefits

- Fully solid state Gallium Arsenide AESA technology with high Mean Time Between critical Failures
- High agile, fast radar beam positioning
- Full digital radar, highly reliable system architecture
- Modular hardware and software
- Enhanced ECCM features
- High overall system reliability
- Reduced Life Cycle Cost due to solid state technology and graceful degradation

Technical Design Features

Available AESA Technology

- The Euroradar partner companies have over the years developed powerful AESA technologies and demonstrated during the European AMSAR project in several campaigns the design capabilities for Active Electronic Scanned Array radars.
- CAESAR CAPTOR AESA Radar
 Euroradar funded demonstrator program 2002-2007
 New AESA frontend with CAPTOR-M backend. Successful flight
 demonstrations on Eurofighter Typhoon in May 2007
- CECAR
 GE and UK MoD funded program, performed by Airbus Defence
 and Space and Selex ES to de-risk an E-Scan development
 based on early analysis of recorded E-Scan radar data.

Series Production of Transmit/Receive Modules

- European sources are the basis for powerful Gallium Arsenide technology and advanced highly reliable frontend designs
- Proven series production for space (TerraSAR), airborne (Vixen E), naval and ground (MEADS, BÜR) application in mass quantities

Multiple Radar Modes of Operation

- Simultaneous/interleaved A/A and A/G radar modes
- Air-to-Air search and track/search while track
- Air-to-Ground real beam ground map as well as high resolution modes for surveillance and reconnaissance
- Ground moving target indication search and track
- Sea surface search
- Pilot workload reduction by efficient radar resource management

Integration/ Installation Aspects

- Easy integration in Typhoon
- Highly reliable AESA antenna with graceful degradation
- · Obsolescence robust design with low life cycle cost

Future Growth Potential

- Non Radar Modes like Data link, ESM and ECM support
- Multi channel adaptive beam forming including Space Time Adaptive Processing (STAP)
- Bistatic operation



CAESAR first flight May 2007



CAESAR integrated in Typhoon



Antenna Power Supply and Control Unit



Advanced Modular Processor



Receiver