



VIXEN 500E ACTIVE ELECTRONICALLY SCANNED FIRE CONTROL RADAR

We have stood at the forefront of the airborne radar market since the 1950s when the AI23 radar became the world's first high power monopulse radar to enter squadron service. To maintain our leading position in the market, we have been developing Active Electronically Scanned Array (AESA) technology since the early 1990s.

Vixen 500E is a compact, lightweight, AESA radar for Fighter and Lead-In Fighter Trainer aircraft. Building on over 50 years of fire control radar experience, Vixen 500E delivers greater performance and higher reliability than comparable mechanically scanned radars.

EASE OF INSTALLATION

Vixen 500E comprises three main Line Replaceable Units (LRUs), easing installation and reducing the system volume. Vixen 500E does not require any interconnecting waveguides, therefore making the radar installation a quick and simple procedure.

OBSOLESCENCE PROTECTION

The impact of future obsolescence arising is minimised by the use of Commercial-Off-The-Shelf based processor cards with an open and expandable architecture and a software

abstraction layer. This design enables hardware to be replaced without significantly impacting the radar software.

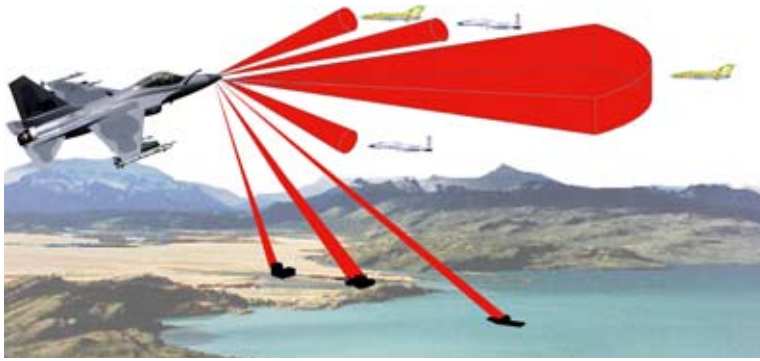
CAPABILITY

Vixen 500E's highly flexible Direct Digital Synthesis generated pulse compression waveforms support optimised performance in all modes of operation. Vixen 500E has been designed to meet the full spectrum of fire control radar operational requirements, detecting, identifying, prioritising and engaging targets, whilst remaining resistant to radar countermeasures.

KEY FEATURES

- Low cost ownership
- Superior performance
- Superior reliability
- Software driven
- Easy to install
- Easy to use
- Mode interleaving
- No waveguides
- Electronic Beam Steering
- Beyond visual range weapons compatibility.

Vixen 500E Active Electronically Scanned Fire Control Radar



Vixen 500E delivers a broad range of air-to-ground, air-to-air and air combat capabilities



Synthetic Aperture Radar (SAR) Ground Mapping

TECHNICAL SPECIFICATIONS

Frequency

X band

Scan Coverage

> ± 60°

Scan Velocity

Instant beam switching

MTBcF

> 1000hrs

Modes Available

Air-to-Air Modes	Track while scan Single target track
Air Combat Modes	HUD search Vertical scan Slewable scan Boresight
Air-to-Surface modes	Real beam ground map Sea Surface Search and Track Synthetic Aperture Radar mapping (standard and high resolution) Ground Moving Target Indicator Beacon interrogation Inverse Synthetic Aperture Radar Imaging Freeze Mode
Interleaved Modes	A number of situational awareness modes

Key Parameters

Track While Scan	> 10 Targets
SAR Resolution	< 3 m
Track Formation Range (look down)	> 25 nm
Track Formation Range (look up)	> 35 nm

RELIABILITY

The Vixen 500E radar minimises the impact of transmitter and receiver failure by using many solid state Transmit/ Receive Modules within the fixed array. As a result, component failures within the array display graceful performance degradation rather than complete system failure, delivering high operational availability when compared with conventional, mechanically scanned radar systems.



Common Commercial-Off-The-Shelf (COTS) Processor

For more information please email sales.marketing@selexgalileo.com

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