

# GIRAFFE 4A

## MULTI MISSION FLEXIBILITY

GIRAFFE 4A combines the battle-proven designs from the ARTHUR and GIRAFFE AMB product families with an all-new radar sensor, based on AESA (Active Electrically Scanned Array) technology. This new radar offers exceptional range, performance and multi-function operational flexibility in a single solution.

- GIRAFFE 4A CAN ACT** simultaneously in the following roles without performance degradation:

  - **Air Surveillance.** The ability to identify and track a high number of objects simultaneously makes the system suitable for air and sea surveillance as well as military ATC.
  - **Ground-Based Air Defence.** Tracks air targets together with identification capability to support multiple simultaneous engagements.
  - **Weapon Locating.** Tracks ballistic projectiles and calculates point of origin and point of impact for counter- battery fire or adjustment of own fire.
- **Sense and Warn.** The ability to detect and warn for small incoming ballistic objects offers valuable protection of own forces or civilian protection objects.

**OPERATIONAL IN ALL CLIMATE ZONES**  
GIRAFFE 4A is specified for operation in extreme climates, ranging from inland, coastal and hot desert to Arctic environments.  
GIRAFFE 4A is reliable and easy to operate. Redundant design such as the AESA concept makes the time between critical failure extremely long; >2,500 h while typical repair time is less than 45 min.

## A WORLD-CLASS LINE-UP

All Saab radars combine battle-proven designs from the renowned ERIEYE (AEW), ARTHUR and GIRAFFE AMB product families. Saab offers a full range of high-performing radar systems for a multitude of applications and mission types.

	GIRAFFE 1X	ARTHUR	GIRAFFE AMB	GIRAFFE 4A	GIRAFFE 8A	RADAR UPGRADES
Air Surveillance			•	•	•	•
Ground Based Air Defence	•		•	•	•	•
Weapon Locating		•		•		
Sense and Warn	•	•	•	•		
Multi Role			•	•	•	



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## MULTIFUNCTION RADAR



# LOOK INTO THE FUTURE

Saab has been active in defence and security for more than 75 years. Solutions for air, sea and land operations, civil security and commercial aeronautics make us a complete business partner. Working with Saab means you will benefit from the ultimate synthesis of experience, efficiency and excellence in engineering.

In radar technology we are at the very forefront and offer outstanding capabilities to demanding customers all over the world. In a way you could say that our mission in this field is to help your forces to virtually look into the future. To see before you are seen and to maintain superior situational awareness.

A line of ground-breaking innovations form a track record that proves our ability to sharpen the **thinking edge**. Making it sharp enough to cut through the barrier of the impossible, strengthening your ability to protect your troops and keep people safe.



# ENGINEERED FOR ADAPTABILITY

The GIRAFFE 4A is designed to serve in several different roles. The system will give the commanding officer real-time information superiority and provide flexible tools to meet current and future threats in both combat and peacekeeping missions.

### MULTI-MISSION CAPABILITY

With GIRAFFE 4A the commanding officer will access very high situation awareness through simultaneous air surveillance and GBAD target acquisition together with weapon locating capacity without performance degradation. If the situation dictates, the commanding officer can choose between search in the entire 360° volume or an optimised search in a sector (40°-120°). Both with coverage up to 70° of elevation.

### OPTIMISED WEAPON LOCATING MODE

GIRAFFE 4A also offers an optimised mode for weapon locating where the radar continuously searches the horizon and immediately tracks incoming projectiles. The point of origin and point of impact are calculated and serve as input for counter-battery fire, adjustment of own fire or warning of incoming fire.

### SURVIVABILITY

- Much emphasis has been put on ECCM performance in the design of GIRAFFE 4A. This includes:
- Ultra-low side lobes
  - Frequency agility; pulse to pulse, burst to burst, and scan to scan frequency agility
  - PRF switching and PRF stagger with random jitters
  - Intermittent (or random) transmission, to confuse hostile ESMS and Anti-Radiation Missiles
  - Sector transmission, which can be independently defined by the operator
  - Automatic selection of least jammed frequency
  - Automatic jammer detection and tracking in both azimuth and elevation

### OPERATED LOCALLY OR REMOTELY

GIRAFFE 4A is designed to be operated locally or by remote control. Local operation is executed with a ruggedised PC in close connection to the system. The system also includes an operator module with two operator places in an NBC protected and armoured shelter.

### FLEXIBILITY & MOBILITY

GIRAFFE 4A can be deployed by two persons in less than 10 min and teardown takes less than 5 min. It can also be airlifted by a single C-130 using standard equipment for container handling. With larger aircraft, such as the IL-76, C-17 or A400M the system can be transported as drive-on/drive-off cargo.

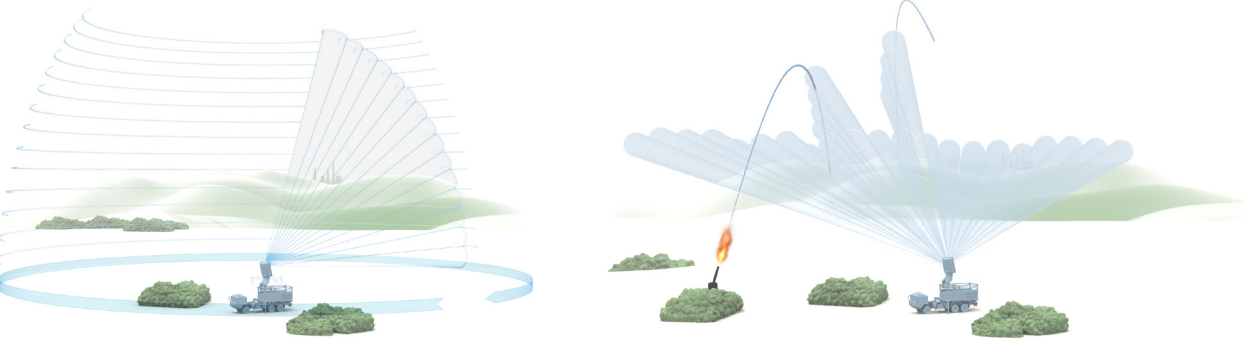
### ILS - INTEGRATED LOGISTICS SUPPORT

ILS is an important part of the system delivery and will form the basis for future maintenance. Saab ILS experts have solid experience in tailoring ILS deliveries together with customers worldwide.



### ANTENNA SYSTEM

- AESA - beam control in azimuth and elevation
- S (E/F) band
- GaN technology



### VOLUME SEARCH

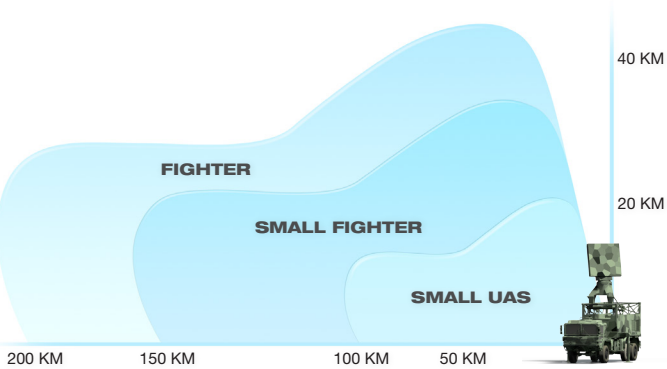
- Rotating or non-rotating mode
- Continuous scan (mechanical or electrical)

### HORIZONTAL SEARCH

- Non-rotating
- Sector scan with Track on demand

### TECHNICAL DATA

Radar type	Stacked beam 3D radar
Antenna type	AESA, digital beam forming
Frequency	S (E/F) band
Elevation coverage	> 70 degrees
Rotation rate	30 or 60 rpm
Search volume	360° or in a sector
Instrumented range	
- Air Surveillance	280 km
- Weapon Locating	100 km
Capacity	
- Air Surveillance	> 1000 tracks
- Weapon Locating	> 100 tracks/min
Power Plant	Internal
Climate zones	All climate zones; in-land, coastal, desert and artic



Specification subject to change without notice.

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