GIRAFFE ELSS
UAV DETECTION
AND TRACKING

www.saab.com
The UAV threat challenges conventional force protection. It jeopardizes critical operations and threatens vital assets. Building on our strong force protection track record and GBAD tradition, Saab can now offer functionality to detect even the very small, commonly available UAVs.

KEY FEATURES OF THE GIRAFFE ELSS FUNCTION

- Exploiting the advantages of the Giraffe:
  - multiple beam concept
  - state of the art clutter suppression
  - high target update rate
  - high measurement accuracy
- Enhanced detection of low radial speed objects
- Detects all types of LSS targets
  - Detection of target fuselage
  - Detection of moving parts when visible
- SAAB-unique classification algorithms

DETECTING THE THREAT

Both civilian and military use of UAVs is increasing. Along with these systems improved endurance and ability to carry payloads, they pose an evolving threat to military operations and key infrastructure. In order to secure freedom of movement and safety of own troops it is vital to be able to detect these threats.

Conventional radar systems usually have problems with detecting and tracking small UAVs operating at slow speeds and, even if detected, distinguishing them from birds and other elements in the surrounding environment.

Saab now introduces the Giraffe ELSS function, capable of coping with the challenges of the UAV threat. It detects and tracks even small/mini-UAVs, with a false alarm rate reduced to an absolute minimum.

OUTSTANDING PERFORMANCE FROM YOUR GIRAFFE

The Giraffe ELSS (Enhanced Low Slow and Small) function offers state of the art UAV detection performance, building on the innovative thinking behind the design of the Giraffe radars. It can be used for a wide range of applications; monitoring airport flight zones, local protection of own forces while on the move, protection of sea operations, camp protection, and UAV surveillance of larger areas.

The ELSS function works in parallel with the main air surveillance mode and the RAM function, meaning that simultaneous air surveillance, RAM detection, and ELSS surveillance is fully supported.

ELSS is available in both land-based and sea-based surface surveillance radar systems through the land and sea versions of the Giraffe 1X, Giraffe AMB, or the Giraffe 4A. It can also be included in your already deployed Giraffe fleet through an upgrade.

CLASSIFICATION AND INTEGRATION

A system capable of detecting even the smallest UAVs needs to be equally capable of selecting what to report further up in the system hierarchy. One essential component is the ability to classify UAVs and distinguish them from objects of less interest.

The Giraffe ELSS function captures and uses all possible parameters from the radar returns from the UAVs, including track data, kinematic and behaviour data, radar cross-section data, Doppler and Micro Doppler data based on the high stability clean Giraffe radar signal.

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