

KRONOS LAND®



MULTIFUNCTIONAL MOBILE RADAR FOR TACTICAL OPERATIONS

KRONOS LAND is a mobile multifunctional radar system designed by the company to support air and coastal defence tactical operations. The system simultaneously performs surveillance, dedicated target tracking and ECCM. It detects and tracks any type of air and maritime threat, such as high speed missiles, low level UAVs, hovering helicopters, rockets and artillery blasts from offensive gunfire, as well as vessels and small and highly manoeuvrable surface targets.

THE SOLUTION

Emerging threat scenarios and requirements for military forces to exercise increased security with reduced manpower and improved response times demand easily deployable tactical sensor units to support a range of different operations. In this context, the company produced the KRONOS LAND mobile radar for tactical operations. It combines a range of capabilities into a single system, is easily deployable and can be put into operation in a very short time.

KRONOS LAND can be easily integrated into a defence surveillance network, contributing to the general Recognized Air Picture (RAP). It can also control SHORAD and VSHORAD systems. It represents one of the most reliable choices for SAM systems, and has been fully engineered and integrated with both semi active and fully active missiles.

In addition, KRONOS LAND also includes Counter Rocket, Artillery & Mortar (C-RAM) capabilities by providing simultaneously the following functions:

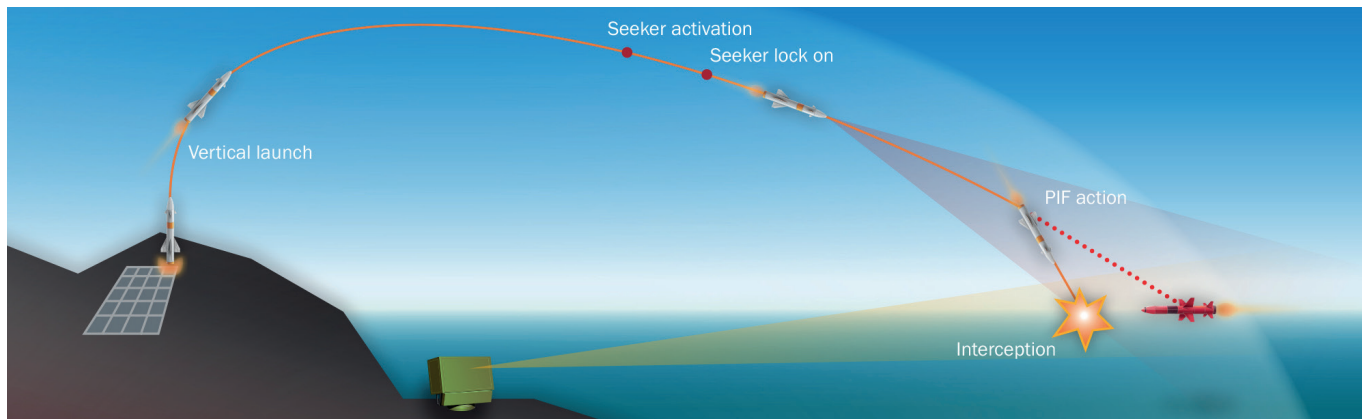
- Fire Finder to detect and locate enemy artillery
- Fire Director to direct fire from friendly forces, estimating and recording shell impact points.

It is a member of the KRONOS multifunctional radar family, based on Active Electronic Scanning Array (AESA) technology.

KEY FEATURES

KRONOS LAND represents an outstanding solution for tactical air and missile defence operations. It offers:

- AESA technology, based on the company's fully-owned GaAs and GaN manufacturing capability, developed within our in-house foundry
- Multifunctional capabilities, allowing a single system to be fielded instead of multiple ones
- Autonomous, easy deployment and operation in harsh environments
- Extremely fast reaction times
- High system reliability and graceful degradation
- Superior ECCM capabilities.



The system

Based on AESA technology, KRONOS LAND has a detection volume that is extremely wide in elevation, and extended in range and altitude. The system consists of:

- AESA antenna, with electronic scanning independently and simultaneously both in azimuth and elevation. This offers variable dwell time and data rate without changing the mechanical antenna rotation rate (60rpm).
- A real-time radar processor that includes a scheduler and threat evaluation function. Depending on assessed threat level, any detected target is tracked with one of the following refresh rates while rotating at 60rpm:
 - HPT (High Priority Tracking) with an update period of 1 second
 - LPT (Low Priority Tracking) with an update period of 4 seconds
 - The processor assures continuity of track management through dedicated waveforms for dynamic adaptation to the operational scenario

- Command, Control & Communication, based on two internal C2 consoles that allow operators to control the local air and tactical picture, assigning threats to weapon systems (medium, short and very short missile or artillery systems).

KRONOS LAND is a very compact, flexible and fully autonomous radar system. It fits within an ISO 20ft volume. It is transportable by standard commercial trucks, helicopter, aircraft, ship or train. KRONOS LAND can be deployed on unprepared sites by two people and made operational in 10 minutes from arrival on site.

TECHNICAL SPECIFICATIONS

• Operating band	C-Band
• Antenna technology	Active Full Phased Array, TX/ RX solid-state modules
• Antenna rotation speed	60rpm
• Electronic scanning capability	$\pm 45^\circ$ Az, $\pm 60^\circ$ El
• Surveillance range	Up to 250Km
• Tracking update rate	Up to 1 second
• Elevation coverage	Up to 85° in tracking Up to 70° in surveillance
• Number of tracks	300 (maximum)

• IFF modes	1, 2, 3/A, C, S, and secure modes
• Navigation aid	Inertial Navigation System and GPS
• Protection	NBC
• BITE	Run-time fault identification and location
• ECCM	Automatic frequency selection Up to 4 tracks on jammer updated every second Side lobe blanking Low peak emitting power

For more information:

infomarketing@leonardocompany.com

Electronics Division

Via Tiburtina, Km 12.400, 00131 Rome-Italy
T +39 06 41501, F +39 06 4131133

This publication is issued to provide outline information only and is supplied without liability for errors or omissions.

No part of it may be reproduced or used unless authorised in writing.

We reserve the right to modify or revise all or part of this document without notice.

2022 © Leonardo S.p.A.

MM07663+ 05-22



leonardo.com

