



TRML-3D/32

Mobile Air Surveillance and Defence Radar System

The TRML-3D system was developed to be rapidly deployable and highly mobile for fast camp and decampment. It is a fully coherent multi-mode phased array surveillance and target acquisition radar system designed for short and medium-range detection and air defence.

The 3D radar is capable of detecting, tracking, and classifying various types of targets with a particular emphasis on small, fast and low-flying aircraft, missiles and hovering helicopters.

The radar has a detection range of up to 200 km with an antenna scan time between 2 and 9 seconds, depending on the mode. It can be deployed as a stand-alone radar or can be integrated into air defence networks in coordination with other radars and command and control systems, taking no more than 10 minutes to become operational.

Functional Data

Transmit and Receive Units	
Frequency	C-band
Transmitter	GaN solid state
Antenna	Phased array, 32 rows of radiators
IFF antenna	Linear array, separate below PR antenna
Signal and Data Processing	
Type	Doppler signal processing (MTI/MTD)
Signal processor	Pulse compression
Instrumented range	Up to 200 km depending on selected mode
Height coverage	20 km
3D target tracking	Automatic in complete search volume
Capacity	> 400 targets simultaneously
Equipped with Command and Control Functions	
Tactical functions	<ul style="list-style-type: none">• LAP generation and target identification/classification• Threat evaluation• Weapon designation
Radar netting capability	<ul style="list-style-type: none">• Eliminates gaps in the search volume• Supports jam strobe triangulation
Display systems	Two high-resolution raster scanners
Navigation	Inertial north-seeking system with GPS/GLONASS
Power Supply	
Unit	On-board diesel generator and access to external power
Voltage	240/400 V, 50 Hz
Power generator	42 kVA
Power consumption	33 kVA

Application

- Air defence with VSHORAD and SHORAD weapon systems
- Air and sea target surveillance
- Fielded in different C2 applications
- Designed for integration of radar netting systems
- High system reliability for frequent relocations or long-lasting deployment

Features

- Accurate 3D track data
- Small target-detection capability
- Excellent suppression of land and sea clutter
- High-performance ECCM functions
- Highly efficient update rate
- Fully automatic air picture generation
- Four/five operational modes selectable by an operator
- Integrated SSR MSSR2000I MK XA, Mk XII and Mode S, Mode 5 growth potential

Mobility

- 2 antenna positions: on shelter roof level or 12 m above ground
- Fully automatic operation and/or remote control

- High mobility, deployment and tear-down time < 10 min
- Container with ISO corners on cross-country truck MAN SX45
- Outstanding cross-country performance in difficult terrain
- CBR protection as an option
- Transportable on C-130 Herkules

User-friendliness

- Single vehicle configuration
- Two operator positions, third optional
- Fully automatic in radar control and systems integration
- Embedded navigation system
- BITE
- Repair by replacement of components
- Fully air conditioned

Interfaces

- Adaptable to different communication and C2 systems
- VHF, UHF, TADIL, fibre-optical interfaces prepared



Detect and Protect.

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