



RADAR SYSTEMS

exMHR® Enhanced & Extended Multi-Mission Hemispheric Radar

The exMHR is a cutting edge, ground-based, multi-mission radar for Counter-UAS, Very Short-Range Air Defense (VSHORAD), Counter Rocket, Artillery and Mortar (C-RAM), Fire Control, and Hemispheric Surveillance operational missions.

This pulse-Doppler, software-defined, S-band radar platform incorporates GaN amplifiers and advanced antenna topology, enabling fire-control tracking accuracy, as well as unprecedented clutter handling and multipath mitigation.

The exMHR is a best-of-breed radar with exceptional situational awareness and survivability during combat that offers superior SWaP-C and On-The-Move operation capabilities.

exMHR MAIN ADVANTAGES

- Extended fire-control tracking accuracy, multipath and clutter handling through advanced antenna topology
- At the heart of mobile GBAD systems
- Complete Dynamic Air Situational Picture (ASP) while mounted on a tactical vehicle or vessel
- Superior performance against low signature targets
- Multi-Mission – “one radar does it all”
- MOSA – Modular Open System Architecture, easily integrated with all kinds of Hard and Soft kill systems
- Software-defined, automated operation through advanced signal processing and algorithms
- Handles hundreds of targets through Track While Search (TWS) and Revisit modes
- Enhanced fast volume scan coverage, full Hemispheric (360°) search & track with four radars
- In-depth 4D analysis of Doppler and other target features
- SWaP-C superiority, unprecedented affordability



Front View

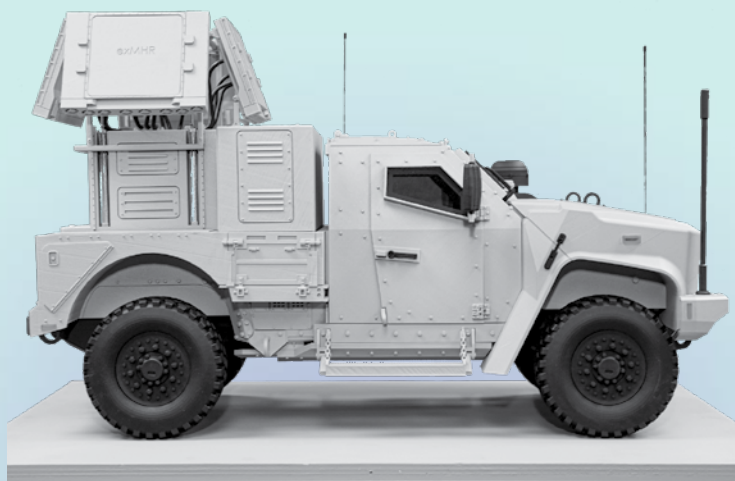


Rear View

RADA'S exMHR SUPPORTS A VARIETY OF ON-THE-MOVE AND STATIONARY OPERATIONAL MISSIONS FOR LAND AND MARITIME

APPLICATIONS:

- Counter-Unmanned Aircraft System (C-UAS) & Short-Range Air Defense (SHORAD), handles all types of aerial threats including class-1 micro-drones
- Counter Rocket, Artillery, Mortar (C-RAM) and Sense & Warn, both indirect and low-QE fire; Point-of-Origin (POO) and Point-of-Impact (POI) determination, ranging of friendly fire



KEY FEATURES

- Active Electronically Scanned Array (AESA) antenna
- Extremely high doppler resolution that provides fast, accurate threat detection and classification
- Wide range of threat velocities
- Coexistence capability
- Multipath reduction and clutter handling through advanced antenna topology
- Electronic Counter Countermeasures (ECCM) capabilities
- Cyber Certification (Risk Management Framework) Ready
- Integrated with IFF

OPERATIONAL MISSIONS AND NOMENCLATURE

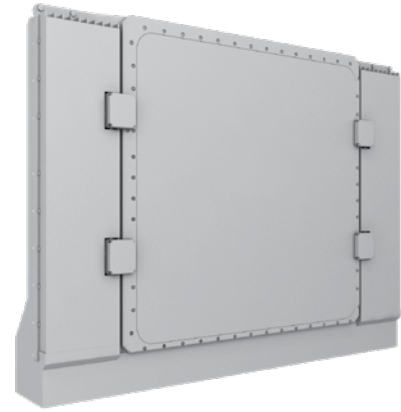
C-UAS, SHORAD	RPS-202
C-RAM, Sense & Warn, Friendly Fire Ranging	RPS-200 / RPS-201



Typical Installation

PARAMETERS

Spatial coverage	Single radar: 90° Az, 90° El Four radars installation: full hemisphere
Interfaces	Ethernet, I/O Discrete
Interface Protocols	ASTERIX, Customer-tailored
Input Power	28 VDC
Power Consumption	2,500 W average
Dimensions	Height: 90 cm, Width: 120 cm, Depth: 30 cm
Weight	150 kg
Operating Temperatures	-40° C to +55° C
Cooling Method	Passive (Fans are added for harsh environments)



MAXIMUM DETECTION RANGES

Threat	Range
Nano UAV	18 Km
Medium-Size UAV	80 Km
Heavy Transport Aircraft	200 Km
Fighter	110 Km
Fighter- Low RCS	60 Km
Utility Helicopter	80 Km
Light/Medium Mortar / Short Range Rocket	18 Km
Heavy Mortar	20 Km
Direct- Attack Rocket / Missile	24 Km
Vehicles & Medium Size Vessel	80 Km
Large Vessel	130 Km

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