



RADAR SYSTEMS

nMHR® Next-Gen Multi-Mission Hemispheric Radar

The nMHR 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), and Hemispheric Surveillance operational missions.

This pulse-Doppler, software-defined, X-band radar platform incorporates an AESA antenna, GaN amplifiers, and a wide instantaneous frequency band with advanced 4D processing capabilities, providing unprecedented accuracies and target resolution, clutter handling and multipath mitigation.

The nMHR 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.

nMHR MAIN ADVANTAGES

- Complete Dynamic Air Situational Picture (ASP) while mounted on a tactical vehicle or vessel
- Superior performances against low signature targets to provide fire control accuracies
- 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
- Unmatched SWaP-C superiority



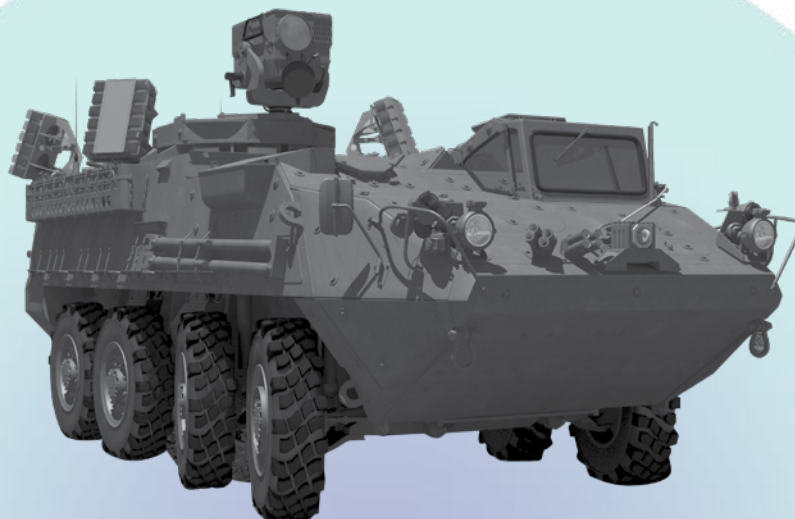
Front View



Rear View

RADA'S nMHR SUPPORTS A VARIETY OF ON-THE-MOVE AND STATIONARY OPERATIONAL MISSIONS:

- 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
- Hemispheric Surveillance, simultaneous detection and tracking of aerial and ground threats



KEY FEATURES

- Active Electronically Scanned Array (AESA) antenna with Wide Band Operation
- Innovative GaN switching technology
- Extremely high doppler resolution that provides fast, accurate threat detection and classification
- Planar T/R architecture, direct RF sampling, digital beam forming
- Wide range of threat velocities
- Extended coexistence capability
- Significant multipath reduction
- Extended Electronic Counter Countermeasures (ECCM) capabilities
- Cyber Certification (Risk Management Framework) Ready

OPERATIONAL MISSIONS AND NOMENCLATURE

C-UAS, SHORAD	RPS-92
C-RAM, Sense & Warn	RPS-90 / RPS-91
Hemispheric Surveillance	RPS-94



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 (per MIL-STD-1275E)
Power Consumption	700 W average
Dimensions	Height: 63 cm, Width: 46.2 cm, Depth: 15.5 cm
Weight	40 kg
Operating Temperatures	-40° C to +55° C
Cooling Method	Passive only



MAXIMUM DETECTION RANGES

Threat	Range
Nano UAV	8 Km
Medium-Size UAV	36 Km
Heavy Transport Aircraft	80 Km
Fighter	52 Km
Fighter- Low RCS	28 Km
Utility Helicopter	36 Km
Light/Medium Mortar / Short Range Rocket	11.2 Km
Heavy Mortar	9.6 Km
Direct- Attack Rocket / Missile	14 Km
Pedestrians	16 Km
Vehicles & Medium Size Vessel	36 Km

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