ieMHR®
Improved & Enhanced Multi-Mission Hemispheric Radar

The ieMHR 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, S-band radar platform incorporates an AESA antenna and GaN amplifiers with advanced 4D processing capabilities, providing unprecedented clutter handling and multipath mitigation.

The ieMHR 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.
**iemHR MAIN ADVANTAGES**

- Combat proven, TRL-9, at the heart of mobile SHORAD/C-UAS 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

**RADA’s iemHR 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
- Hemispheric surveillance, simultaneous detection and tracking of aerial and ground threats
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

<table>
<thead>
<tr>
<th>C-UAS, SHORAD</th>
<th>RPS-82</th>
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</thead>
<tbody>
<tr>
<td>C-RAM, Sense &amp; Warn</td>
<td>RPS-80 / RPS-81</td>
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<tr>
<td>Hemispheric Surveillance</td>
<td>RPS-84</td>
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</tbody>
</table>
**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  
790 W average

Dimensions  
79 cm

Weight  
58 kg

Operating Temperatures  
-40° C to +55° C

Cooling Method  
Passive only

**MAXIMUM DETECTION RANGES**

<table>
<thead>
<tr>
<th>Threat</th>
<th>Range</th>
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</thead>
<tbody>
<tr>
<td>Nano UAV</td>
<td>10 Km</td>
</tr>
<tr>
<td>Medium-Size UAV</td>
<td>45 Km</td>
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<tr>
<td>Heavy Transport Aircraft</td>
<td>100 Km</td>
</tr>
<tr>
<td>Fighter</td>
<td>65 Km</td>
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<tr>
<td>Fighter- Low RCS</td>
<td>35 Km</td>
</tr>
<tr>
<td>Utility Helicopter</td>
<td>45 Km</td>
</tr>
<tr>
<td>Light/Medium Mortar / Short Range Rocket</td>
<td>10 Km</td>
</tr>
<tr>
<td>Heavy Mortar</td>
<td>12 Km</td>
</tr>
<tr>
<td>Direct- Attack Rocket / Missile</td>
<td>14 Km</td>
</tr>
<tr>
<td>Pedestrians</td>
<td>20 Km</td>
</tr>
<tr>
<td>Vehicles &amp; Medium Size Vessel</td>
<td>45 Km</td>
</tr>
<tr>
<td>Large Vessel</td>
<td>80 Km</td>
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**DRS RADA Technologies**

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