



## RADAR SYSTEMS

# aCHR<sup>®</sup> Advanced Compact Hemispheric Radar

A cutting-edge, ground-based, multi-mission radar.

The aCHR radar provides outstanding protection for the maneuver force. It is optimized for Counter-Unmanned Aircraft System (C-UAS) and Very Short-Range Air Defense (VSHORAD) missions. Both these advanced radars offer best of breed radar sensors for air defense and active defense against all types of aerial threats.

- Deployed on operational APS / VPS and VSHORAD systems
- Superior performance against low signature targets (RCS, Velocity, Altitude)
- Multipath and clutter handling through advanced antenna topology
- Multi-Mission 'one radar does it all'
- Automated operation through advanced signal

processing and algorithms

- Complete dynamic Air Situational Picture (ASP) mounted on tactical vehicle or vessel
- Unique low-probability-of-detection features
- Ballistic survivability by antenna & radome construction
- Advanced antenna topology (MIMO) provides extended accuracies, multipath and clutter handling
- Handles hundreds of targets through Track While Search (TWS) and Revisit modes
- In-depth 4D analysis of Doppler and other target features
- Highly cost-effective SWaP-superiority.

## SUPPORTING A VARIETY OF ON-THE-MOVE AND STATIONARY OPERATIONAL MISSIONS

- Active Protection (APS), Vehicle Protection (VPS) & Hostile Fire Detection (HFD) operational missions; threats such as: RPGs, ATGMs, tank rounds & small arms
- Counter-Unmanned Aircraft System (C-UAS) & Very-Short-Range Air Defense (VSHORAD); aerial threats including class-1 micro-drones
- Hemispheric surveillance, simultaneous detection and tracking of aerial and ground intruders

## KEY FEATURES

- Active Electronically Scanned Array (AESA) antenna, GaN amplifiers
- Software-defined, digital, with adaptive beam forming
- Hemispheric search and track with four radars
- Extremely fast volume coverage
- Wide range of threat velocities
- Interoperable via Standard interfaces
- High immunity through Electronic Counter Countermeasures (ECCM)

## PARAMETERS

Spatial coverage	Single radar: 90° Az, 90° El Four Panel Installation provides Full Hemispheric Coverage
Interfaces	Ethernet, I/O Discrete
Interface protocols	ASTERIX, Customer-tailored
Input Power	28 V (per MIL-STD-1275E)
Power consumption	200 W average
Dimensions	W: 46.4 cm, H: 29.5 cm, D: 18.9 cm
Weight	<24 kg
Operating temperatures	-40° to +55° C
Cooling method	Passive only

## MAXIMUM DETECTION RANGES

Threat	Range
Direct-Attack Rocket / Missile	4 Km
Nano UAV	3 Km
Medium-Size UAV	15 Km
Fighter	22 Km
Utility Helicopter	15 Km
Pedestrians	7 Km
Vehicles	15 Km

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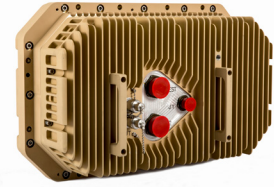
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## OPERATIONAL MISSIONS AND NOMENCLATURE

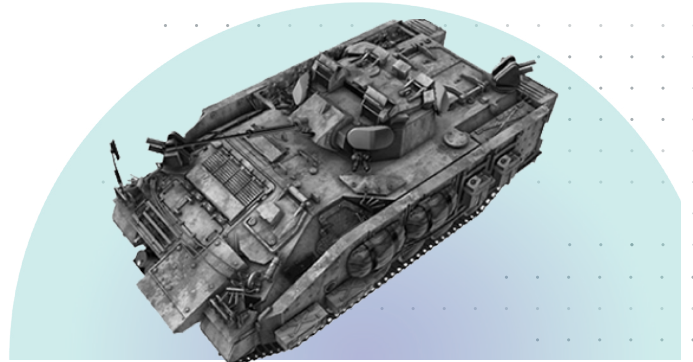
APS/VPS, HFD	RPS-600
C-UAS, VSHORAD	RPS-620
Hemispheric Surveillance	RPS-640



Front View



Rear View



Typical Installations



Other installations

