



Active Protection Solutions for Combat Vehicles

At the Core of Modern Force Protection Systems

RADA's Compact Hemispheric Radar (CHR) detects, tracks and classifies all relevant threats that may be fired at combat vehicles – RPGs, ATGMs, and tank rounds. When three or four radars are connected as a system, they provide hemispheric coverage to the Armored Fighting Vehicle (AFV) on which they are installed.



This software-defined radar platform, in its RPS-10 mission, is the core sensor for advanced Active Protection Systems (APS). It provides the real-time target trajectory data to the APS at ranges and accuracies which enable automatic and precise interception and neutralization of the threat. Integration with any APS and/or Battle Management System (BMS) is enabled thru the CHR's standard Ethernet channel.



When the CHR is integrated with Laser Jammers and/or immediate smoke grenades launching system, this RSK-51 system provides Soft-Kill active protection solution against ATGMs.



In addition to target track data, the CHR computes the firing point and impact point of the fired threats, at tactical accuracies.

The CHR's armored-steel antenna provides resistance to bullets and fragments of the radar and its electronics.

In addition to APS solutions, the CHR software-defined platform can host a variety of operational missions such as Hostile Fire Location, Ground/Surface Surveillance, and combinations of such operational missions.

Nomenclature of the CHR missions:

Mission	Nomenclature
Radar Sensor for APS	RPS-10
CHR-Based Soft-Kill System	RSK-51
Very Short Range Air Surveillance	RPS-12
Hostile Fire Location	RPS-15
3D Perimeter Surveillance	RHS-14

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CHR Radar



Front View



Rear View

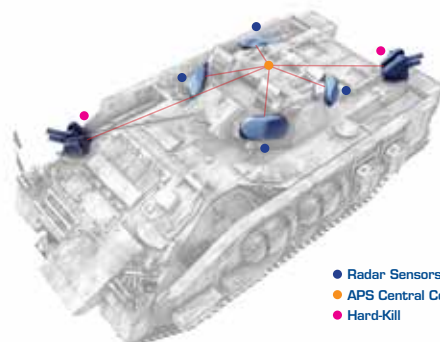
Key Characteristics of the CHR Radar Platform:

- Pulse Doppler, Software-Defined, Multi-Mission
- AESA (Active Electronically Scanned Array) Antenna based on GaN Amplifiers
- Extremely High Elevation Angles, up to Hemispheric Coverage
- On-the-Move (OTM) Operation
- Non-Rotating, Solid State, Digital Radars
- Compact and Mobile, for Tactical Applications
- High Reliability
- Superior Performance-to-Price Ratio

CHR Specifications:

Parameter	Performance
Spatial Coverage (Single Radar)	120° Az, 90° El
Frequency Band	S Band
Antenna Type	GaN-Based AESA
Interfaces	Ethernet, I/O Discretes, RS-422, RS-232
Input Power	28 V (16V to 32V, per MIL-STD-1275B)
Power Consumption (Single Radar)	110 W average
Dimensions	47.5 cm (w) by 27 cm (h) by 16.5 cm (d)
Weight	18 Kg (with armored antenna)
Cooling Method	Passive
Mean Time Between Failures (GF Environment, Calc.)	Over 25,000 Hours
Operating Temperature	-40° to +55° C

Typical Installation



- Radar Sensors
- APS Central Computer
- Hard-Kill



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