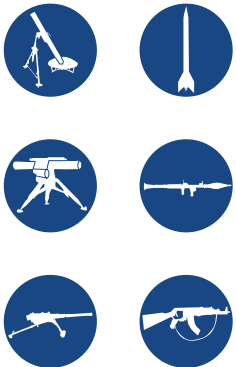




The Ultimate Combat Threat Management



Hostile Fire Location Radar Systems

RADA's Hostile Fire Detection (HFD) and Location radar systems detect, track, classify and locate all types of direct and elevated fires, including: Rockets, Artillery, Mortars (RAM), ATGMs, RPGs, Low-QE Rockets, Small Arms, and more. They classify the threats, calculate the POO (point of origin) and POI (point of impact) with tactical accuracies, display tracking and provide audible and visual warning/alert, as well as data over Ethernet to external C⁴I systems for alerting the threatened forces.

The radar systems can be based on any member of RADA's Multi-Mission Hemispheric Radar (MHR) family of tactical radar platforms – pMHR, eMHR, ieMHR, and also the Compact Hemispheric Radar (CHR) platform. These radar platforms differ primarily in antenna sizes, resulting in maximal detection ranges.

These Hostile Fire Location radars are the systems of choice for advanced tactical force protection and C-RAM solutions, whether on-the-move or stationary. They provide maximal alert time against elevated fire, and accurate POO for preventing further threats coming from the same firing origin.

The radar systems can be integrated with any protection system and other radars/sensors. It may be installed onboard fighting vehicles for deployable, on-the-move force protection, at fixed bases, and also shipborne onboard littoral combat and patrol ships.

A single radar platform provides 90° azimuth coverage using MHR and 120° using CHR. Hemispheric coverage is achieved when four/three identical and interchangeable radars are employed as a system.

In addition to Hostile Fire Location, these programmable, software-defined radar platforms can host a variety of operational missions such as Aerial Surveillance, 3D Perimeter Surveillance, and combinations of such operational missions.

Nomenclature of RADA's radar systems (per platform):

Mission	CHR	pMHR	eMHR	ieMHR
Hostile Fire Location	RPS-15	RPS-40 / RPS-41	RPS-70 / RPS-71	RPS-80 / RPS-81
All-Threat Air Surveillance	RPS-12	RPS-42	RPS-72	RPS-82
3D Perimeter Surveillance	RHS-14	RHS-44	RHS-74	RHS-84

Full Range of Tactical Radar Platforms for the Maneuver Force



- Pulse Doppler, Software-Defined, Multi-Mission Radar Platforms
- 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

Radar Platforms Specifications:

PARAMETER	CHR	pMHR	eMHR	ieMHR
Spatial Coverage (Single Radar)	120° Az, 90° El	90° Cone from Antenna Axis (90° 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	350 W average	590 W average	760 W average
Dimensions	47.5 cm (w) by 27 cm (h) by 16.5 cm (d)	50.4 cm diameter, 16.5 cm max width	67 cm diameter, 16.5 cm max width	79 cm diameter, 17 cm max width
Weight	18 Kg (with armored antenna)	20 kg	40 kg	58 kg
Cooling Method	Passive Only			
Mean Time Between Failures (GF Environment, Calc.)	Over 25,000 Hours	Over 15,500 Hours	Over 11,500 hours	Over 8,500 Hours
Operating Temperature	-40° to +55° C			

Radar Operating Modes:

- **Track While Search:**

The radar search volume is set to meet the desired continuous coverage. Elevation coverage is mission-dependent, can reach up to 90°. Search beams are overlapped to avoid losses. The designed cycle time enables stable tracking of practically unlimited number of targets within the search volume coverage.

- **Target Revisit:**

When a tracked target exits the search volume, the Revisit mode is automatically activated and additional dwells are scheduled among the Track While Search dwells. Targets can be tracked up to the radar spatial coverage limits. Revisit rate is mission dependent, and can be ceased based on target parameters (speed, direction, classification, ...). Each radar can typically handle up to 10 revisited targets.

- **Single Target Tracking**

This mode is employed when the most accurate and frequent information on a certain target is desired, typically by an external weapon system who also commands the radar to this mode. Specifically, angular accuracies of a tracked target are more than doubled and can reach fire control accuracies.

Maximal Detection Ranges per Radar Systems:

Type of Threat	RPS-15 (Hosted on CHR)	RPS-40 (Hosted on pMHR)	RPS-70 (Hosted on eMHR)	RPS-80 (Hosted on ieMHR)
Light/Medium Mortar		5 Km	8.5 Km	10 Km
Heavy Mortar		6 Km	10 Km	12 Km
Short-Range Rocket		5 Km	8.5 Km	10 Km
Direct-Attack Rocket/Missile	2 Km	6.5 Km	11 Km	13 Km
RPG	250 m	Max. Firing Range	Max. Firing Range	Max. Firing Range

Radar System Installations:



Static - Deployable, Fixed



Land Vehicles – Maneuverable/On-the-Move



Shipborne

7 Giborei Israel Blvd.,
P.O. Box 8606
Netanya, 4250407
Israel
Tel: +972-9-892-1111
Fax: +972-9-885-5885
E-mail: mrkt@rada.com

www.rada.com



RADA
ELECTRONIC INDUSTRIES LTD.