

# MPDR MAN PORTABLE DOPPLER RADAR

## Compact, Multi Function Phased Array Radar System

### Applications

Weather Detection  
Short-range Air Surveillance (drones, etc.)  
Perimeter Security  
Electronic Warfare / Communications

### System Specifications

8.5 to 10.5 GHz operating frequency range  
10 MHz instantaneous operating bandwidth  
 $\pm 45^\circ$  azimuth/elevation scan limits  
Ruggedized for extreme environments

Ability to control phase/amplitude at each element  
(for advanced tapering) and aperture size control

### Modular Tile Based Array Architecture - Allows Larger Apertures to be Created for Missions Requiring Greater Sensitivity and Range

SPECIFICATION	MPDR (Single Tile)	MPDR x4 (Four Tiles)
Frequency Range	8.5 to 10.5 GHz	8.5 to 10.5 GHz
Peak Transmit Power	40 W	160 W
Electronic Scan Volume	$\pm 45^\circ$ Azimuth and Elevation	$\pm 45^\circ$ Azimuth and Elevation
Beamwidth	6° Azimuth 6° Elevation	3° Azimuth 3° Elevation
Weather Detection ( $< 18$ dBZ)	$> 40$ km	$> 200$ km
Target Detection (0 dBsm)	$> 9$ km	$< 22$ km
Power Consumption	$< 500$ W	$< 1200$ W



Weather Reflectivity (dBZ) from August 7th, 2019 near Philadelphia, PA (10km range ring interval)

