



AIR AND GROUND DRONE SURVEILLANCE RADAR

FLIR Ranger® R8SS-3D

The man-portable FLIR Ranger® R8SS-3D has the vertical coverage, low minimum detection velocity and algorithms to detect and track up to 512 threats simultaneously, including drones, while filtering bird detections. The R8SS-3D can monitor the coverage area four times per second, running 24/7, detecting all ground and aerial threats in virtually any climate, day and night. Compact and lightweight, it fits in a backpack, draws only 135 W, while costing much less than its vehicle-sized counterparts.

R8SS-3D detects micro UAS targets up to 1.2 km out, pedestrians up to 3 km out, and light vehicles up to 6.5 km out. Multiple scan mode options include fixed sector, alternating sector, and continuous scan. An optional pan-tilt mount enables full 360° fast scanning. Depending on configuration, total backpack weight maxes out at 38.6 pounds. Fast 4-Hz refresh improves detection and tracking of micro drones. One cable, four mounting bolts, an XML command set make it easy to integrate.

FEATURES

FULL PERIMETER PROTECTION

Wide 45° beam elevation provides complete hemispherical detection of virtually every land and aerial target, including micro UAS. With the pan/tilt mount, the R8SS-3D covers 360°.

TARGET CLASSIFICATION

R8SS-3D mitigates bird false alarms and informs the operator if the target is a person, vehicle, UAS, bird, or unknown.

INTEGRATION WITH OTHER SENSORS

R8SS-3D reports target elevation and automatically points cameras and countermeasures to target.

FAST, ACCURATE THREAT DETECTION

R8SS-3D quickly detects one or up to 512 ground and airborne threats simultaneously while accurately displaying each target's location and elevation – whether it's alone or part of a drone swarm.

MAN PORTABLE

R8SS-3D can be transported in a backpack of a dismounted soldier and draws only 135W giving it extreme deployment flexibility.

APPLICATIONS

FORCE PROTECTION

BORDER SECURITY

VEHICLE DISMOUNT

ARTILLERY AND MORTAR FIRE CORRECTION

UAS DETECTION

SPECIFICATIONS

Parameters	R8SS-3D
Instrumented range	7,800 m
Detection Range	
Person	3.0 km
Light Vehicle	6.5 km
Large Vehicle	7.8 km
MicroUAS	1.2 km
MiniUAS	2.1 km
Small UAS	4.0 km
Minimum Detection Range	10m
Scan sector	± 45° (fixed) - 360° with P/T
Vertical coverage	≥ 40°
Number of simultaneously displayed tracks	Up to 512
Electronic scan rate	2 Hz or 4 Hz
Minimum Detection Velocity (MDV)	< 0.1 m/s
Accuracy	
Range Accuracy	± 3 m
Angular Accuracy (azimuth)	< 0.8 degree
Angular accuracy (elevation)	< 3 degrees
Power	
Power consumption	135 W nominal
Operating voltage	20 - 48 VDC
Overview	
Size (in)	14.7" x 14.4" x 4.3" (37 x 36 x 11 cm)
Weight	≤ 23.1 lbs (10.5 kg)
Operating frequency	X-Band
Connectivity	Ethernet
Environmental	MIL-STD-461F, IP67, MIL-STD-810G, FCC/CE
Other Features	
Built-in GPS	Yes
Built-in compass	Yes



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