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 135 W giving it extreme deployment flexibility.

APPLICATIONS
- FORCE PROTECTION
- BORDER SECURITY
- VEHICLE DISMOUNT
- ARTILLERY AND MORTAR FIRE CORRECTION
- UAS DETECTION
## SPECIFICATIONS

<table>
<thead>
<tr>
<th>Parameters</th>
<th>R8SS-3D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrumented range</td>
<td>7,800 m</td>
</tr>
</tbody>
</table>

### Detection Range

<table>
<thead>
<tr>
<th>Type</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person</td>
<td>3.0 km</td>
</tr>
<tr>
<td>Light Vehicle</td>
<td>6.5 km</td>
</tr>
<tr>
<td>Large Vehicle</td>
<td>7.8 km</td>
</tr>
<tr>
<td>MicroUAS</td>
<td>1.2 km</td>
</tr>
<tr>
<td>MiniUAS</td>
<td>2.1 km</td>
</tr>
<tr>
<td>Small UAS</td>
<td>4.0 km</td>
</tr>
</tbody>
</table>

### Minimum Detection Range

- 10 m

### 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

### Other Features

- Built-in GPS: Yes
- Built-in compass: Yes

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