



## 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                                   |
| <b>Detection Range</b>                    |   |
| 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                                 |
| <b>Accuracy</b>                           |   |
| Range Accuracy                            | ± 3 m                                     |
| Angular Accuracy (azimuth)                | < 0.8 degree                              |
| Angular accuracy (elevation)              | < 3 degrees                               |
| <b>Power</b>                              |   |
| Power consumption                         | 135 W nominal                             |
| Operating voltage                         | 20 - 48 VDC                               |
| <b>Overview</b>                           |   |
| Size (in)                                 | 14.7" x 14.4" x 4.3"<br>(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  |
| <b>Other Features</b>                     |   |
| Built-in GPS                              | Yes                                       |
| Built-in compass                          | Yes                                       |



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