

## Self-Contained VHF/UHF DF Sensor



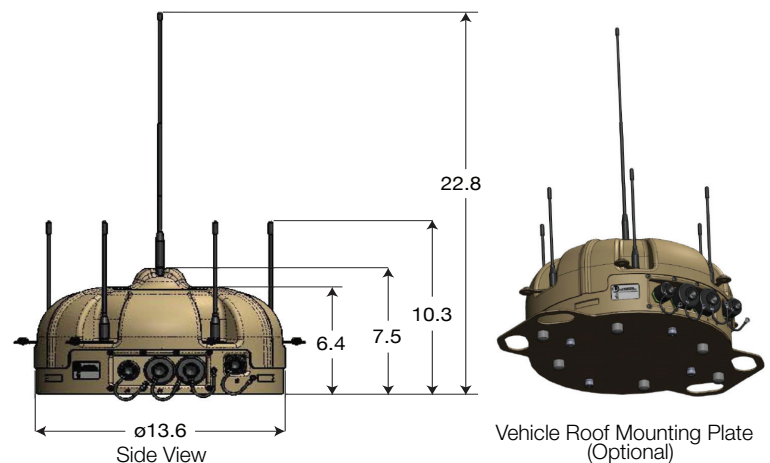
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L-3's RDF-210 is a unique solution for direction finding (DF) and geolocation missions. Our RAPID FIRE technology has enabled the integration of low size, weight and power (SWaP) multi-channel tuners and FPGA signal processors with innovative, mature DF algorithms to create an advanced, fully self-contained DF sensor. The RDF-210 DF sensor independently provides true line-of-bearing (LOB) responses to DF task requests received through an Ethernet connection.

### FEATURES

- Multiple collection modes
- Internal dual-channel tuner and signal processor with on-board DF algorithms
- Multiple operating modes
- Ethernet interface
- Wide frequency range
- Dedicated broadband RF intercept output
- Integrated GPS and compass
- Low size, weight and power

All dimensions shown are in inches.



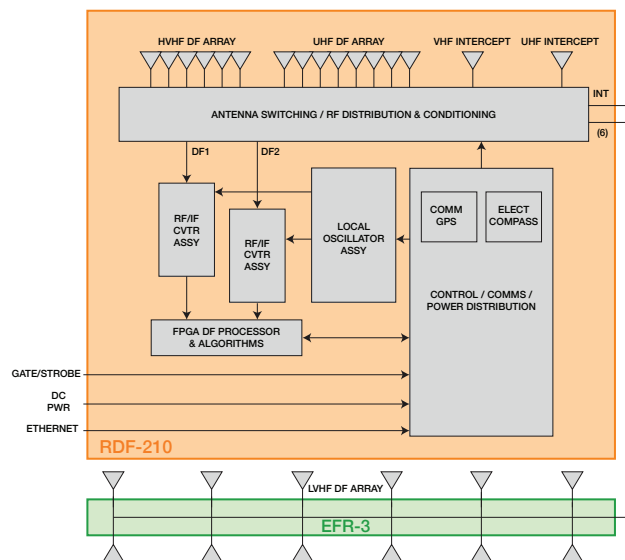
### APPLICATION

L-3's RDF-210 is a self-contained DF sensor capable of supporting bolt-on augmentation of sophisticated COMINT scan and intercept systems where DF tasking was not previously an objective. Fully self-contained DF sensors do not require expensive external receiver resources to accomplish the conventional DF mission. The RDF-210 is a fully autonomous solution for direction finding, but can also be used in a network of DF sensors combined to produce real-time precise geolocation data for targets of interest. The DF sensor's low cost and simple interface architecture enables affordable, networked geolocation. The low SWaP makes this DF sensor suitable for a variety of platforms, including battery powered manpack or unattended ground sensors.

## Self-Contained VHF/UHF DF Sensor

| SPECIFICATIONS                   |                                                                                                                                                                                                                                                                         |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating frequency              | Standard: 400 to 3000 MHz<br>Suitably mounted: 100 to 3000 MHz<br>Optional EFR-3: 20 to 3000 MHz                                                                                                                                                                        |
| DF accuracy (20 dB SNR)          | Standard: 5-degree RMS, typical<br>Suitably mounted: 10-degree RMS, typical<br>Optional EFR-3: 6.5-degree RMS, typical                                                                                                                                                  |
| Operating modes                  | Single and directed search LOB request                                                                                                                                                                                                                                  |
| Collection modes                 | General purpose, gated collection, strobe collection and burst collection                                                                                                                                                                                               |
| Signal types supported           | CW, SSB, AM and FM                                                                                                                                                                                                                                                      |
| Bandwidths                       | 0.5, 3, 6, 15, 25, 50, and 200 kHz                                                                                                                                                                                                                                      |
| LOB time                         | 100 ms (from GPR receipt)                                                                                                                                                                                                                                               |
| Scan rate                        | 40 channels per second min.                                                                                                                                                                                                                                             |
| Navigation data                  | Internal GPS and compass<br>(contact factory for external source)                                                                                                                                                                                                       |
| Size                             | Diameter 13.6 in., height 7.5 in., typical<br>(excluding antennas)                                                                                                                                                                                                      |
| Weight                           | < 14 lb.                                                                                                                                                                                                                                                                |
| Power                            | < 20 W (10 to 32 VDC source)                                                                                                                                                                                                                                            |
| Operating temperature            | -40 °C to +71 °C                                                                                                                                                                                                                                                        |
| Storage temperature              | -40 °C to +85 °C                                                                                                                                                                                                                                                        |
| Environmental (designed to meet) | Humidity: tropical levels (MIL-STD-810F)<br>Altitude: < 15,000 ft. MSL<br>Shock: 11 mS, 40 g peak (MIL-STD-810F 516.5)<br>Vibration: 3 axis, 5 to 500 Hz random (MIL-STD-810F) 514.5C VII, Fig. 514-C-3<br>EMI/RFI (MIL-STD-461E): CE102, CS101, CS114, RE102 and RS103 |

### SYSTEM BLOCK DIAGRAM



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