EchoShield®
Multi-Mission 4D Radar
Next-Gen ESA
Intelligent Search
Multi-Domain, Multi-Mode

A Medium-Range, Software-Defined, Pulse-Doppler, Cognitive 4D Metamaterials ESA (MESA®) Radar.

**Radar Performance**
- **Frequency**
  - Ku-band 15.4 – 16.6 GHz
- **Field of View**
  - 130° Azimuth x 90° Elevation
- **Track Accuracy**
  - < 0.5° Azimuth x < 0.5° Elevation
- **Track Update Rate**
  - 10 Hz
- **Max Tracks**
  - > 1,000 Objects of Interest
- **Instrumented Range**
  - 30 km (Mission Defined)

**SWaP & Environmental**
- **Size**
  - 42.5 cm x 33 cm x 18 cm
- **Weight**
  - 17.8 kg
- **Power**
  - + 21.5 to + 33 VDC
  - < 250 W (Operating)
  - < 100 W (Hot Standby)
- **Operating Temp**
  - - 40° C to + 49° C
- **Weather Protection**
  - IP67
- **Environmental**
  - MIL-STD-810 H

**Integration & Data**
- **Control I/O**
  - Gigabit Ethernet
- **Power I/O**
  - MIL-STD_38999 Style Bayonet
- **Data Output**
  - 10 Gbps Ethernet
  - Range-Doppler Spectrograms
  - 1 Gbps Ethernet
  - Detections, Measurements
  - Tracks, Radar Status
- **Mounting**
  - 4x M6 200 mm Bolt Pattern

**EchoShield Mission Sets**
- Each Mission Set utilizes waveforms and agile beam schedules to rapidly deliver performance tuned to mission needs. Moving between Mission Sets is only a few steps in the software interface, with radar resources tailored to the selected mission snapping into the user foreground.

**Mission Set: Counter-UAS**
- **UAS Mean Tracking Ranges**
  - Group 1: 2.7 km to 4.8 km (- 20 to - 10 dBsm)
  - Group 2: 4.8 km to 6.4 km (-10 to - 5 dBsm)
  - Group 3: 6.4 km to 11.4 km (-5 to 5 dBsm)

**Mission Set: Dismount**
- **Perimeter Surveillance**
  - Human Movement: > 8 km
  - Vehicles: > 11 km

**Additional Mission Sets**
- C-UAS 2 (Larger UAVs)
- Coastal Surveillance
- Airspace Management
- On-the-move (OTM)
Software & Support

SOFTWARE UPDATES
Continuous Improvement from Software-Defined Radar
- Includes All Major and Minor Releases
- Improve Radar Operations
- Enhanced Classification
- Radar Data Visualization Tools
- Radar Support Tools

TECHNICAL SUPPORT
Priority Access to Radar Support
- Review and Training Sessions
- Systems Integration
- Troubleshooting
- Performance Review
- Planning

PRIORITY TECHNICAL SUPPORT
Priority queuing via company match when using support@echodyne.com.

CUSTOMER PORTAL
24/7 access to all tools, manuals, and materials.

PERFORMANCE ENHANCEMENT
Continuous improvements through software development.

USER COMMUNITY
Submit requests for features and functionality.