

A GLOBAL RADAR NETWORK FOR PERSISTENT ORBITAL INTELLIGENCE

The LeoLabs radar network delivers all-weather coverage in the Northern and Southern Hemispheres as well as Equatorial regions.

The Next Generation in Space Radar Technology

Our next-generation radars unlock the advanced, persistent Orbital Intelligence required to detect, locate, and maintain custody of growing threats in space. Designed for rapid deployment and modularity, they can be constructed in as little as five months and scaled up or down to meet mission requirements. By integrating legacy and next-generation radars, LeoLabs is enhancing our ability to identify and monitor activity with unparalleled precision. As we deploy new radar classes and technologies, we will continue to expand our capabilities across mission sets and orbital regimes.

Radar Features

- ▶ AI-optimized scheduling
- ▶ Rapid revisit rates up to 13x daily
- ▶ Precise, low-latency data within 2 minutes
- ▶ Patented Active Electronically Scanned Array (AESA) 3D pulse-Doppler hardware
- ▶ World-class digital signal processing software with field-deployed, in-house developed, software-defined radio backend
- ▶ Can operate independently or as part of an integrated network to augment government systems

AI/ML FOR RADAR SCHEDULING

As the number of objects in LEO rapidly increases, LeoLabs radars commonly have multiple objects in their field of view at a given time. Our dynamic, intelligent scheduling system tells the radars which objects to prioritize and how long to track a specific object for. This technology benefits customers by enabling us to track objects 40% more frequently and with greater accuracy.

RADAR CLASSES

TRACKER

Our first and most proliferated system to date, LeoLabs' Phased Array Offset-Fed Reflector (PAFR) radars enable reliable, superior tracking and monitoring of objects in LEO.

- ▶ Spacecraft tracking including High Interest Objects
- ▶ >10 cm debris tracking
- ▶ Launch & early operations support



SEEKER

LeoLabs' next-generation Ultra High Frequency (UHF) planar Direct Radiating Array (DRA) radars have higher power and a wider field of regard, enabling high-altitude search and detection of more targets through longer tracks.

- ▶ Spacecraft tracking
- ▶ High Interest Object search & tracking
- ▶ >10cm debris tracking
- ▶ Launch & early operations support
- ▶ Foreign launch search
- ▶ Tracking in MEO, GEO & Cislunar (R&D)
- ▶ Hypersonics (R&D)



SCOUT

Our expeditionary S-band DRA radars offer mobility, extensive proliferation, and rapid deployment. Scout is designed to be fielded in large numbers to fill gaps in LEO monitoring and rapidly respond to dynamic Space Domain Awareness missions.

- ▶ Spacecraft tracking
- ▶ High Interest Object search & tracking
- ▶ >10 cm debris tracking
- ▶ Foreign launch detection & tracking in LEO & VLEO
- ▶ Hypersonics (R&D)



RANGER

Scalable S-band DRA radars will offer the ability to detect small, sub-catalog objects in support of advanced space traffic management missions.

- ▶ Spacecraft tracking including High Interest Objects
- ▶ >2 cm debris tracking
- ▶ Battle Damage Assessment
- ▶ Hypersonics (R&D)

