

Advanced Radar for National Security

KNOW SOONER.
RESPOND SMARTER.
PROTECT MORE.



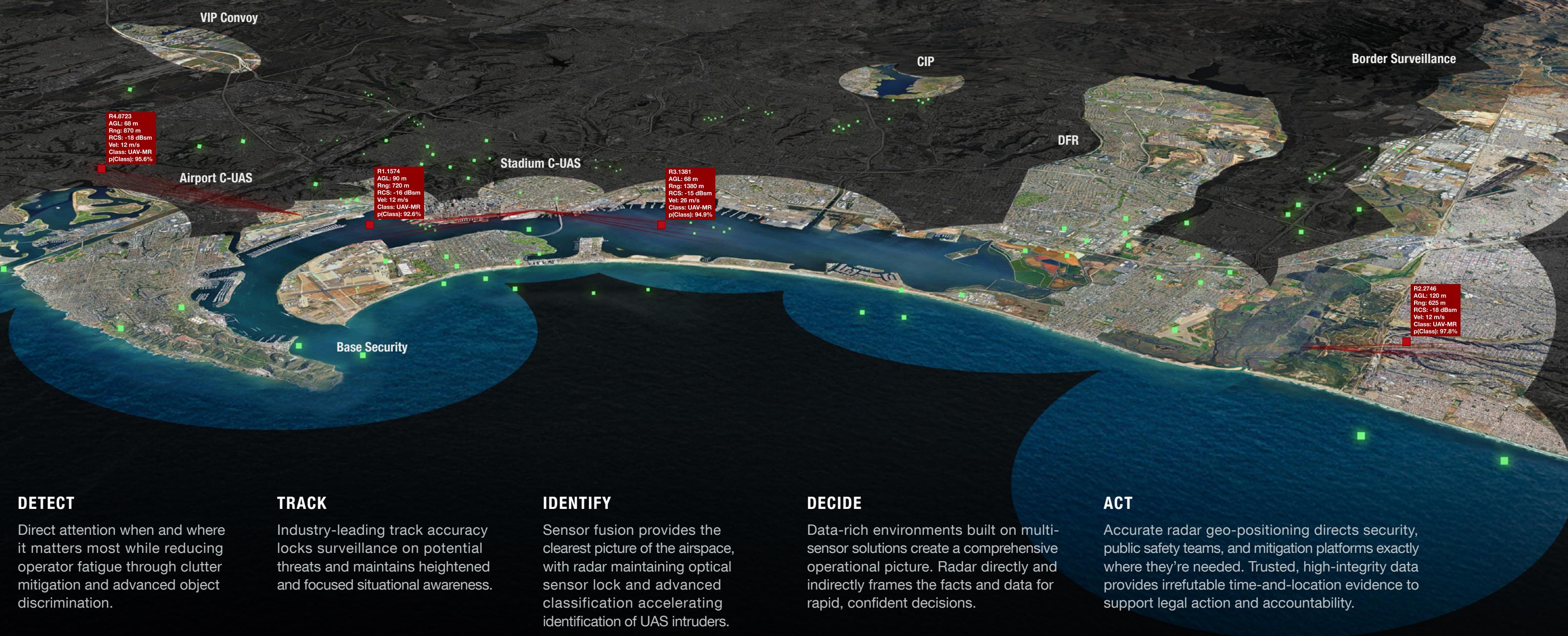
R1.4210
AGL: 89 m
Rng: 2680 m
RCS: -19 dBsm
Vel: 10 m/s
Class: UAV-MR
p(Class): 95.9%



Secure the Airspace

UAS dominance with radar-driven intelligence.

Trusted for Counter-UAS protection by dozens of government agencies around the world, Echodyne radars reliably deliver airspace domain awareness with pinpoint precision. Multi-object detection, high-fidelity tracking, and classification give national security, government agencies, and public safety teams the clarity to identify faster and act with confidence.



One Radar. Many Missions.

Trusted by U.S. and allied agencies to protect troops, borders, people, and critical assets.

NATIONAL SECURITY
BORDER PROTECTION
ASSET SECURITY
EVENT PROTECTION

PERIMETER SECURITY
PUBLIC SAFETY
MOBILE PROTECTION



From borders to urban areas, Echodyne radars provide dependable multi-domain surveillance in any terrain or climate. Integrated into your security ecosystem, high-fidelity radar data sharpens every sensor and improves every outcome.

Multi-Mission. Multi-Domain. Multi-Modal.

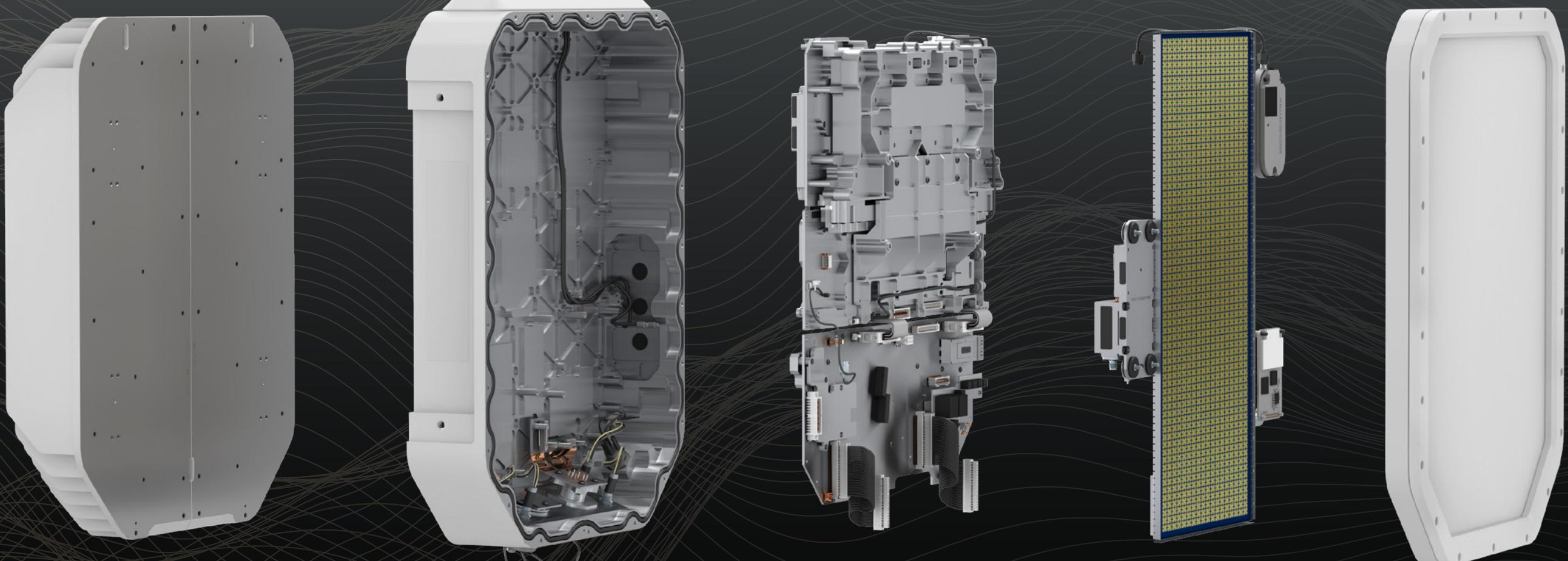
Better by Design

MESA®

Patented physics-design approach shatters design barriers to miniaturizing ESA radar. MESA creates industry-leading ultra-low SWaP ESA radars with commercial pricing and availability.

Software-defined

Software is the foundation for adaptable multi-mission, multi-domain, multi-modal radar. On-radar processing combined with off-radar networking and protocol conversion.



ACCURACY

Highest angular accuracy (azimuth and elevation). Consistently slews optical sensors, locks RWS effectors with 10 Hz precision track data, and pinpoints every object of interest.



CLASSIFICATION

Smarter radar leads to smarter systems. Superior AI-based classification models discriminate every detail in every scene.



MOBILITY

Same advanced radar performance for every modality: fixed, temporary, portable, or on-the-move (OTM), on land, sea, or in the sky.



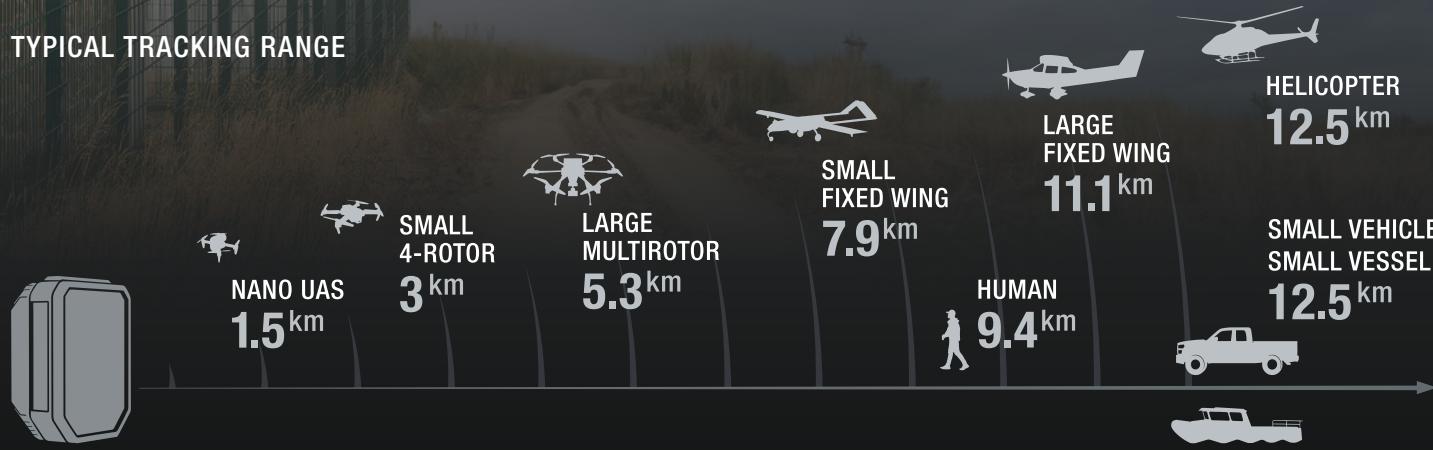
COGNITIVE/ NETWORKING

Seamless networks of radars. Waveform and beam scheduling adaptive to external sensors and systems. Future-ready.

EchoShield®

EchoShield delivers multi-domain awareness tailored to the scale and complexity of government security for fixed, temporary, or on-the-move (OTM) missions. Proven and trusted as the primary sensor in platforms and solutions across the world, EchoShield's best-in-class performance safeguards expansive perimeters, protects convoys, and secures high-consequence sites.

TYPICAL TRACKING RANGE



SIZE
42.9 x 32.9 x 18.7 cm
16.9 x 12.9 x 7.4 in

WEIGHT
19.2 kg
42.3 lbs

POWER
+20 to +33 VDC
(+28 V nominal)
<250 W Operating

FREQUENCY
15.4 – 16.6 GHz

FIELD OF VIEW
130° Az x 90° El

TRACK ACCURACY
< 0.5° Az x < 0.5° El

TRACK UPDATE RATE
10Hz

MAX TRACKS
> 1,000 Objects of Interest



Kits & Accessories

Quick Start Kit
Tower Mount Kit
Rapid Deployment Kit

EchoWare

Advanced Software for MESA Radar

Intuitive UI
Seamless Radar
Single Track ID
Fixed, Temporary, OTM

Powerful Software Platform Enabling Enhanced Cognitive Radar Capabilities



EchoWare combines advanced MESA capabilities with powerful off-radar software to deliver an abstraction layer that seamlessly integrates multiple (n) Echodyne radars into a single radar instance.

One interface to the radar network. A single interface to manage all radars. A single Track ID for each object, regardless of number of radars in the network. One software platform for every modality – fixed, portable, temporary, or on-the-move (OTM).

Technical & Software Support

Companion package with dedicated tech support and continuous software improvements.



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.

EchoGuard®

EchoGuard is proven in government security, national security and border operations, delivering dependable radar coverage in the most demanding environments. Compact and portable, it adapts easily to both urban and remote missions where heightened situational awareness and rapid deployment are equally essential. As a cornerstone in multi-sensor platforms, EchoGuard reliably monitors surface and air threats to enhance layered security operations.

TYPICAL TRACKING RANGE



SIZE
16.3 x 20.3 x 5.7 cm
6.4 x 8 x 2.3 in

WEIGHT
1.25 kg
2.8 lbs

POWER
+15 to +28 VDC
50 W Operating

FREQUENCY
24.45 - 24.65 GHz (USA)
24.05 - 24.25 GHz (INTL)

FIELD OF VIEW
120° Az x 80° El

TRACK ACCURACY
<1° Az x <1.5° El

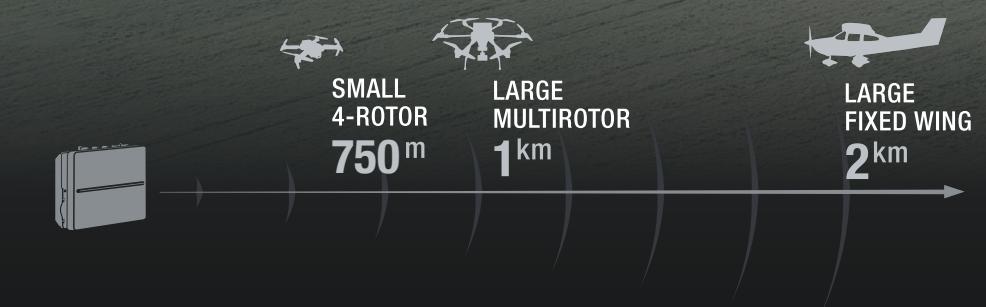
TRACK UPDATE RATE
10Hz

MAX TRACKS
Up to 20 Simultaneous

EchoFlight®

EchoFlight takes security vertical. Whether temporary or permanent, tethered drones, aerostats, and UAVs equipped with radar secure the perimeter anywhere, anytime.

TYPICAL TRACKING RANGE



SIZE
12.1 x 18.7 x 4.1 cm
4.8 x 7.3 x 1.6 in

WEIGHT
819 g
1.8 lbs

POWER
+12 to +28 VDC
45 W Operating

FREQUENCY
24.45 - 24.65 GHz

FIELD OF VIEW
120° Az x 80° El

TRACK ACCURACY
<1° Az x <1.5° El

TRACK UPDATE RATE
10 Hz

MAX TRACKS
Up to 20 Simultaneous



Kits & Accessories

Quick Start Kit
Tower Mount Kit
Radar Hub
Lightweight Deployment Kit

Technical & Software Support

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Echodyne, the radar platform company, is a U.S. designer and manufacturer of advanced commercial radar systems for defense, government, and commercial market applications. The company combines patented metamaterials electronically scanned array (MESA) architecture with powerful software and machine learning to deliver high fidelity situational awareness data pinpointing activity in air and surface domains with unrivaled speed, accuracy, and precision. Proven and trusted by militaries, agencies, integrators, and critical infrastructure across the globe, Echodyne's products set a new standard for radar excellence. Privately held, the company is headquartered in Kirkland, WA, USA and backed by Bill Gates, NEA, Madrona Venture Group, Baillie Gifford, Northrop Grumman, and Supernal, among others.

See radar in action at Echodyne.com.

