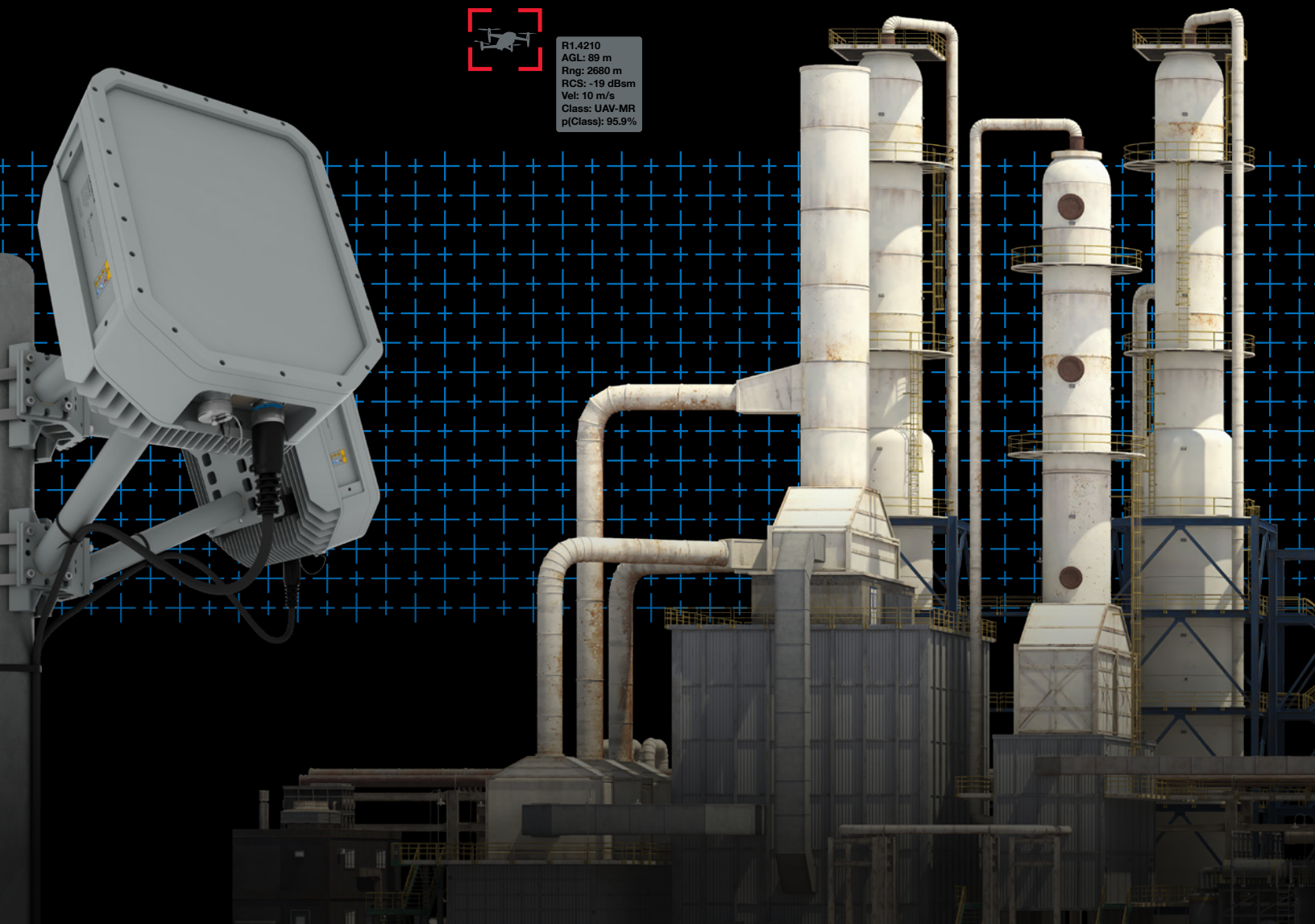
ECHODYNE

Smarter Radar. Superior Security.

BETTER DATA.
REACT FASTER.
OWN EVERY PERIMETER.



Unmatched Airspace Awareness

Command the skies. Secure what's below.

Actively deployed across hundreds of Counter-UAS operations globally, MESA radars reliably deliver precise object data and high-fidelity tracking to drive faster identification and confident security operations.

DETECT

Direct attention when and where it matters most while reducing operator fatigue through clutter mitigation and advanced object discrimination.

TRACK

Industry-leading track accuracy locks surveillance on potential threats and maintains heightened and focused situational awareness.

IDENTIFY

Sensor fusion provides the clearest picture of the airspace, with radar maintaining optical sensor lock and advanced classification accelerating identification of UAS intruders.

DECIDE

Data-rich environments built on multi-sensor solutions create a comprehensive operational picture. Radar directly and indirectly frames the facts and data for rapid, confident decisions.

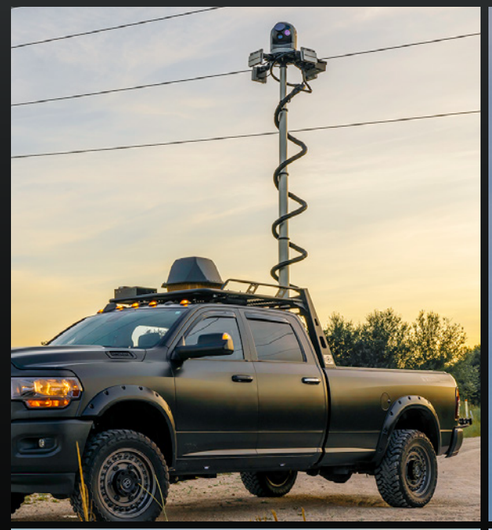
ACT

Accurate radar geo-positioning directs security, public safety teams, and mitigation platforms exactly where they're needed. Trusted, high-integrity data provides irrefutable time-and-location evidence to support legal action and accountability.

One Radar.
Perimeter Secured.

Flexible enough for any facility.
Powerful enough for every threat.

AIRPORTS
DATA CENTERS
ENERGY
OIL & GAS
PRISONS
PORTS
PUBLIC SAFETY
STADIUMS
UTILITIES



From busy ports to remote power facilities, MESA radars deliver dependable, multi-domain surveillance. The intelligence-rich data integrates seamlessly into perimeter security ecosystems, closing coverage gaps, enhancing other sensors, and sharpening decision-making.

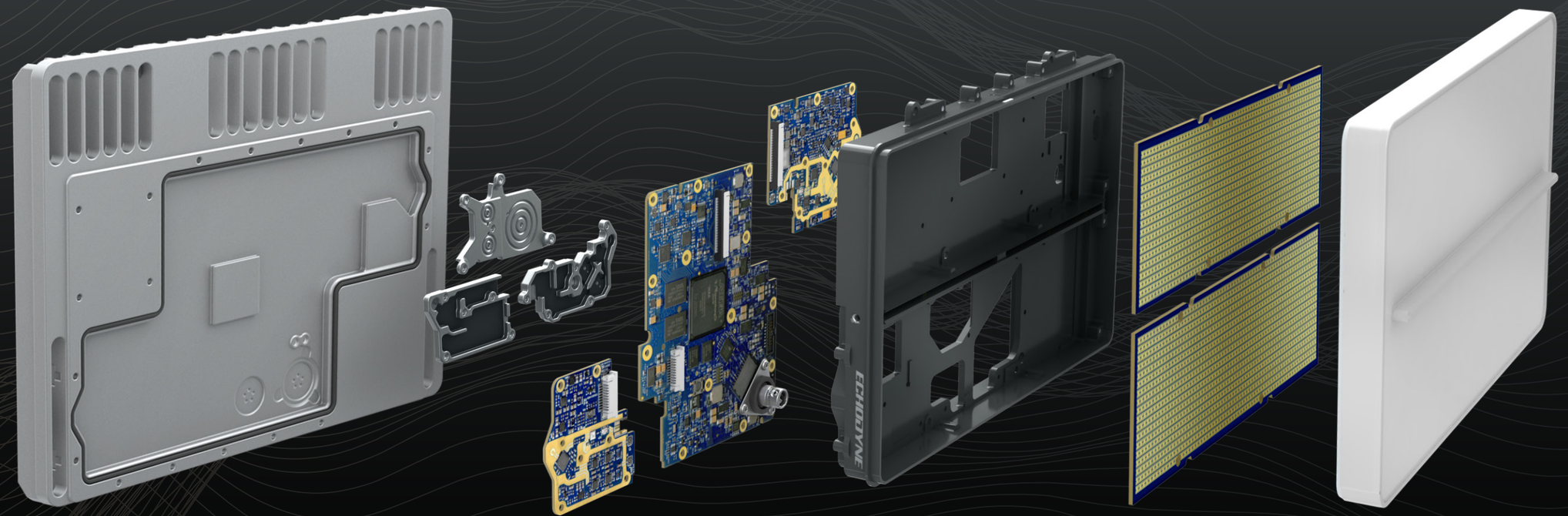
Better by Design

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

With the highest angular accuracy in its weight class and 10 Hz precision track data, pinpoints every object of interest, consistently slews optical sensors and locks effectors.

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®

Whether fixed, temporary, or on the move, EchoShield detects aerial and surface threats and tracks thousands of objects simultaneously to secure expansive perimeters and challenging environments. From critical infrastructure protection to drone as first responder programs, EchoShield delivers the advanced situational awareness that modern security operations demand.

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** 10 Hz	**MAX TRACKS** >1,000 Objects of Interest

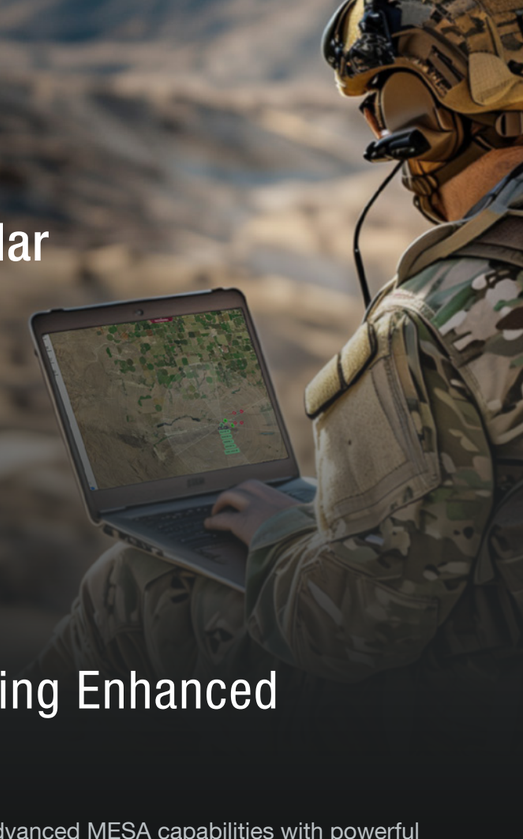
Kits & Accessories

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.

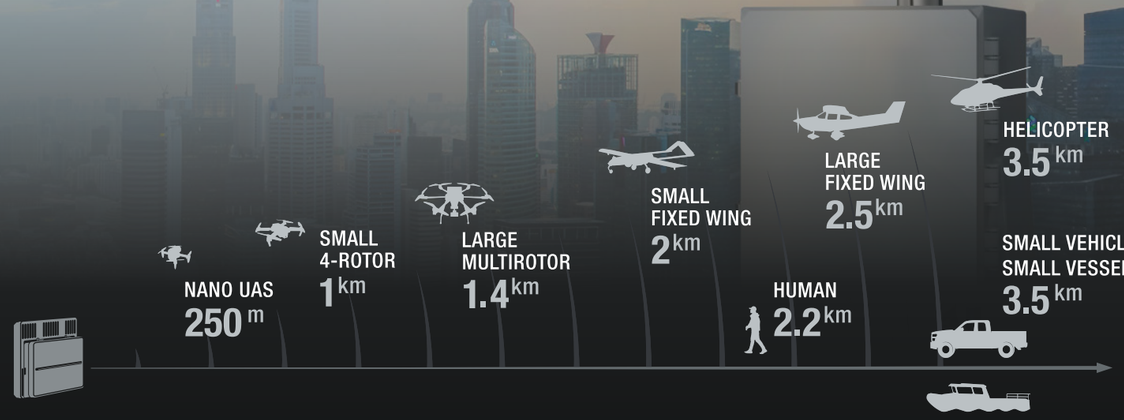
CUSTOMER PORTAL
24/7 access to all tools, manuals, and materials.

PERFORMANCE ENHANCEMENT
Continuous improvements through software development.

USER COMMUNITY
Submit requests for features and functionality.

EchoGuard®

EchoGuard is trusted for flexible, reliable protection. Compact, portable, and easy to integrate, it delivers dependable detection of air and surface threats for permanent and temporary security surveillance deployments. From secure site protection to short-range coverage in urban environments, EchoGuard enhances layered security wherever comprehensive awareness is critical.



SIZE	WEIGHT	POWER	FREQUENCY
16.3 x 20.3 x 5.7 cm 6.4 x 8 x 2.3 in	1.25 kg 2.8 lbs	+15 to +28 VDC 50 W Operating	24.45 - 24.65 GHz (USA) 24.05 - 24.25 GHz (INTL)
FIELD OF VIEW	**TRACK ACCURACY**	**TRACK UPDATE RATE**	**MAX TRACKS**
120° Az x 80° El	< 1° Az x < 1.5° El	10 Hz	Up to 20 Simultaneous

Kits & Accessories

Quick Start Kit
Tower Mount Kit
Radar Hub
Lightweight Deployment Kit

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	WEIGHT	POWER	FREQUENCY
12.1 x 18.7 x 4.1 cm 4.8 x 7.3 x 1.6 in	819 g 1.8 lbs	+12 to +28 VDC 45 W Operating	24.45 - 24.65 GHz
FIELD OF VIEW	**TRACK ACCURACY**	**TRACK UPDATE RATE**	**MAX TRACKS**
120° Az x 80° El	< 1° Az x < 1.5° El	10 Hz	Up to 20 Simultaneous

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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 unrivalled 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.

U.S. Designed & Manufactured

AS9100D CERTIFIED ISO 9001

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