info@echodyne.com
+1 425.454.3246

SOLUTIONS BRIEF

MESA® Radar for National Security

Information leads to advantage. The better the information, the greater the advantage.

National security concerns have rightly focused on identifying cyber weaknesses and fortifying defenses against a growing volume of creative threats. There is no endpoint here. It's a marathon of unknown length.

Physical security threats within the national security framework are following a similar trajectory. From national borders and governmental centers to VIP events and critical infrastructure, external and internal threats to homeland safety are on the rise. Given scope and scale, there will never be sufficient human resources or insurmountable obstacles to secure government operations. Technology must create the advantage, act as a force multiplier, and improve situational awareness.

Complicating all scenarios are uncrewed aerial vehicles (UAV), or drones. Fast, nimble aircraft with significant range and operational simplicity, drones increase reach and capabilities for any actor intent on crime, chaos, or malice. Whether quietly transporting contraband across borders or threatening VIPs in public settings, drones create a 3-dimensional challenge for federal agencies and law enforcement authorities.

Radar is the foundation for defense and the highest national security threats but has been cost prohibitive and far too operationally complex for wide government use. Radar, like every sensor in the toolbox, is a means to acquire data. Data that enhances situational awareness. Data as a force multiplier for field agents. Data that secures assets and facilities, empowers prosecutions, and saves lives.

ECHODYNE

Why are Echodyne radars the choice for more and more missions?

Data fidelity. Radar is a means to acquire data, gain information, and achieve superior situational awareness. Echodyne radars generate the most accurate data in their class. More accurate data, better fusion, smarter systems.

Systems integration. Built for data fusion and systems integration, Echodyne radars utilize TCP/IP over Gigabit Ethernet and offer multiple rich-data options that can be individually or simultaneously ingested.

SWaP. Unbeatable size, weight, and power. Echodyne's proprietary MESA design creates truly portable comprehensive situational awareness.

Price-performance breakthrough. Advanced ESA beamforming performance at commercial radar prices, designed and built in the USA.

Counter-Drone

Drones challenge existing security operations and compliance regimes. Interfering with drone flight directly or through communications interruption contravenes long-established legislation protecting both aircraft and communications privacy. Agencies and agents need sensors that are easy to use, optimize situational awareness, and provide an information advantage.

Echodyne radars are integral to dozens of counter-drone systems and have a proven track record of superior performance. With data accuracy that improves every layered solution and the portability to respond to any situation, commercial 4D radar keeps budget efficiency and elevates field performance.

Perimeter Surveillance

Information is an advantage. Security processes are built on data that disambiguates scenes and informs actions and responses. Optical sensors are increasing recognition capabilities but require radar for putting eyes on drones. Whether permanently installed or in response to unexpected or temporary circumstances, radars are the backbone for informed 3D security operations. With native industry-standard data interfaces and data-rich options, Echodyne radars raise the bar for perimeter surveillance.

Border Security

The open spaces between authorized border crossings are too vast for human surveillance alone. These spaces require situational awareness technologies that provide early warning for nearby agents and responsible offices. Radar detects, tracks, and classifies any movement across great distances, slews cameras for identification, and provides coordinate details for response actions.

Field agents require portability and maximum range detection and tracking capabilities. Tower solutions require radar data fidelity to optimize sensor fusion and solid-state platforms to minimize operational costs. Echodyne radars are a critical sensor in every border technology solution.

Public Safety

As aircraft get smaller and closer to the ground, their threat vector increases uncomfortably. Agencies overseeing VIP events, securing airspace around stadiums and other public spaces, and extending perimeter surveillance into the sky around facilities and assets require radar in the solution. Echodyne radar detects non-RF emitting drones (aka "dark drones") and provides the tracking accuracy to keep optical sensors trained on the intruder.