DRONE DETECTION RADAR

VALLUS

Affordable and reliable FMCW radar optimized for drone detection and tracking to better safeguard your airspace

CUTTING EDGE TECHNOLOGY

By adopting advanced FMCW (frequency modulated continuous wave) and DBF (digital beam forming) technologies, it offers 360° coverage in 4D with a wide elevation beam. This enables a stable and reliable detection and tracking of drones with instant, accurate, and high-quality data.

AI EMPOWERED ALGORITHM

AI empowered algorithm facilitates the capability of target clustering and increases environmental awareness to minimize false alerts. The radar therefore can provide instant and reliable data that are critical for the user to identify potential threats and to guide other sensors like EO cameras.

EASY TO DEPLOY

The modular design and user-friendly interface make the radar easy to deploy and use. The open-architecture communication protocols allow for a seamless integration into your current system.

24/7 PROTECTION IN ALL CONDITIONS

The radar is immune to many environmental conditions, such as light, rain, dust, fog, and smoke. Built with an industry-certified rugged design, it ensures stable performance and continuous, all-weather protection even in the harshest environments.

KEY BENEFITS:

- Frequency: 24GHz
- Massive MIMO + DBF
- 360° coverage with wide elevation beam
- 4D tracking of UAV within a range of up to 1640 ft
- FMCW for low probability of interception
- AI empowered algorithm for target clustering and lower false alarms
- Simultaneous tracking of more than 128 targets
- Integrated internal GPS
- Affordable system and easy to deploy
- Reliable protection in all weather conditions, day and night

DRONE DETECTION RADRA SPECIFICATIONS

Model	**AXDUD05H**
Radar and performance	
Radar type	Frequency Modulated Continuous Wave (FMCW)
Frequency band	K Band
Scan type	DBF in Elevation; Mechanical Scanning in Azimuth
Scan speed	20 RPM (120°/s) or 30 RPM (180°/s)
Detection and accuracy (RCS=0.01m²)	
Max dection range	≥ 1640 ft
Range resolution	± 4.9 ft
Range accuracy	≤ 5.3 ft
Max simultaneous tracking	128
Maximum detectable target velocity	up to 67 MPH
Azimuth coverage	0 ~ 360°
Elevation coverage	0 ~ 90°
Azimuth accuracy	≤ 0.01°
Elevation accuracy	≤ 0.9°
Power requirement	
Power supply	AC 100-240V / DC 24V
Power consumption	≤ 46 W
Network	
Communication protocol	UDP/TCP
Communication interface	100 Mbps Ethernet
Environment	
IP rating	IP66
Working temperature	-40 ~ 140 °F (storage and operation)
Dimension and weight	
Dimension	≤ 8.1*7.4*10.8 in
Weight	≤ 13.2 lb