

# HARRIER True3D™

Beyond Visual Line of Sight (BVLOS)

HARRIER True3D is a three-dimensional (3D) digital multi-beam radar that provides real time detection and tracking within a full 3D volume. The system is designed to detect targets ranging from small UAS to aircraft and provide real time data for BVLOS operations. The system can be integrated into multiple platforms to provide clients with a functional autonomous Detect and Avoid (DAA) solution.

Engineered & manufactured in the USA for dependable 24-7 operation with high reliability & low maintenance with hardware and software developed specifically for detection of airborne targets.



**Model: HARRIER 7360 True3D**

## Technology Features

- Classification intelligence (target-of-interest & false positive minimization)
- Fast update rates (1-5 Hz) for improved target tracking
- Medium sized drone detection up to 2.25+km (1.2+ nm)
- Cessna sized aircraft detection up to 7+km (3.8nm)
- All weather situational awareness
- Low wattage power for low interference risk
- US FCC, US DOD & foreign frequency licensed/ registered.

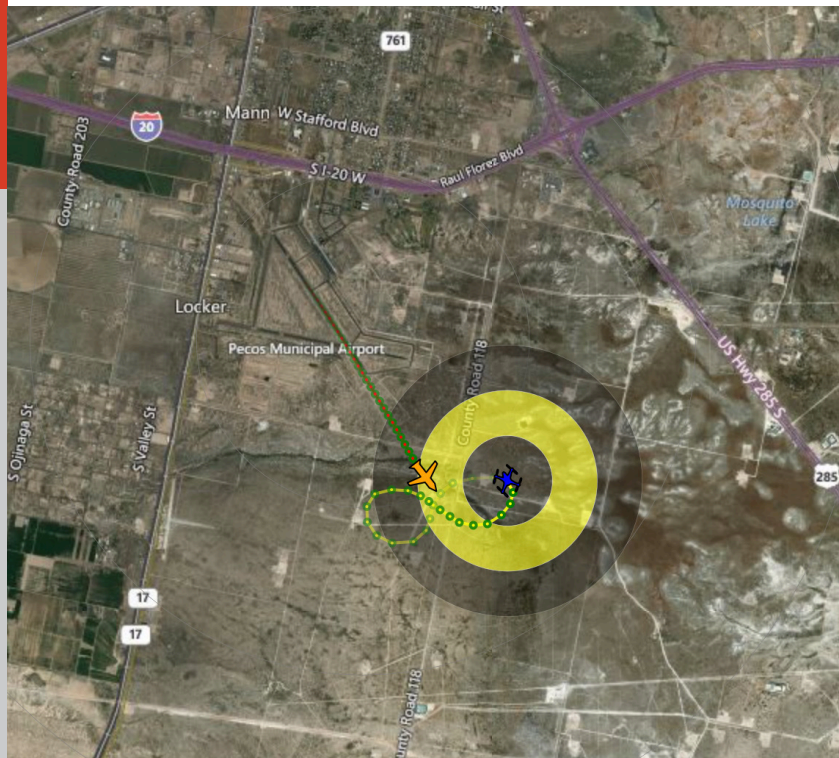
## DeTect True3D™ BVLOS Radar Advantages

- 3D digital multibeam dynamic (scans full 3D volume in single scan)
- S-Band, Pulsed Doppler
- High update rates (4 x per second)
- Real-time data processing with third party sensor integration for active risk analysis
- Available in fixed, mobile and vehicle mounted configurations.



DeTect's HARRIER True3D BVLOS radar system is based on DeTect's HARRIER Air Surveillance Radar technology and provides long range surveillance and monitoring of airspace to extend UAV operations beyond line-of-sight.

The HARRIER is proven in BVLOS applications by Unmanned Aerial Systems developers and operators since 2008. Systems are available in fixed and mobile configurations and can be designed and installed on a customer provided vehicle.



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# HARRIER True3D™

Beyond Visual Line of Sight (BVLOS)

Unlike traditional 3D & quasi-3D radars that scan only one sector at a time and leads to under sampling, fewer tracks & low accuracy altitude estimates, DeTect's dynamic multi-beam True3D radar scans & updates target data across the entire 3D volume continually, providing precise (x-y-z) data and no target or track error.



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## TECHNICAL SPECIFICATIONS

**Architecture:** Simultaneous multiple beams

**Processing Type:** Pulsed Doppler

**Frequency Band:** S

**Range Resolution:** 10m or 20m (adjustable)

**Selectable Frequency Bands:** 6 calibrated

**Instrumented Range:** 8km (4.3nm)

**DeTetection Ranges:**

Medium-sized Drone (DJI Phantom): 2.25km (1.2nm) 360°

Large Aircraft: 7km (3.8nm)

**Azimuth FOV:** 360°

**Elevation FOV:** 45°

**Software Defined Update Rate:** 1-5Hz

**Minimum Detectable Velocity:** 0.25 - 1mph (0.4 - 4.5km)

**Weight:** 22.7 kg / 100 lbs

**Dimensions:** 24.5 in x 24.5 in x 20.75 in (62.2 cm x 62.2 cm x 52.7 cm)

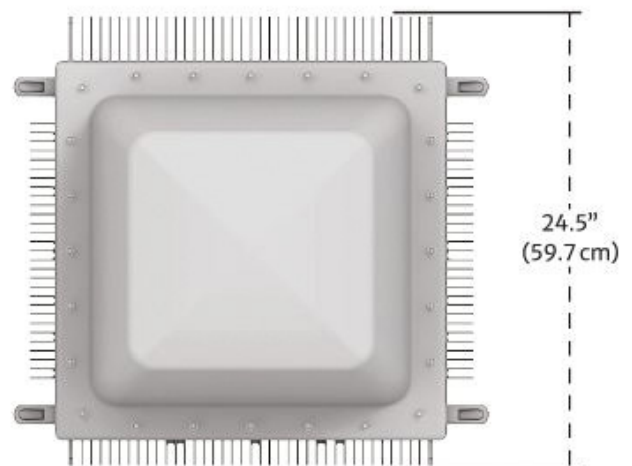
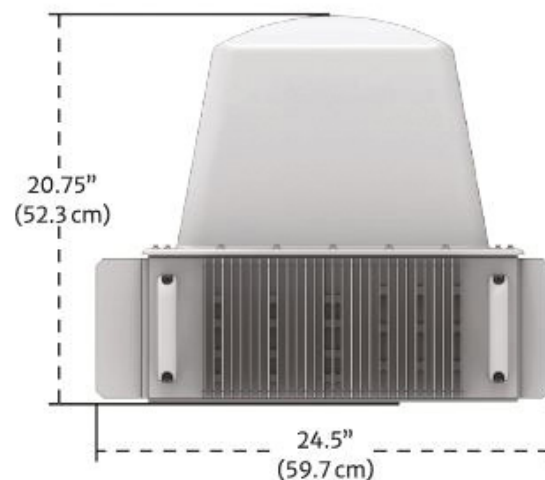
**Power Draw:** 80W

**Operating Temperature:** -4°F to +122°F (-20°C to +50°C)

**Component Temperature:** -40° to +185°F (-40°C to +85°C)

**Heating/Cooling:** Passive

\*Note: Achieving maximum detection ranges requires sufficient mounting height and line of sight. Specifications subject to change as design is completed.



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