

# MERLIN True3D™ BDR-DDR

## Aircraft Birdstrike Avoidance Radar

The world's first dual-function bird and drone detection radar system for aviation safety & bird control. In use since 2003 for real-time, tactical operational birdstrike avoidance, now with True3D & drone detection and alerting.

Engineered & manufactured in the USA for dependable 24-7 operation with high reliability & low maintenance.



**Proven technology tested, validated & used operationally by commercial airports, the US Air Force, Navy & NASA.**

Available in dual function BDR-DDR configuration for simultaneous bird & drone detection with integrated radar-directed electro-optic, infrared (EOIR) camera system and DroneWatcher RF-DR radiofrequency drone detection & interdiction; includes real-time target classification using advanced AI technology.

Available in fixed and mobile installation configurations.



### Model:

**True3D BDR-DDR for commercial airports & military airfields**

### Application:

Real-time aircraft-bird strike avoidance & drone detection (Counter-UAS).

### Configuration:

Fixed and mobile designs, fully self-contained with all system hardware, software and integration included.

### Sensors:

- S200 solid-state S-band Doppler horizontal surveillance radar (long-range bird & small drone detection, 4-6 nm)
- S9000 solid-state True3D panel radars; 2-panel model for full 3D in critical runway approach and departure corridors (where 85% of birdstrike occur), or 4-panel model for full 360 True3D surveillance, 3-4 nm range
- Optional radar-controlled EOIR visible & night camera for real-time target classification & identification
- Optional DroneWatcher RF-DR radiofrequency sensors for detection, tracking & identification of RF & video signal emitting drones (80%+ of consumer & prosumer).

### Operating range:

2-6 mile range, 360-degree airspace surveillance around the airport, including runway, approach & departure corridors & detection from near surface to above 18,000 ft AGL.

### Power:

Single phase 110/240VAC, with UPS back-up, power conditioning & optional auto-start electric generator & fuel tank to support 10-20 days 24-7 operation (foreign power configurations available).

### Network:

TCP/IP supports multi-user web remote realtime system display, control & data access via fiber optic, wireless or mobile broadband.

### General Specifications:

- Frequency range: 2.9 to 3.3 Ghz (electronically variable)
- Emitted Power: 200-300 watts
- Operational Wind Speed: 185 km/h (51 m/s)
- Operational temperature range: -25 to +60°C
- Operational relative humidity: up to 100%.

**Offices in:** Panama City, Florida • Grand Forks, North Dakota • San Diego, California  
Honolulu, Hawaii • Calgary, Alberta • London, England • Goleniow, Poland

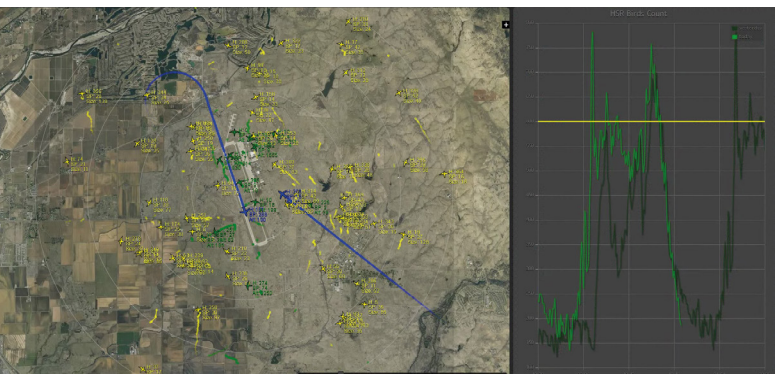
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- Operational, production-model technology
- Real-time, web-based display of high-risk bird & drone activity with accurate target position & altitude data (x-y-z)
- Automatic, continuous risk assessment & warnings for tactical aircraft bird strike risk & drone incursion alerts
- Mobile display capabilities to support wildlife control managers & security teams
- State-of-the-art solid state, S-band radar technology
- Proven bird & drone detection tracking algorithms, clutter suppression & insect filtering
- Radar software developed specifically for detection & tracking of small RCS targets (birds & drones)
- Simultaneous multi-range operation to support both bird control, drone detection & aircraft surveillance
- Automatic SQL data system with daily report generation
- Complete design, installation, commissioning & long-term support
- Full parts & labor warranty & performance guarantee
- Designed & manufactured in the USA meets Buy American Act (2018 & 2021 amendment)

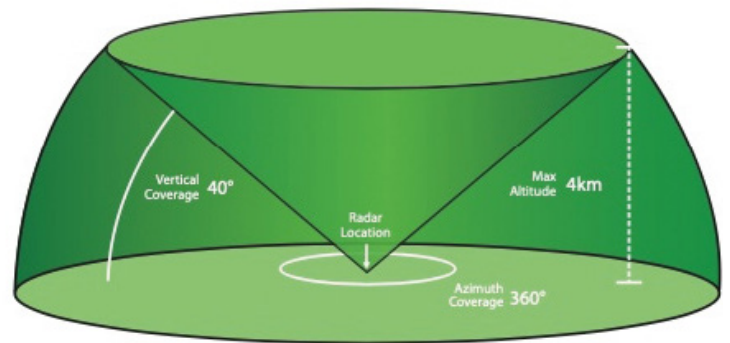


#### Model:

True3D BDR-DDR for commercial airports & military airfields

### DeDetect True3D™ Radar Advantages

- Full 3D Radar
- S-Band, Pulsed Doppler
- 3D digital multibeam dynamic (scans full 3D volume in single scan)
- Available in several power & range levels
- Available in all DeDetect radar products in various power & range levels.



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, DeDetect's dynamic multibeam True3D radar scans & updates target data across the entire 3D volume continually, providing precise (x-y-z) data and no target or track error.

### Technology Features

- Classification intelligence (target-of-Interest & false positive minimization)
- Fast update rates (1-5 Hz) for improved target tracking
- Drone/bird detection up to 5+ km (4+ nm)
- All weather situational awareness
- Low watt power for low interference risk
- FCC & US DOD frequency licensed/registered

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