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 selfcontained 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%.

MERLIN

(((DeTect ™

DeTect True3D™ Radar Advantages

Full 3D Radar
S-Band, Pulsed Doppler
3D digital multibeam dynamic (scans full 3D volume in single scan)
Available in all DeTect radar products in various power & range levels
Fully integrated display seamlessly combining data from all sensors (2D & 3D Radars, RF Detectors, ADSB and EOIR cameras) for simplistic and intuitive operation on one command and control interface.
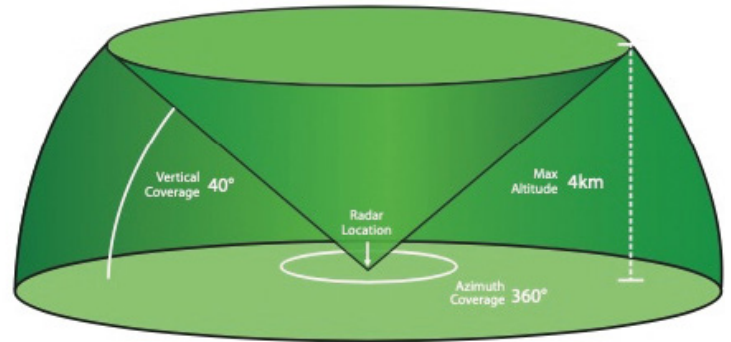
Unlike traditional 3D & quasi-3D radars that scan only one sector at a time and leads to under-sampling, fewer tracks & low accuracy altitude estimates, DeTect's dynamic multibeam True3D radar scans & updates target data across the entire 3D volume continually, providing precise (x-y-z) data and no target or track error.

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)
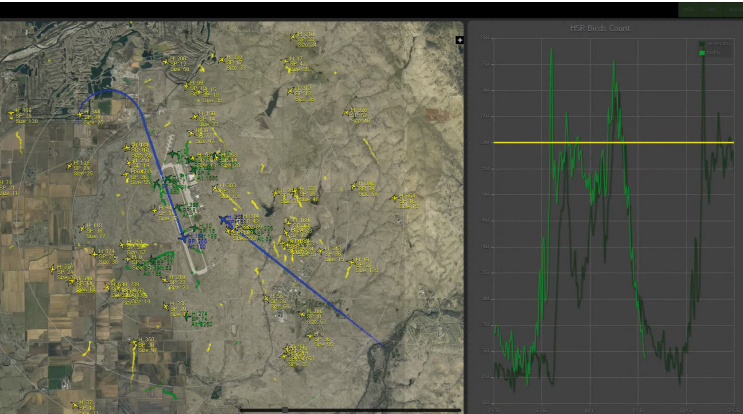
Technology Features

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