

MERLIN

Aircraft Birdstrike Avoidance Radar (ABAR)

The most widely used & tested bird radar system with over 250 units delivered worldwide for aviation safety & bird control. The only system in use for real time, tactical operational birdstrike avoidance by air traffic controllers. Engineered & manufactured for dependable 24-7 operation with high reliability & low maintenance.

MERLIN™ systems are available in fixed and mobile installation configurations.



Model:

Industrial series for **commercial airports** and **military airfields**

Application:

Real-time aircraft-bird strike avoidance.

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

Sensors: MERLIN SS200: dual solid-state S-band Doppler radars provide 2-1/2 D coverage of airspace around airfield to 4+ nm (3D in runway approach and departure corridors).

MERLIN True 3D: solid-state S-band, full 360 degree true 3D, digital beam forming radar with real-time x-y-z target location and tracking to 4+ nm.

Operating Range: 2-6 mile range, 360-degree airspace surveillance around the airport, including runway, approach and departure corridors and detection from surface to at least 18,000 ft.

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

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



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

Can be combined with DroneWatcher RF and/or **HARRIER™** Drone Surveillance radar for simultaneous bird and drone detection.

MERLIN™ systems are available in fixed and mobile installation configurations. For large, multi-runway airports and airfields, multiple fixed-mount sensor packages can be installed around the airfield and networked to provide optimal coverage.



Offices in: Florida • San Diego • Hawaii • Calgary • London • Beijing

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The **MERLIN™** system includes a wide range of unique technology features and benefits not available with any other bird radar system:

- Operational, production-model technology
- Real-time, web-based display of high-risk bird activity with high update rates with accurate target position & altitude data
- Automatic, continuous risk assessment & warnings for tactical aircraft bird strike risk alerts to air traffic controllers & pilots
- Mobile display capabilities to support wildlife control managers
- Advanced clutter suppression & Doppler processing detects birds from near ground level to 18,000 feet
- Real-time bird mass & size filtering eliminates false positive alerts
- State-of-the-art solid state, S-band radar technology
- Proven bird detection tracking algorithms, clutter suppression & insect filtering
- Bird radar software developed specifically for detection & tracking of bird targets
- Simultaneous multi-range operation to support both bird control & aircraft surveillance
- Automatic SQL data system with daily BASH report generation
- Complete design, installation, commissioning & long-term support
- Full parts & labor warranty & performance guarantee.



Technical Data Sheet

With **MERLIN™** users get more than just a radar:

Each **MERLIN™** system is supported by DeTect's experts in military and commercial aviation safety, air traffic control, airfield management, airfield bird control and radar remote sensing to provide a cost-effective system that integrates seamlessly and effectively into airfield / airport operations.

The **MERLIN™** bird radar uses custom software specifically developed to detect and track bird targets: not modified ship or aircraft tracking software, which are not designed to identify and track the unique flight signature and variable characteristics of birds in flight.

The **MERLIN™** system also processes and displays the bird targets and tracks the current bird strike risk in real-time.

A key feature of **MERLIN™** is its wide-beam coverage that detects and provides real-time alerts of hazardous bird activity from ground level to 18,000 feet for real-time tactical & strategic aircraft bird strike risk avoidance.

With its clutter suppression and Doppler processing, the system provides continuous bird detection near the ground level where 85% of damaging and hazardous birdstrikes occur.



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