MERLIN

Avian Radar Systems for Wind Energy Preconstruction Survey and Risk Assessment

DeTect specializes in delivery, integration and support of advanced, proven avian radar technologies for wind energy project developers, owners, operators and environmental consultants for bird and bat survey, mortality risk assessment, operational monitoring and realtime risk mitigation with over 500 systems delivered worldwide.

Model: E-Series (Environmental)

Application: Real-time bird and bat detection and tracking for quantitative wind farm preconstruction surveys, mortality risk assessment mitigation system & monitoring of on & offshore windfarms and other projects

Configuration: Mobile, trailered, fully self-contained or fixed system designs

Sensors: Solid state Doppler Horizontal Surveillance Radar (HSR) & Vertical Scanning Radar (VSR); Frequency Diversity processing option with True 3D

Operation: Simultaneous horizontal and vertical bird detection with real-time analysis of flight paths, altitude, characteristics, passage rates and environmental conditions with full data recording to SQL data server system

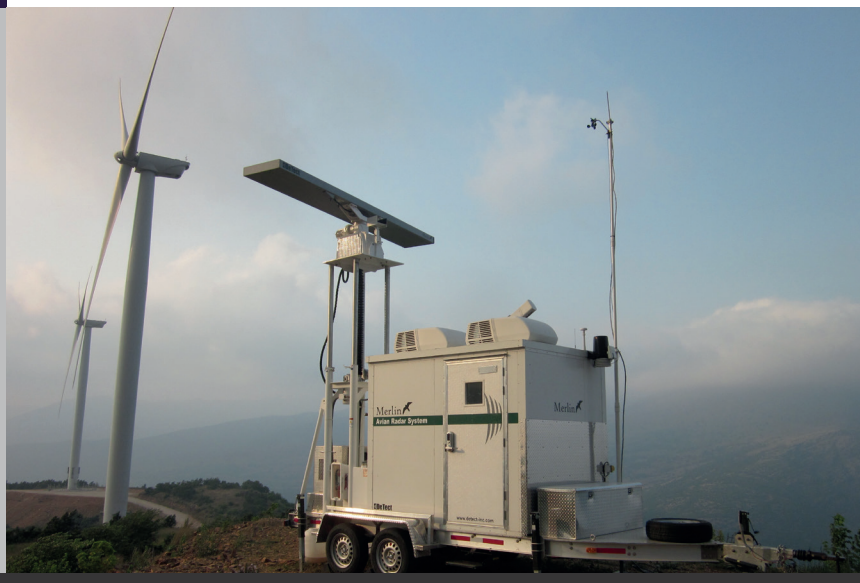
Operating Range: **HSR** 2-6 mile (3.2 – 9.65km) range, 360-degree airspace surveillance. **VSR** 2-3 mile (3.2 – 4.8km) range and detection from surface to at least 18,000 ft. True 3D tracking to 4+ NM (7.4km)

Power: **Single Phase** 120-240 VAC with UPS back-up & power conditioning & optional auto-start diesel generator

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

DeTect provides advanced radar technologies and expert support to wind energy developers, owners and consultants for bird and bat survey, mortality risk assessment, monitoring and risk mitigation for projects worldwide that includes:

- Bird & bat radar systems - offshore and onshore
- Data Processing, analysis & reporting
- Bird and bat mortality risk analysis
- Risk mitigation radar systems
- Public meeting support & technology consulting.



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

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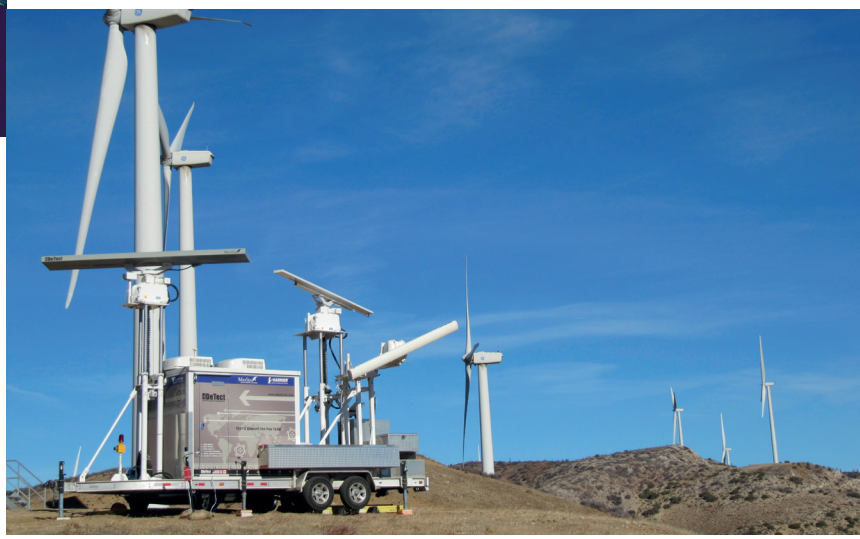
DeTect™

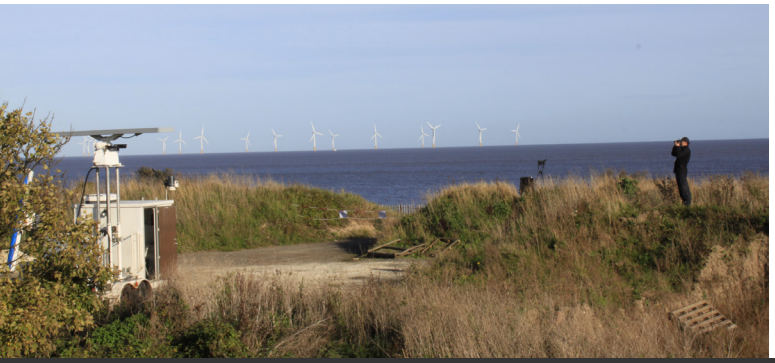
Staff specialists include highly experienced radar ornithologists, avian biologists and statisticians that comprise the most experienced team of experts in remote sensing of birds and bats in the world with specific expertise in design, construction and operation of bird/wildlife detection systems for real-time risk management.



Bird Monitoring and Mitigation System (BMMS)

DeTect is the developer and manufacturer of the most advanced and proven Bird Monitoring and Mitigation System available for wind energy project bird and bat survey, risk assessment, monitoring and real-time risk mitigation with over 500 systems delivered worldwide. The MERLIN technology, originally developed for the US Air Force and NASA, can be used to develop detailed preconstruction risk projections, and mitigate risk at operating wind farms. DeTect provides full operational and technical support to wind farm owners and consultants that includes system deployment, operation, user training, data processing, analysis, reporting and QA/QC.

MERLIN uses state-of-the-art radar and computer techniques developed specifically for detecting and tracking the unique behavioral characteristics of birds and bats to collect data unattended, 24-7 and automatically generate highly accurate, detailed datasets for quantitative analysis. MERLIN's options for real time display and the automatic reporting feature generate detailed data in both tabular and graphical formats quantifying the numbers of birds passing through the rotor swept area allowing precise calculation and determination of bird and bat mortality risk.



Mitigation On Demand

DeTect's MERLIN Bird Monitoring and Mitigation System (BMMS) integrates the advanced, fully automatic MERLIN Avian Radar System (ARS) with a wind farm's SCADA network to create a realtime risk mitigation system for bird or bat mortality.

MERLIN BMMS consists of additional software, hardware, and/or other data sensors that monitor the wind farm, assess realtime mortality risk using mitigation rule sets, and alert for or automatically initiate risk mitigation measures when pre-defined risk thresholds are detected by the system. The MERLIN BMMS ultimately reduces both turbine downtime and bird or bat mortality risk by implementing mitigation measures in real time, and only during time periods of high mortality risk. Configurations are available for mitigating mortality risk for migrating songbirds, raptors, and bats.

Staff specialists include highly experienced radar ornithologists, avian biologists and statisticians that comprise the most experienced team of experts in remote sensing of birds and bats in the world with specific expertise in design, construction, and operation of bird/wildlife detection systems for real-time risk management.

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