LEONARDO Germany GmbH

SKIRON3D®

DOPPLER LIDAR SYSTEM

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TECHNICAL DATA

Basic Figure of Merit (FOM)	120 mJ · sqrt(Hz)
Number of Channels	4
Laser Beam Quality [M^2]	< 1.2
Operational Range (LOS)	> 20 km with 1s accumulation time (depending on atmospheric conditions)
Radial Wind Speed Range	± 70 m/s
Scanner Pointing Accuracy	± 0.05°
Rotation Speed of Scanning	2°/s to 50°/s during operation

SKIRON^{3D}®
DOPPLER LIDAR SYSTEM

The SKIRON^{3D}® lidar is the optimal solution for measuring winds and detecting wind hazards. Wind shear, gusts, turbulence, and microbursts are dangerous wind phenomena, which impact airport efficiency and flight safety. SKIRON^{3D}® provides the tools necessary to monitor the hazardous winds threatening airports.

The SKIRON^{3D}® is a coherent pulsed Doppler lidar system, which employs a MOPA (Master-Oscillator-Power-Amplifier) configuration. It combines an all-fiber technique that enables excellent beam quality with high pulse energy for long-range measurements.

SKIRON^{3D}® is optimally suited for integration with weather radar for observing 3D wind shear along the glide slope and departure path.

SKIRON^{3D}®
HIGHLIGHTS

- High-end lidar in a cost-effective and modular design, e.g. supporting flexible cooling strategies (global effects of climate change)
- Full remote surveillance and control capability based on Ravis® maintenance tool
- Proprietary designed scanner with no slip rings
- Air-knife no-contact optical window cleaning
- Integrated camera for lidar northing using the sun, moon, or a fixed target
- Feedback-controlled laser power for long-term stability
- Minimal lifecycle costs due to highly reliable fiber technology
- Laser pulse operated in eye-safe wavelength

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