



LEONARDO Germany GmbH

SKIRON^{3D}®

Doppler Lidar System





Technical Data

Basic Figure of Merit FOM	> 120 mJ · sqrt(Hz)
Velocity accuracy	0.1 m/s
Laser Beam Quality (M²)	< 1.2
Operational Range (LOS)	> 20 km 1 s accumulation time (normal 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

SKIRON3D[®] Doppler Lidar System

The SKIRON3D[®] 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. SKIRON3D[®] provides the tools necessary to monitor the hazardous winds threatening airports.

The SKIRON3D[®] is a coherent pulsed Doppler lidar system, which employs a MOPA (Master-Oscillator-Power-Amplifier) configuration. A multi-channel technique is utilized that allows the combination of high-power and an all-fiber setup. This enables optimal beam quality and long-range measurements.

SKIRON3D[®] is optimally suited for integration with weather radar for observing 3D wind shear along the glide slope and departure path.

SKIRON3D[®] Highlights

- High-end lidar in a cost-effective and modular design, supporting e.g. flexible cooling strategies (global effects of climate change)
- Full remote surveillance and control capability based on Ravis[®] maintenance tool
- Proprietary scanner design without 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 operated at eye-safe wavelength

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