WindCube Scan Explore Edition

VAISALA

Product Spotlight

Providing trusted weather observations for a sustainable future

3D scanning Doppler wind lidar for accurate real-time wind and aerosol backscatter measurements

Accurate weather forecasts, climate modeling and other atmospheric research depend on the ability to reliably monitor atmospheric parameters such as wind, turbulence, clouds and aerosols. These parameters impact all aspects of human life, directly or indirectly.

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Key benefits

Wind, aerosol backscatter and cloud measurements.

Versatile and user-friendly configuration support multiple scanning patterns and measurement needs .

Autonomous remote operation.

1 year initial warranty coverage with onsite maintenance service options for high uptime and long lifetime.

A dedicated WindCube Scan model for long range profiling.

Why Vaisala?

As the global leader in weather and environmental measurements, Vaisala provides trusted weather observations for a sustainable future. With over 85 years of experience and customers in 170+ countries, from the North and South Poles to Mars, we help provide the most reliable and accurate weather and climate information for better and safer daily lives.

Our instruments and intelligence are known as the gold standard for precision and reliability. As a sustainability leader we enable meteorology professionals to better understand, forecast and explain climate change. We continue to channel our curiosity into climate action and new ways of enabling a better planet for all.

The next generation of high-resolution weather prediction models require very high levels of spatial and temporal continuity. Satellite observations for global coverage have to be interlinked with ground-based instrument networks offering high vertical and temporal resolution.

The WindCube® Scan series of wind and aerosol lidars perform 24/7 realtime measurements and high-level data processing. It is a versatile tool for recovering accurate wind and aerosol backscatter measurements in any scanning geometry up to more than 10 km. The state-of-the-art structure detection algorithm enables you to detect, locate and classify clouds and aerosol layers in the troposphere, and monitor the height of the Atmospheric Boundary Layer (ABL).

WindCube Scan enables you to monitor the first vertical layers of the atmosphere with superior accuracy — not covered by standard ground or satellite-based observations. Advancing research of the meso- and microscale aspects of weather and climate with wind lidars helps scientists and meteorologists develop ever more accurate forecasting models.

Applications

- Atmospheric sciences and climatology
- Boundary layer profiling for observation networks
- Weather monitoring and decision support
- Structural engineering
- Air quality monitoring and forecasting
- Industrial emissions monitoring
- Aerospace and defense

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