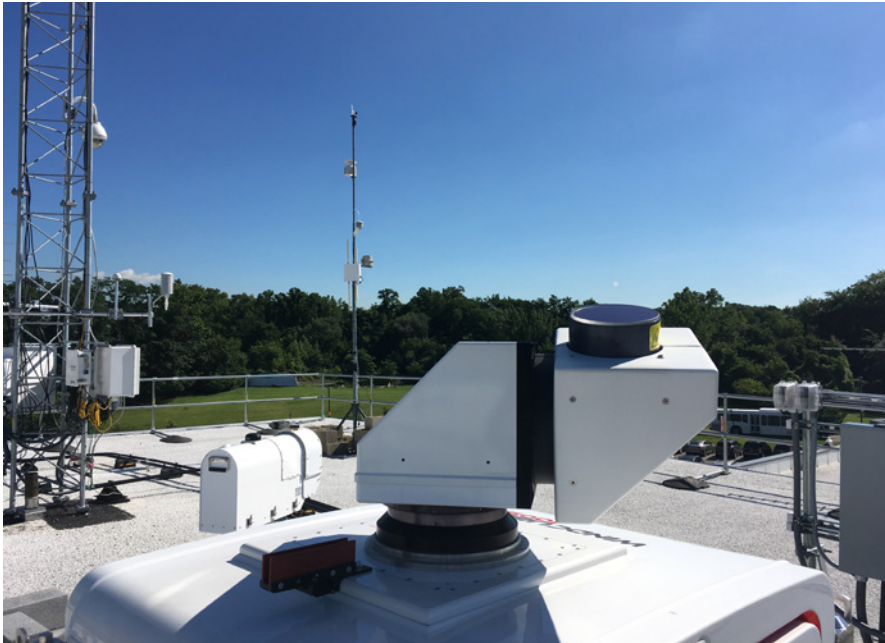


WindCube Scan – 3D scanning Doppler Lidar for accurate real-time wind and aerosol backscatter measurements



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

For example 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.

WindCube Scan series of wind and aerosol Lidars perform 24/7 real-time measurements and high-level data processing. It is a versatile tool for recovering accurate real-time wind and aerosol backscatter measurements in any scanning geometry up to more than 10 km. State of the art structure detection algorithm offers the capability to detect, locate and classify clouds and aerosol layers in the troposphere, as well as to monitor the height of the Atmospheric Boundary Layer (ABL).

WindCube Scan offers the ability to highly accurately monitor the first vertical layers of the atmosphere, which are not covered by standard ground, nor 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.

Key benefits

Improved short-term weather forecasting

WindCube Scan helps filling the gap with continuous observations of the lower troposphere.

Augmented climate modeling

WindCube Scan feeds climate models and databases with continuous planetary boundary layer heights and profiles of optical atmospheric properties for generating continuously improved climate models.

Supported by the industry leader

WindCube Scan is supported by decades of experience, scientific tools and expertise, and industry standard support services — all of which enable customers to get the most from their equipment over its full life span.

WindCube Scan at a glance

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

Key features

- Wind, aerosol backscatter and cloud measurements
- Versatile and user friendly configuration that can be tailored to 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



	100S	200S	400S
Typical wind measurement range	3 km	6 km	10 km
Maximum range	14 km+	14 km+	15 km+
Scanner rotation speed	Up to 30°/s		
Accumulation time	From 0.1s to 10s		
Data transfer	Ethernet/LAN		
Data format	Export in NetCDF by graphic interface or to FTP server		
API type	REST web API		
API functionalities	Lidar configuration and monitoring; status/activities/logs monitoring; data (JSON stream and NetCDF files) download		
Dimensions	1008 x 814 x 1365(h) mm		
Weight	232kg		
Temperature range	-30°C to +45°C (-22° to 113 F°)		
Power consumption	500W to 1.600W		
	Designed for quick and efficient onsite services		

Why Vaisala?

The industry's most dependable technology

Vaisala solutions are built on decades of industry leadership, and thousands of WindCube units are deployed around the world. Our technology's precision and reliability under varying conditions have been validated time and time again.

Support to count on

Look to Vaisala for dependable support and training so you can get the most from your equipment. With decades of experience providing the best technologies and the finest support, Vaisala's philosophy of partnership is unmatched in the industry.

VAISALA

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