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Product Spotlight

windcubelidar.com

WindCube Scan *Wind Energy Edition*

Long-range, fully customizable measurements for wind farm development and operations

Wind farms are growing larger and more densely filled with turbines, and turbine technology continues to evolve. Vaisala WindCube® Scan *Wind Energy Edition* reliably and seamlessly provides accurate Wind Resource Assessment (WRA) and wake analysis that are now indispensable to onshore and offshore projects.

WindCube Scan *Wind Energy Edition* is the industry's tool of choice for providing reliable, precise spatial wind data at any stage of a wind farm project, from prospecting to operation. Suitable for short-term rental changing placements during development campaigns or long-term operations.

WindCube units feature rugged, industrial designs and can be placed in extreme environments. They are among the most flexible and accurate wind measurement technologies available complementing met masts and accurate vertical profiling lidars. Each system is fully configurable for several uses including monitoring, atmospheric cross-sectioning, and wind profiling.

Key benefits

Unmatched versatility — WindCube Scan *Wind Energy Edition* offers full 3D scanning with typical ranges up to 8 km or 10 km (depending on model) and a maximum range of 18+ km — as well as multiple scanning patterns. The system boasts outstanding uptime, reliability, and a robust on-site maintenance program, making it ideal for long-term projects. And it can be moved and repurposed to support a variety of applications, providing outstanding value over time.

Simplified operation to maximize uptime while reducing cost — Now includes a 3-year warranty thanks to technological and operational advances plus a hassle-free, annually renewable service contract. Modern scanning head minimizes maintenance tasks, increases uptime.

Deploy even in challenging environments — Keep measuring in temperatures as low as -40° C and up to 55° C, while the heated lens resists humidity and frost. Deploy at remote near-shore and offshore environments and rely on enhanced dust and water resistance plus 4G connectivity.

Ultimate capability with single and dual configurations — The WindCube Scan Dual Lidar Ready offering provides an enhanced picture of wind resource profiles through seamless data integration using two lidars.

Supported by the industry leader — Vaisala's decades of experience, scientific tools and expertise, and industry-leading support services all enable customers to get the most from their equipment over its full life span.

WindCube® The gold standard

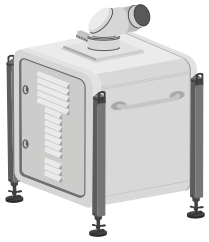
WindCube is the iconic and trusted gold standard in wind lidar. The turnkey product suite offers innovative, reliable, and highly accurate solutions with more than 2,000 WindCubes delivered globally. Borne from a passion to advance the field, WindCube continues to take wind energy ever higher through a commitment to four guiding principles:

- Trustworthy, superior metrology
- Innovative lidars from a one-stop shop
- Unrivaled thought leadership
- Easy, reliable global solution

WindCube Scan at a glance

Applications

- Large-scale wind resource assessment, onshore or offshore
- Measurement of wind turbine wake and wind farm blockage effect
- Short-term forecasting for farm power prediction
- Single or multiple power performance tests run simultaneously



Key features

Full 3D fast scan

Single and Dual Lidar Ready providing rich insights from one or multiple positions

3 year warranty

Fully configurable lidar scanning strategy based on PPI, RHI, DBS and single beam scans plus exclusive volume, segment and VAD scans to meet all needs

Provides NetCDF files, a robust auto-documented format for operational flexibility

A wind reconstruction tool proven by international third parties is also available

Dedicated reprocessing and display software

API available for user's own configuration and data access

WindCube Scan series specifications

	200S	400S
Typical wind measurement range	8 km	10 km
Maximum acquisition range	>15 km	>18 km
Scanner rotation speed	Up to 50°/s	
Accumulation time	From 0.1s to 10s	
Data transfer	Graphical User interface / FTP / SSD swap /API/4G connectivity	
Data format	NetCDF data format	
API type	REST web API	
API functionalities	Lidar scan configuration and monitoring; status/activities/logs monitoring; data download (JSON stream and NetCDF files)	
Dimensions	830 x 1008 x 1355 mm (L × W × H)	
Weight	220kg	
Temperature range	-40° to +55° C	
Power consumption	1100W maximum average power with brief peaks up to 1600W	

Why Vaisala for renewable energy?

We are innovators, scientists, and discoverers who are helping fundamentally change how the world is powered. Vaisala elevates wind and solar customers around the globe so they can meet the greatest energy challenges of our time.

Our weather and environmental monitoring solutions for renewable energy are guided by several key priorities:

- Thoughtful evolution in a time of change
- Making renewable energy smarter at every stage
- Extending our legacy of leadership

Vaisala is the only company to offer 360-degree renewable energy solutions — from sensors and systems to digital services and actionable intelligence — nearly anywhere on the planet (and even on Mars). Every Vaisala solution benefits from our 85+ years of experience, pioneering deployments in 170+ countries, and unrivaled thought leadership.

Our innovation story, like the renewable energy story, continues.

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