

WindCube Scan

Long-range, fully flexible wind data for wind farm development and operations



Key benefits

Unmatched versatility — WindCube Scan offers full 3D scanning with typical ranges up to 3, 6, or 10km (depending on model) and a maximum range of 15km — 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.

At-a-glance data insight and reporting — Get rich campaign insight through your choice of data management tools. WindCube Scan offers flexible data management through API requests, communication with an FTP server, or through a user-friendly and robust graphical user interface.

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 — 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.

Wind farms are growing larger and more densely filled with turbines, and turbine technology continues to evolve. WindCube® Scan reliably and affordably provides accurate wind mapping and wake analysis that are now indispensable to onshore and offshore projects.

WindCube Scan 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.

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 for thousands of customers across the globe. 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

Fully configurable lidar scanning strategy based on PPI, RHI, DBS and single beam scans to meet all needs

Provides NetCDF files, a robust auto-documented format that gives flexibility to the user

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

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.

WindCube Scan series specifications

| | 100S | 200S | 400S |
|--------------------------------|---|--------|-------|
| Typical wind measurement range | 3km | 6km | 10km |
| Maximum range | 14.7km | 14.7km | >15km |
| 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 download (JSON stream and NetCDF files) | | |
| Weight | 232kg (without options) | | |
| Temperature range | -30°C to +45°C (-22° to 113 F°) | | |
| Power consumption | 500W to 1.600W | | |

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windcubelidar.com



Scan the code for more information

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