

WindCube 2.1 XP

VAISALA

Product Spotlight

Excellent wind data accuracy, availability, and bankability with minimized uncertainty for utility-scale Wind Resource Assessment

Vaisala WindCube® 2.1 XP measures up to 400 meters and is the only wind lidar on the market IEC classified up to 200 meters – the critical rotor sweep height for utility-scale wind turbines. High data availability in low aerosol environments make it suitable for bankable wind data collection even in areas with clean air. With its compact, low-power design, easy deployment, and a 5-year warranty, WindCube 2.1 XP sets a new standard for wind lidar that continues to advance the wind energy industry.



Key benefits

Outstanding results with the industry's best measurement uncertainties (only 0.35% horizontal wind speed at 200m)

Exceptional data availability in low aerosol environments, plus an extended measurement range of 400m

Dependable performance in all terrain types thanks to embedded Flow Complexity Recognition (FCR) and CFD modeling

Low classification uncertainty and limited sensitivity to environmental variables as per IEC 61400-50-2 Ed.1

Minimal sensitivity to environmental variables assures stable accuracy

Nominal power consumption of only 35W

Easy maintenance and low down time for repair thanks to the open architecture

5 year warranty and maintenance cycle

Patented wind reconstruction algorithm to reduce sensitivity to turbulence

Why Vaisala?

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 pioneering approach reflects our priorities of thoughtful evolution in a time of change and extending our legacy of leadership.

Vaisala is the only company to offer 360° of weather intelligence for smarter renewable energy, nearly anywhere on the planet. Every solution benefits from our nearly 90 years of experience, deployments in 170+ countries, and unrivaled thought leadership.

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

WindCube delivers exceptional performance and capabilities so wind energy leaders can make more informed decisions to maximize energy production and profitability. It provides the bankable data needed for reducing measurement uncertainties in Energy Yield Assessments to secure funding while minimizing project risk.

Accuracy where it matters most

WindCube 2.1 XP is the only wind lidar on the market classified to measure accurately up to 200 meters – the critical rotor sweep height for today's large utility-scale wind turbines – with a total measurement range of up to 400 meters. Innovative Vaisala Compass software further enhances data insights and productivity.

Industry-leading low sensitivity to environmental factors ensures remarkably stable accuracy across a wide range of operating environments. High data availability in low aerosol environments make it suitable for bankable wind data collection even in areas with clean air.

Applications

WindCube is suitable for permanent and temporary wind monitoring with little or no environmental footprint and no safety risks. Applications include site prospection, Wind Resource Assessment, site suitability and calibration, permanent wind monitoring, Power Performance Testing (PPT), grid-loss compensation and R&D.

Field tested, verified, IEC classified

WindCube has been third-party validated in hundreds of independent studies and across thousands of customer deployments – backed by 20+ years of wind lidar expertise and unparalleled global service.

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