WIND POWER | WEATHER & CLIMATE | AVIATION WEATHER | AIR QUALITY & INDUSTRIAL RISK

WINDCUBE® v2

Vertical Profiler
Doppler LIDAR

SITE ASSESSMENT

POWER CURVE

RENEWABLE NRG SYSTEMS™

LEOSPHERE

Global Partners in Lidar Wind Technologies

WINDCUBE® v2

Reduce Uncertainty and Increase Profitability

The WINDCUBE v2 has the most units deployed of any LIDAR used for Wind Power applications. It is the equipment of choice for wind measurements at any step of the wind farm construction, from site assessment, site suitability, commissioning to repowering.

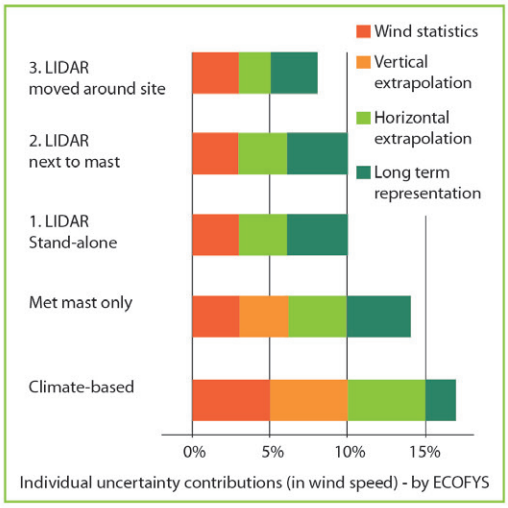
Wind farm profitability

The profitability of a wind farm rests upon reducing uncertainty associated with wind ressource assessment and wind turbine optimization.Projects risks vary from site to site, depending upon wind farm size and site complexity.

In combination with traditional meterological met mast measuring for twelve to eigtheen months, a mobile LIDAR remote sensor collecting actual measurements is ideal for knowing the wind resource and reducing project risk.

Providing bankable data to wind farm investors and owners, the WINDCUBE v2 can make the difference between project success or failure. An analysis of return on investments found that the use of a LIDAR system can save a millions in equity investments.

During the lifetime of windfarms, due to the increasing height of the turbines and the on-going revision of the IEC 61400-12-1 standard, the WINDCUBE v2 becomes the equipment to be used to measure the wind speed across the entire rotor, and so make **an accurate power curve measurement.**



Ref: Improved Bankability: The ECOFYS Position on LIDAR use

WINDCUBE® v2: the 200m ultra-portable wind LIDAR profiler

Not all LIDARs are equal, the WINDCUBE v2 is recognized as the best in class LIDAR in the industry with the most accurate data, proven by independent studies. With hundreds of LIDAR systems in operation, WINDCUBE is the proven choice for wind assessment.

The ultra-portable WINDCUBE v2 Doppler LIDAR remote sensor collects measurements at heights up to 200 meters, mapping wind speed and direction, turbulence and wind shear. It is the lightest, most compact LIDAR available on the market.

The WINDCUBE v2 designed to be deployed on any site is now operating successfully in 5 continents. The major developers, consultants and manufacturers have selected the WINDCUBE v2 for its superior and reliable measurement accuracy, rapid deployment and ease of operation.

Optional Features

FCR® Flow Complexity Recognition

Supported by the 5th vertical beam, FCR® enables the WINDCUBE v2 to provide highly accurate, bankable data in all terrain types. FCR® combines hardware and software innovations to allow for direct, accurate wind speed measurements. CFD Software Engine add-ons also available (Windsim, Meteodyn)

WINDCUBE Anywhere SAT / 3G

The built-in modem card provides a secured web-based interface from any location. The WINDCUBE Anywhere option features:
- Remote access to real time data
- System health monitoring
- Data management

WINDCUBE Power Pack

A power pack is the ultimate solution for remote locations. Ultra-portable, green and affordable, this stand-alone power supply is available worldwide.

GPS Geofencing Security

The optional GPS geofencing security provides reliable, affordable peace of mind.

PERFORMANCE

Range	40 to 200m
Data sampling rate	1s
Number of programmable heights	12
Wind speed accuracy	0.1 m/s
Wind speed range	0 to +60 m/s
Direction accuracy	2°

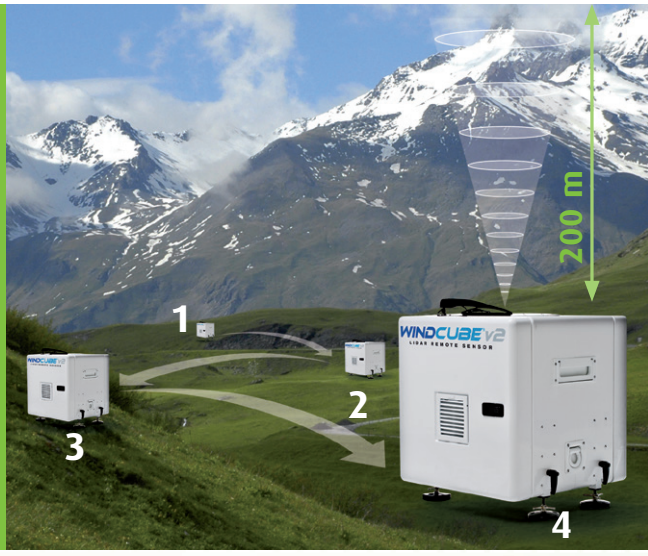
HARDWARE AND ENVIRONMENTAL

Dimensions	L-W-H : 543 x 552 x 540 mm
Weight	45 kg
Power consumption	45 W nominal
Environmental	• Temperature range -30°C to +45°C/-22°F to108°F • Operating humidity: 0 to 100% RH (non-condensing) • Housing classification IP67 (for inner racks)
Safety	Class 1M IEC / EN 60825-1
Compliance	CE

SOFTWARE / DATA

Data format	ASCII
Data storage	SSD and compact flash (backup storage)
Data transfer	LAN / USB
Software features	• Configuration and control • Real time display • Diagnostic
Output data	• 1s/10min horizontal & vertical wind speed • Min & Max • Direction • SNR Quality factor (data availability) • GPS coordinates

- Ultra-portable (45kg) - 10 minute installation
- Class 1 anemometer matched accuracy
- Complex terrain applications with FCR® : Flow Complexity Recognition
- Unmatched reliability and data availability
- Backed by industry leaders



For further information about

WINDCUBE® v2
LIDAR REMOTE SENSOR

please contact us: info@leosphere.com

www.leosphere.com

LEOSPHERE is a world leader in LIDAR (laser radar) atmospheric remote observations. The company develops, sells and services new turnkey remote-sensing instruments allowing wind measurement and aerosol (ice, ash, dust, smoke) characterization.

LEOSPHERE has deployed several hundreds of LIDARs throughout the world in severe environments with the same concern of reliability, reduction of operational costs for clients, and dedication to atmospheric hazards control.

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