

WindCube Scan *Explore Edition*

Long-range, 3D wind data for efficient, safe port operations



Key benefits

The right data at the right time

Get full 3D scanning in ranges up to 6 km, 8 km or 10 km (depending on model), as well as several scanning patterns for wind observations. Depend on outstanding uptime, data availability and comprehensive insights that exceed what traditional wind sensors can provide.

At-a-glance insights and reporting

Gain rich campaign insights through your choice of data management tools. WindCube Scan offers flexible data management through API requests, communication with an FTP server, or a user-friendly and robust graphical user interface.

Extreme performance, low maintenance

Count on the robust casing and heated scanner lens for high performance in the harshest marine environments including humidity, dust, ice, heavy rain and snow. Best-in-class components provide continuous and timely measurements plus hands-off maintenance. 4G connectivity takes WindCube Scan even further — no Ethernet cable needed.

Supported by the industry leader

Rely on Vaisala's industry-leading warranty and servicing package for sustained performance and accurate, reliable measurements. Our decades of experience, scientific leadership, and industry-leading support services help you get the most from your equipment over its full life span.

Ports are getting bigger, busier and more dense with cranes, buildings, containers and large ships. These structures interact with wind in complex ways, with different areas of a port often seeing dramatically different wind behavior. At the same time, seaports are often hit hardest by severe weather and wind is the most dangerous climate factor in port operations — becoming more so with climate change. These factors put today's ports at increased risk of injuries, delays and damages.

Modern, laser-based weather sensors capture 3D spatial wind data for detailed situational awareness in every corner of complex port areas — making it an invaluable asset for understanding wind behaviors and patterns.

WindCube® Scan is the industry's tool of choice for maximizing safety, efficiency and operational continuity. By providing precise spatial wind data at ranges up to more than 10 km, WindCube Scan can create a virtual dome around the port area (the equivalent of thousands of anemometers) so you can measure, understand and act on current — and ever-changing — conditions.

WindCube Scan at a glance

Applications

- Accurate, actionable remote wind observations for optimized port operation and safety decisions
- Creating a virtual dome around port areas for expanded situational awareness and short-term forecasting

Key features

Full 3D wind map with high data quality and range

Dedicated display software

Resistant to harsh weather conditions with minimal maintenance

API available for user's own configuration and data access

WindCube Scan Explore Edition specifications

	100P	100S	200S	400S
Typical wind measurement range	Up to the boundary layer	6 km	8 km	10 km
Maximum acquisition range		14 km+	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			
Data format	NetCDF data format			
API type	REST web API			
API functionalities	Lidar scan configuration and monitoring; status/activities/logs monitoring; data (JSON stream and NetCDF files) download			
Dimensions	830 x 1008 x 1365 mm (L x W x H)			
Weight	225kg			
Temperature range	-40°C to +55°C (-40° to 131 F°)			
Power consumption	1100W maximum average power with brief peaks up to 1600W			
	Designed for quick and efficient onsite services			

Why Vaisala?

Weather and environmental insights are the greatest catalysts for successful maritime operations. From sensors to systems and digital services, Vaisala technology empowers maritime leaders to confidently meet new challenges and harness new opportunities.

Vaisala is driven by passion, relentless curiosity, and the desire to create a better world, as reflected by our guiding principles for maritime:

1. Master the weather, master the sea

The weather affects maritime operations—whether onshore or offshore—more than any other factor. It also reveals the vast potential of the sea. We enable maritime leaders to harness that potential while navigating pressing challenges driven by climate change.

2. Oceans of insight

The maritime industry is a complex ecosystem, with valuable information to be found everywhere. Our integrated, end-to-end solutions turn that information into practical insights for new competitive advantages.

3. Currents of innovation

Maritime is evolving, and the currents of innovation are taking us to a more sustainable and weather-aware industry. Vaisala markets leading-edge solutions backed by our unmatched legacy of scientific leadership.

4. Champions for sustainability

We help provide a proactive, informed approach to navigating sustainability initiatives and saying ahead of regulatory pressures. Along the way, we protect and strengthen the ecosystems of which we are all part.

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vaisala.com/maritime



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