

3D Scanning Doppler Wind Lidar

Molas 3D

Molas 3D is a three-dimensional scanning doppler wind lidar based on the principle of pulsed laser coherent Doppler frequency shift. Various scan modes (PPI/RHI/DBS/LOS/programmed scan) are realized. Molas 3D can be applied to offshore wind resource assessment, complex terrain research, wind turbine wake detection, airport glide path wind shear warning, urban meteorological observation, high-altitude turbulence detection and other customized wind speed measurement scenarios.



Product Advantages

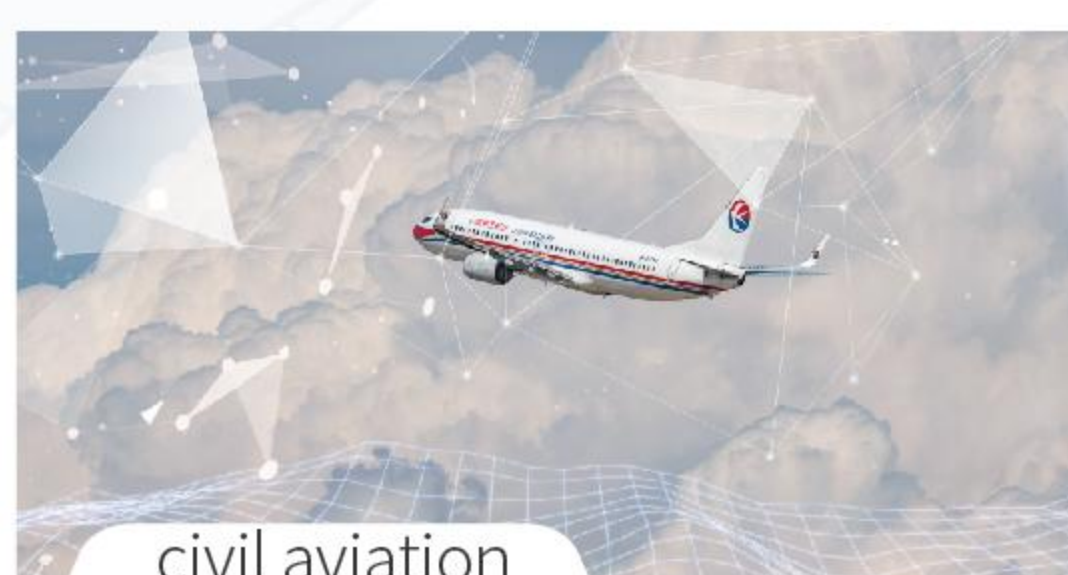
- **Rich measurement information:** 3D wind field refined measurement, up to 300 custom distance layers
- **large range:** 4/8km typical detection distance
- **High precision:** Pointing accuracy 0.1°, visual direction wind speed accuracy 0.1m/s
- **Rich scanning methods:** PPI/RHI/DBS/LOS/ Programmable arbitrary scan method
- **Flexible deployment:** Small and lightweight, easy to transition and build
- **all-weather:** No fear of harsh wild environment, with LPZ0B minefield survivability
- **Safe to use:** With GPS location reporting and geo-fencing functions, data encryption has no risk of leakage
- **Rich configuration:** 2 distance resolutions and 5 accumulation times to choose from

Application Field



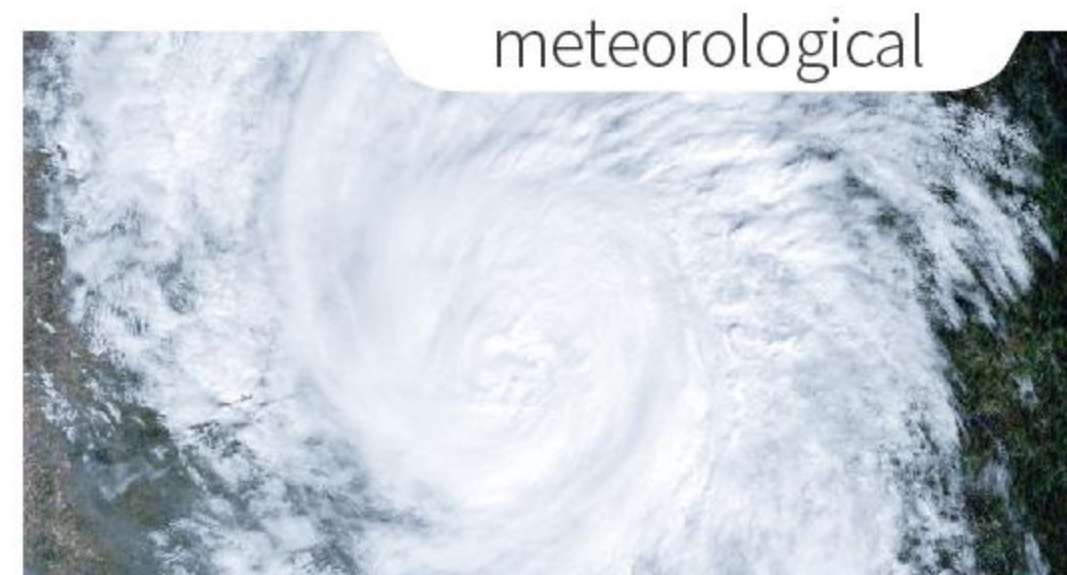
wind power

- Wind resource assessment, measuring wind field information in a large area, reducing site selection risk
- Long-distance power curve measurement, wake eddy current measurement, optimize wind energy utilization, optimize unit efficiency



civil aviation

- Detection and early warning of dangerous meteorological phenomena, such as wind shear, microburst, etc.
- Measure wake vortices to optimize flight separation for airport traffic



meteorological

- Provide wind field information to understand the state of wind in the boundary layer
- Provides accurate and high spatiotemporal wind profile information within a few kilometers of the near surface, filling the gap in low-altitude observations



air quality inspection

- Real-time 3D information on plume dispersion to track emission sources
- Optimizing Dust Emission Control for the Mining Industry

Parameters

Basic Parameters

Distance	8km (corresponding to 75m distance resolution) 4km (corresponding to 30m distance resolution)
Distance Resolution	30m、75m
Accumulation Time	0.5s/1s/2s/4s/8s optional
Sight wind Speed Range	-75~+75 m/s
Sight Wind Speed Accuracy	0.1m/s
Distance Layers	up to 300
Horizontal Range	360° × n
Vertical Range	-10°~190°
Pointing Accuracy	0.1°
Scanning Method	PPI、RHI、DBS、LOS and program scan
Data Output	Profibus DP/Modbus TCP/CAN optional
Data Network	1000BASE-TX or 4Gremote access

Other Parameters

Power Consumption	Room temperature within 400W Extreme temperature within 1000W
Powered Supply	110VAC±20%、220VAC±20% 50Hz±10%
Size	800mm*650mm*1130mm
Weight	≤150kg

Auxiliary Function

Data Storage Time	5 to 18 months
Data Format	.csv file

Environmental Parameters

Operating Temperature	-40 ~ +55°C
Operating Humidity	5% ~ 100% RH no condensation
IP Protection Level	Housing IP54, Inner Module IP66
Storage Temperature	-45 ~ +60°C
Storage Humidity	5% ~ 100% RH no condensation



Schematic Diagram Of 3D Scanning Doppler Wind Lidar

