

Using multiple scanning
lidar units? Contact us!

ArgusScan Multi-Lidar Campaign Planning and Control Software



iee.fraunhofer.de/argusscan

A software for designing, programming, controlling and observing synchronized multi-lidar atmospheric measurements using Vaisala WindCube® scanning lidars. ArgusScan aims to simplify the way multi-lidar campaigns are conducted by giving you all the tools you need to configure, execute and evaluate your own measurements. ArgusScan has been developed and used extensively within research campaigns by Fraunhofer IEE both on- and off-shore with great success.

Multi-Lidar Campaigns

Multi-lidar setups allow synchronized measurements using two or more scanning lidars, for example dual-Doppler or triple-Doppler measurements. With the campaign editor, multi-lidar campaigns can easily be configured by providing the position and orientation of the lidar devices and the positions of the targets. ArgusScan then programs the scanning lidars, continuously downloads data and automatically reconstructs wind speed and direction at the configured targets. All this data can be exported as CSV files for further processing.

Adaptive control

Using the automated wind parameter reconstruction, ArgusScan can switch between multiple different pre-configured multi-lidar campaigns based on wind direction, speed or carrier-to-noise ratio. This operational mode is successfully used during offshore research campaigns about wind park wake analysis.

Features

The following features are currently available within the ArgusScan application:

- Multi-lidar campaign planning, configuration and programming
- Device Monitoring
- Data Retrieval
- Data Indexing
- Data Conversion
- Automatic wind parameter reconstruction
- Adaptive measurement control
- CNR-mapping tools

IEE-Index 1.2 North

Name
IEE-Index 1.2 North

RGL
75m

CNR Minimum
-25

CNR Maximum
-5

Description
Development testing campaign (Northern)

Lidar Units
☒ Lidar #57

General
<http://10.0.0.57>

Position
51.3209747° 9.4709425° 181m GPS

Orientation
0° 0° 78°

☒ Lidar #58

General
<http://10.0.0.58>

Position
51.3212577° 9.4872562° 178m GPS

Orientation
0° 1.2° 12°

Measurement Points
Interleave Scans

+ Add Measurement Point
+ Add Vertical Pattern
Filter Points ...

#1 pReference 51.316618° 9.479425° 421m GPS

General
Name: pReference
Accumulation Time: 1000 ms

Position
Latitude: 51.316618° Longitude: 9.479425° Altitude: 421 m GPS

Ranges
Range in front of Point: 100 m Range behind Point: 100 m Range Steps: 9

Extra
Extra Ranges Start: 0 m Extra Ranges End: 0 m Extra Ranges Steps: 0

Remove

#2 pLeft 51.32793° 9.473858° 399m GPS

#3 pFar 51.33537° 9.481615° 419m GPS

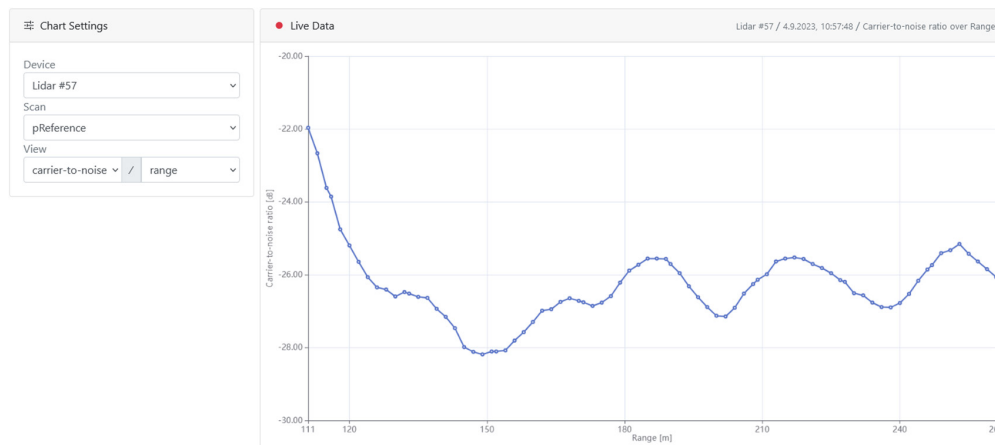
#4 pRight 51.325532° 9.489488° 378m GPS

Campaign Programming

Each campaign may be configured to run on multiple devices at the same time. ArgusScan will attempt to synchronize the measurements with each other so that all devices perform the measurement at the same time.

Live Panel

Often users need to inspect live data from the configured devices. Of course, ArgusScan provides a dedicated page for viewing this data. Additionally, ArgusScan provides up-to-date and easy to understand plots showing device environmental data (like pitch, roll and temperature) over time.



Contact

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