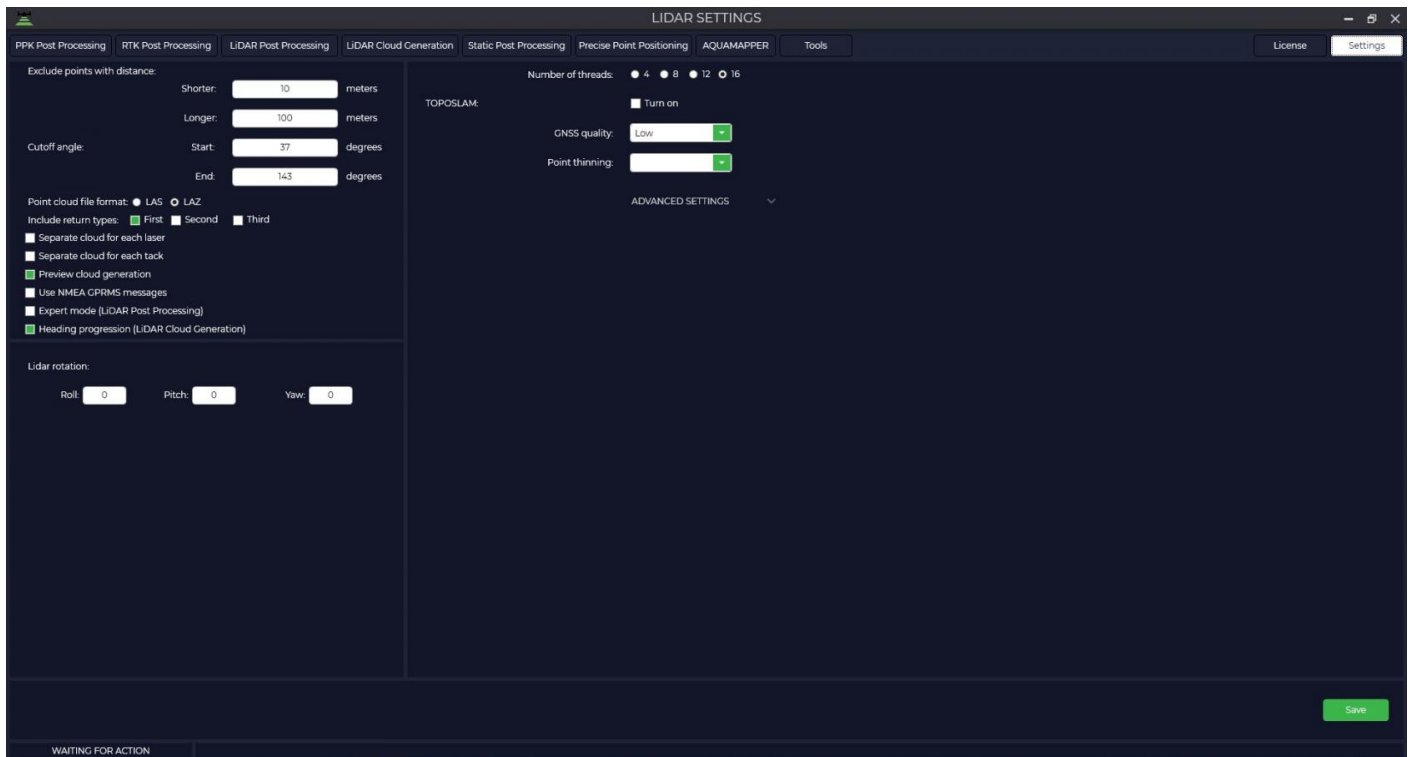


# Lidar scanning

In this section of the program you can configure parameters for high-precision trajectory processing, point cloud generation including TOPOSLAM technology.



[To do this, go to the "Settings" tab, and then select "Lidar scanning" and in the window that appears, configure the processing parameters.](#)

Exclude points with distance:

Shorter:  meters

Longer:  meters

Cutoff angle:

Start:  degrees

End:  degrees

Point cloud file format:  LAS  LAZ

Include return types:  First  Second  Third

Separate cloud for each laser

Separate cloud for each tack

Preview cloud generation

Use NMEA GPRMS messages

Expert mode (LiDAR Post Processing)

Heading progression (LiDAR Cloud Generation)

Exclude points with distance from lidar

Closer is the distance to disregard when generating the point cloud.

Next is the maximum beam length when generating points.

Cut angle:

Specify the start and end angle of the LiDAR scan.

Point cloud format - select in which format the LAS/LAZ point cloud will be generated.

Include return types in the point cloud - select the number of reflections you need or the number that your hardware supports.

- **FIRST** - first reflection
- **SECOND** -second reflection
- **THIRD** - third reflection

Separate point cloud for each laser - generate separate point clouds for each beam separately.

Separate point cloud for each tack - generate a point cloud according to how the user divides the data into transects.

Preview cloud generation - view point cloud generation in real time

Synchronize time by NMEA GPRMC packets -

Expert mode (LiDAR Post Processing) is a mode that allows you to manually specify the type of sensor and IMU to be used.

1. Drone files

Lidar model

IMU model

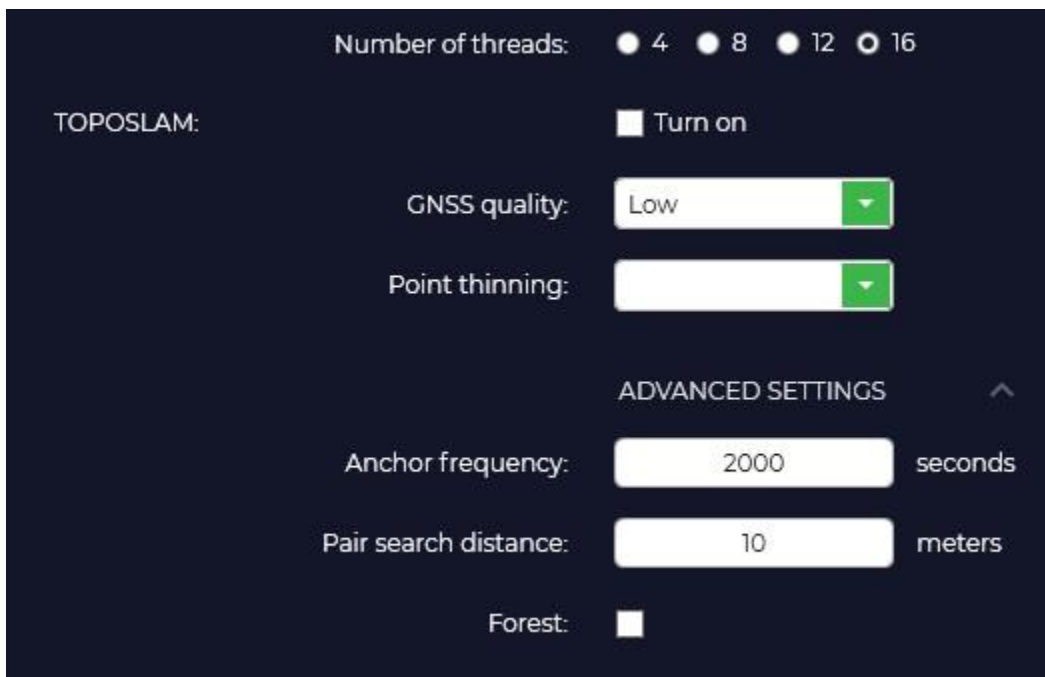
GNSS file

IMU file

Output folder

Batch processing

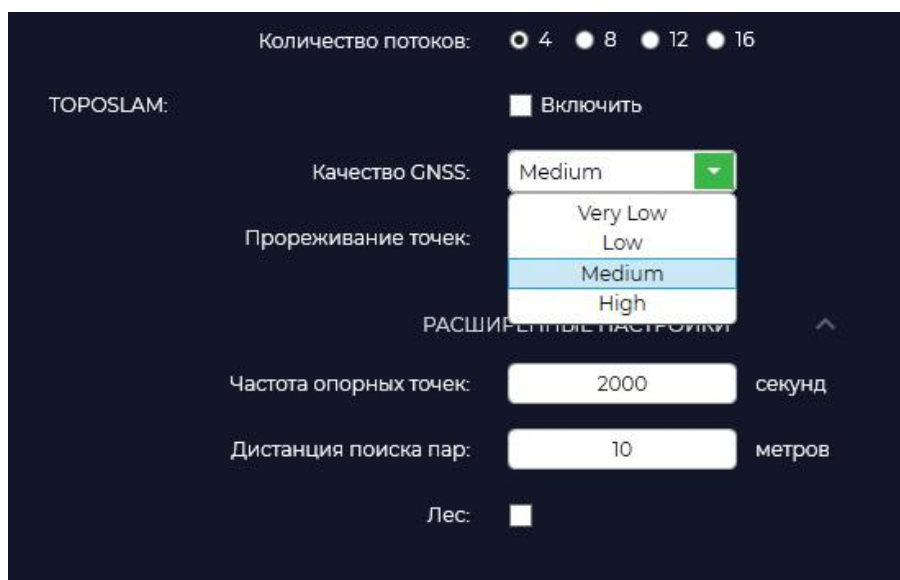
TOPOSLAM is designed to correct the point cloud when the GPS signal is not good enough. Currently TOPOSLAM only supports ground scanning.



Number of streams. Specify the number of processor threads you would like to utilize to accelerate SLAM processing.

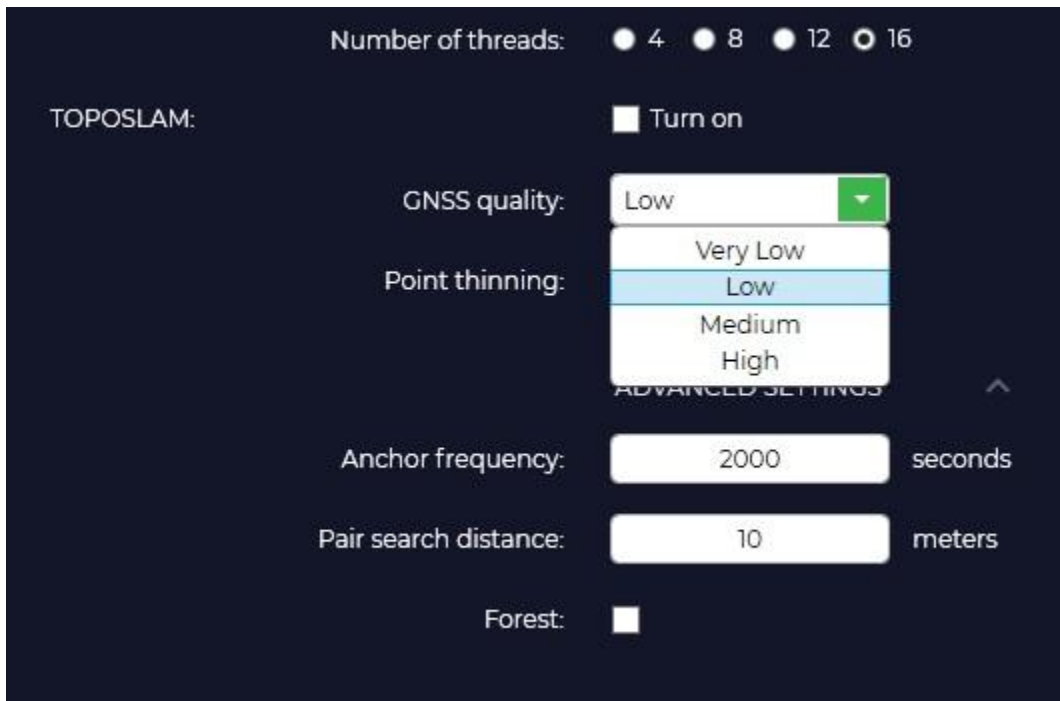
To activate the TOPOSLAM algorithm, you must check the corresponding "Enable" option.

GPS signal quality. Depending on the quality of GPS track you should select the appropriate tab. Low - floating solution more than 70%, Medium - floating solution more than 50%, High - floating solution more than 20%. If the quality is low, the program splits the track into smaller segments for their further mutual comparison.



Point thinning. Segment skipping function. Off - do not skip, Low - skip one segment after each generated segment, Medium - skip two segments, High - skip four segments. This function is designed

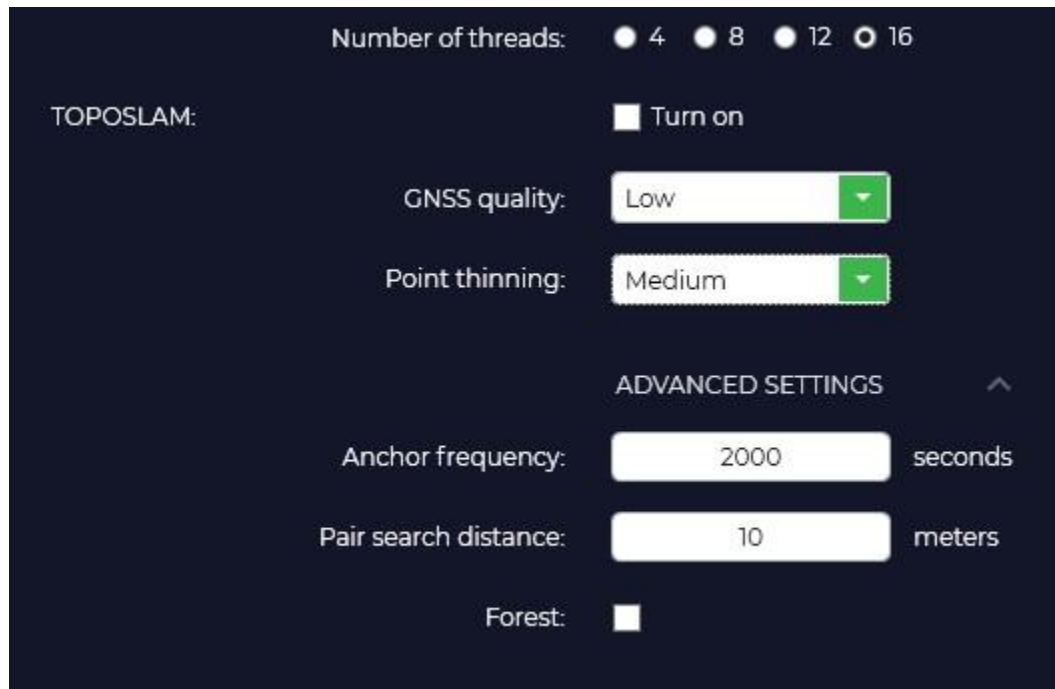
to speed up the processing process and in case of RAM shortage for large shootings.



Frequency of reference points.

Distance search for pairs.

Forest.



Updated 30 October 2024 09:39:21 by TOPODRONE SUPPORT