



SLC GNSS Receiver Tested in the Forest Area

In October, we brought the SatLab SLC GNSS Receiver to a forest area in Poland, which is covered by wood for decades, to have a test about SLC's performance under the shelter of the trees.



SatLab Toolbox:

The SATLAB TOOLBOX application is used for the one-time first configuration of the SatLab SLC receiver to download RTK/RTN corrections.



1. Bluetooth connection



2. Configuration of the modem



3. Configuration of the NTRIP network access



4. Sending NMEA to an external device via Bluetooth port

Power GPS – application for Android:

The test was conducted using the Power GPS application. The Power GPS configuration comes down only to connect the application to the SatLab SLC via Bluetooth.

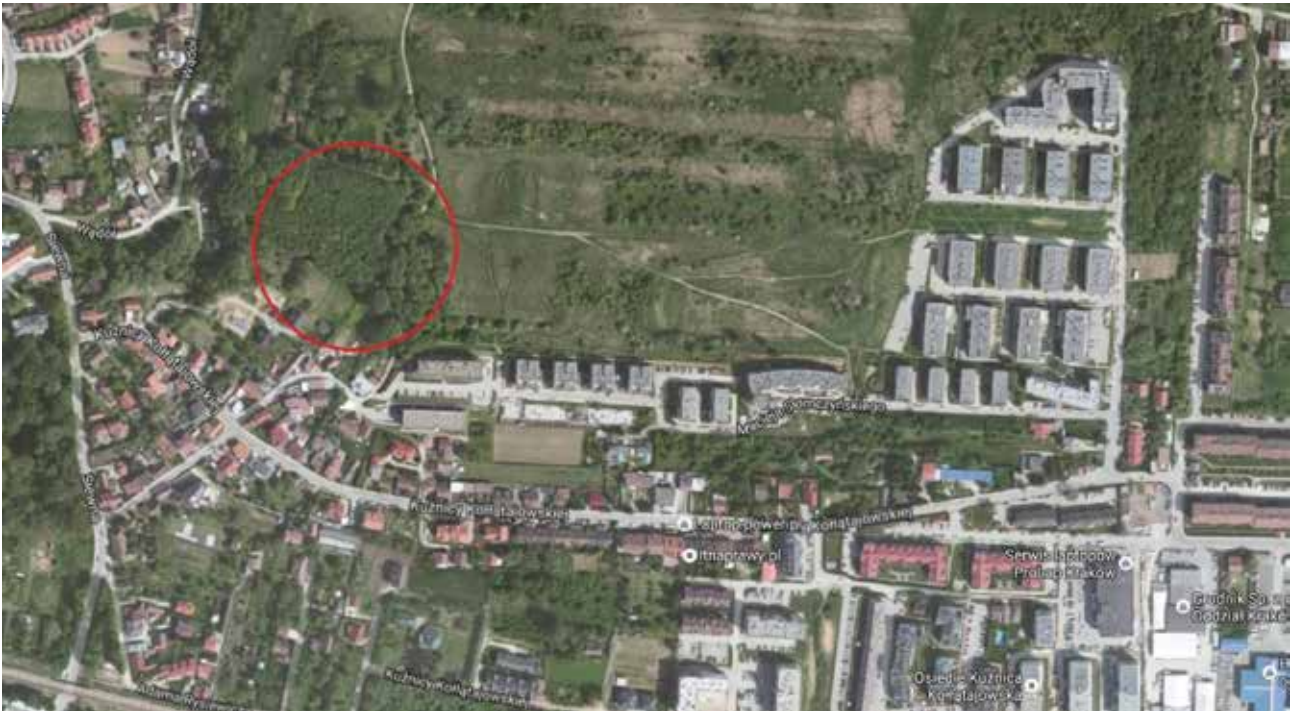
3 points have been measured to compare the performance of the receiver with an internal antenna and with an external antenna. Below is a table with deviations.

NR	Without external antenna			With external antenna			Differences[m]		Remarks
	X [m]	Y [m]	Accuracy	X [m]	Y [m]	Accuracy	X	Y	
1	5551852.533	7425414.139	1-2 cm	5551852.499	7425414.154	1 cm	0,034	-0,015	
2	5551833.473	7425432.314	2-3 cm	5551833.446	7425432.334	2-2 cm	0,027	-0,020	
3	5551807.127	7425423.096	4-5 cm	5551807.188	7425423.163	2-3 cm	-0,061	-0,067	Measurement beside wall

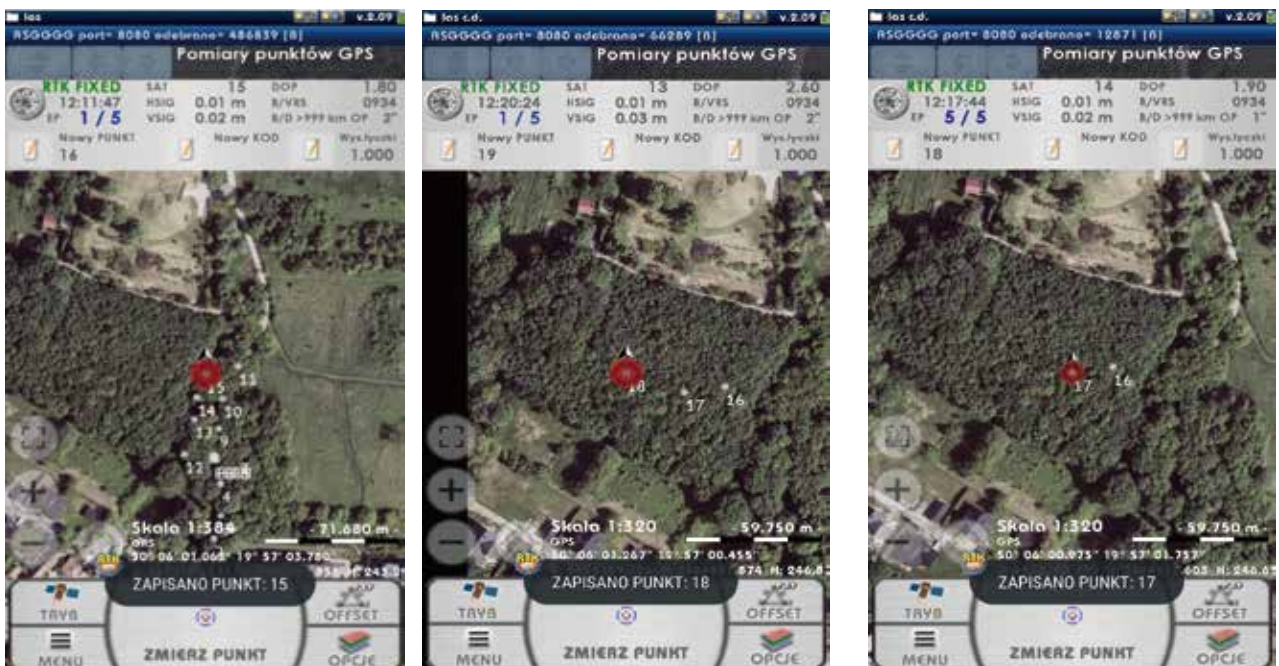
Compared with the state surveying warp, the differences are about 1–2 cm when measuring with and without an external antenna.



Tests in forest areas



In the forest, the receiver only works with an additional external antenna. The position accuracy is 2 cm. When moving with the receiver, the accuracy is about 15–20 cm. It is necessary to stop for a few seconds to get an accuracy of 2 cm again. Below are the screenshots from the application and photos from the measurement place.



A screenshot of the measurement of 15 points on a forest road and in a ravine.

Below are pictures of the place where the measurements were taken.



CONCLUSIONS:

Great Performance

SatLab SLC works very well. It searches satellites quickly: in the open air, it can track 18–20 satellites. When equipped with an external or an internal antenna in open areas, it can provide good accuracy and quick initialization and stable connection, especially the high recurrence of the accuracy of measured points. The external antenna amplifies the signal. There is a visible difference from the measurement without the antenna between the buildings and in the forests, while in the open spaces, measurements can be taken without an additional antenna.

Simple operation and configuration

You need to configure the SatLab SLC Toolbox once only and it will remember all settings. Therefore, from the second time, all you need to do is to switch it on and to connect to a measuring application on your tablet or smartphone.

ABOUT SATLAB GEOSOLUTIONS AB

Satlab Geosolutions is a Swedish based global satellite positioning solutions company with offices strategically located around the world. Founded by a group of passionate and pioneering engineers, with a total of more than 40 years of experience in the GNSS industry, the management team is made up of veteran industry experts who value our customers' needs. Focusing on research and development, the Satlab Geosolutions team works around the clock to create innovative products for surveying professionals across the globe, providing superior complete solutions.

SWEDISH ENGINEERING AND TECHNOLOGY

In the geospatial world, surveying professionals depend on the most accurate and precise measurements to build the world we live in. At Satlab Geosolutions, we pride ourselves in creating solutions with Swedish engineering and technology. We ensure that all our products meet our rigorous quality check and assurance, delivering the Swedish innovation the moment you power it up for your work, the technology you can rely on that are designed and engineered in Sweden.

SATLAB GEOSOLUTIONS MISSION STATEMENT

Satlab Geosolutions strives to maintain the quality of producing high-performance and premium products coupled with innovative solutions.