



Astrocast and SensAlpin to develop satellite communication monitoring stations based on SatIoT.

Astrocast to develop a resource-optimized satellite communication system for Central Asia's remote snow, glacier, and permafrost monitoring stations.

Lausanne, Switzerland, February 27, 2023, [Astrocast](#), a leading global nanosatellite IoT network operator, announces today that the [Swiss Polar Institute](#) has selected the company to develop a resource-optimized satellite communication system for remote snow, glacier, and permafrost monitoring stations in Central Asia. This project aims to address challenges associated with acquiring a continuous time series of correctly measured environmental parameters over a long time period; with consistent quality, particularly at remote high-latitude and high-altitude field sites.

This project, which was initiated and driven by the [University of Fribourg, Switzerland](#) will apply the satellite communication technology, developed by Astrocast, to these remote monitoring stations. In doing this, Astrocast will work closely with [SensAlpin GmBH](#), Davos – a company that designs, builds, and operates specialised equipment for environmental monitoring. The technology deployed will be optimized for minimal resource use, e.g. low power consumption, and will significantly reduce the prohibitive costs associated with existing satellite communication services. Once developed, the system will first be tested in the Swiss Alps, before being implemented on a recently drilled permafrost borehole in the Akshiirak region in Kyrgyzstan.

This integration project is a joint effort between Astrocast and SensAlpin. Together, both organisations have worked on a solution that integrates Astrocast's Astronode S+ on top of the control cabinet of the stations. As part of the trial, an adequate housing for harsh conditions, as well as the software for controlling the Astronode S+, will need to be implemented and tested in Davos before it is deployed in Kyrgyzstan.

Climate change poses a significant challenge for humanity, and the related global implications will influence and threaten future economies and the livelihoods of many coming generations, especially in developing countries. The UN General Assembly agreed upon 17 Sustainable Development Goals and related Targets, representing an overarching framework for implementing the Paris Agreement at the 21st Conference of the Parties of the UN Framework Convention on Climate Change. This project forms a part of this framework and supports these aspirations.





Andreas Hasler, Project Manager, SensAlpin says, *“Strategies to enforce climate resilience, and to mitigate and adapt to climate change must be based on strong and accurate baseline information. This includes data that can be tracked while monitoring the climate through using sophisticated, cost-effective satellite communication systems. In particular, the monitoring of Essential Climate Variables, as defined by the Global Climate Observing System are important. And, today, snow, glacier, and permafrost are considered Essential Climate Variables to track.”*

In addition, this project also aims to improve the current services of the Hydromet and other research agencies in Kyrgyzstan and other countries in Central Asia.

“Water resources are unevenly distributed in Central Asia and are mainly stored in the cryosphere in the upstream countries - Kyrgyzstan and Tajikistan. As a result, this region faces numerous challenges in water management, energy production, irrigation, agriculture, environment, disaster risk reduction, security, and public health. This situation is very challenging for these countries and is taking their own sustainable development for the future into an enhanced risk by the ongoing climate change,” says Martin Hoelzle, Department of Geosciences, University of Fribourg

Fabien Jordan, CEO Astrocast says, *“Our team worked successfully with SensAlpin to integrate SatloT into the satellite communication system that they developed for this project. The experience that our joint teams have gained through collaborating on this fascinating project will most likely result in additional developments for similar use cases, such as those found in other polar and high-altitude monitoring projects, where SatloT can bring connectivity benefits to important sensors and other forms of monitoring equipment. For instance, based on this experience, our technology could be easily and cost-effectively integrated into an array of data loggers available on the market – such as those provided by the likes of Campbell Scientific, among others.”*

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ABOUT ASTROCAST

Astrocast SA operates a leading global nanosatellite IoT network, offering services in industries such as Agriculture & Livestock, Maritime, Environment & Utilities to name a few. The Astrocast network enables companies to monitor, track, and communicate with remote assets from anywhere in the world. It relies on superior L-band spectrum through a strategic alliance with Thuraya. In partnership with Airbus, CEA/LETI and ESA, Astrocast developed Astronode S, an ultra-low power and miniaturised module compatible with inexpensive L-band patch antennas. Founded in 2014 by a renowned team of experts, Astrocast develops and tests all its products in-house, from the satellites to the modules. Astrocast is listed on [Euronext Growth Oslo](#).

For more information visit astrocast.com



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