



## IRIDIUM CERTUS® AIDS COLLECTION OF VITAL BIOLOGICAL DATA

*Iridium Certus® powers the Thales MissionLINK™ terminal for unparalleled 24/7 connectivity in the remote Norwegian landscape. IEC Telecom and The IK Foundation chose Iridium® for its global, reliable, and robust communications capabilities to support the gathering of critical, raw scientific data at a far-away, unmanned Field Station in Svalbard.*

### THE CHALLENGE

Prins Karls Forland, an island off the West coast of Svalbard (part of the Spitsbergen Treaty), within the Forlandet National Park, is one of the last places on Earth to retain an unaltered, wild landscape that houses a variety of wildlife species. The land is an untapped scientific resource, largely because of its inaccessibility - government regulations only allow scientists to explore this part of Spitsbergen for ten days out of the year. In addition to that, passage of large vessels to the island is impossible due to a coastal plain formation with dangerously shallow waters.

### COMPANIES

- **The IK Foundation:** Non-governmental scientific organization that conducts natural and historical research around the world.
- **IEC Telecom:** Specializes in supplying and delivering highly reliable mobile and fixed satellite communications solutions to businesses, public institutions, and consumers around the world.
- **Iridium:** Satellite communications company that offers truly global voice and data connectivity anywhere in the world.
- **Thales:** Internationally recognized manufacturer of satcom equipment.

### CHALLENGES

- The Field Station is situated in a highly remote location with difficult to maneuver terrain, only accessible via small boats manned by even smaller crews.
- Strict conservation regulations only permit scientists and technicians to be on the island for ten days a year, requiring quick install and upkeep of technology on the Field Station.
- Historically, there is limited connectivity in this remote area of the world, but for the Field Station to produce the volume of data needed, strong connectivity is required 24/7, 365 days a year.

### BENEFITS

- Thales MissionLINK on Iridium Certus™ terminals are highly portable and lightweight, the ideal hardware for The IK Foundation's scientific endeavor.
- Iridium Certus terminals feature solid-state, omnidirectional antennas that automatically connect with the closest Iridium® satellite when pointed toward the sky, allowing for easy set-up and use.
- Iridium Certus enables truly global, real-time connectivity, allowing the Field Station to transmit collected data in a timely manner.

Finally, the steep and glaciated terrain on the island itself presents its own challenges for navigation and work on the

The IK Foundation, supported by the LMK-Stiftelsen Foundation for Interdisciplinary Scientific Research, saw an opportunity to conduct scientific investigations in this untapped corner of the world to bring a variety of data, including meteorological patterns and wildlife movements, to an interested global audience. They created The Field Station | Naturae Observatio | Martin's Eye to enable panoramic, photographic, high-definition monitoring of the local biosphere. The station is sustainably designed and generates round-the-clock scientific data without disturbing the environment or local wildlife.

However, conducting groundbreaking scientific research and sending large quantities of data from such a remote location presents unique logistical and communications challenges. The Field Station requires continuous and reliable connectivity, despite the remote landscape, in order to disseminate vital data every day. The communications system also needs to be autonomous, given the limited amount of time that technicians are permitted onto the island.

## THE SOLUTION

With access to the island possible only for small boats, the equipment brought on board also needs to be lightweight and portable, yet robust enough to deliver high-quality, dependable connectivity in a challenging environment. Once installed on the ground, the equipment has to remain in place for one year, operating in cold and damp conditions and withstanding severe snow and ice.

In order to achieve reliable connectivity for long periods of time without human intervention, The IK Foundation approached IEC Telecom, an Iridium partner and service provider, who recommended a Thales MissionLINK terminal powered by Iridium Certus. The Thales MissionLINK terminal was chosen for its streamlined interface and ease of installation and operation.



Initial set-up of the Field Station in May 2019

Service Provider: IEC Telecom  
Enabling Product: Thales MissionLINK™  
Enabling Service: Iridium Certus®

**THALES** IEC telecom

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Built upon the Iridium Certus platform, the terminal provides seamless connections without the need for hardware checkups.

IEC Telecom was responsible for the set-up and support of the terminal. A small crew arrived at the island by boat during the permitted ten-day window in May 2019 and were able to quickly get the terminal up and running within hours. IEC Telecom was also responsible for the remote maintenance, allowing any system upgrades to be completed without an engineer on site. The winning combination of Iridium Certus connectivity, IEC technical support, and Thales hardware enables the Field Station to send photographic data of the local flora and fauna to scientists and researchers without disrupting the Nordic biosphere.

## THE IMPACT

Since May 2019, the Field Station, enabled by Iridium Certus and serviced by IEC Telecom, has already produced staggering amounts of raw biological data that has significantly bolstered scientific research around the globe.

By providing on-demand access to data and figures, the Field Station revolutionized the scientific approach of the organization, and the scientific data obtained will open doors for further studies. "New research opportunities have opened up, given that all projects and observations can be carried out remotely, and now the opportunities this platform presents are limited only by our imagination," says Lars Hansen, Head of The IK Foundation.

## TAKE AWAY

Thanks to Iridium, IEC Telecom and Thales, the Field Station is now able to consistently transmit and disseminate raw scientific data several times a day to researchers across the globe through an autonomous communications system. Iridium Certus will continue to be a critical part of the Field Station and The IK Foundation's approach to gathering and sharing observation data and increasing scientific engagement worldwide.



The Field Station

iridium®