



A leading salmon farm in Chile to upgrade its Wi-Fi infrastructure with Altai

Background

In the heart of Chile's renowned salmon farming region, a leading local producer sought to modernize its operations to support digital workflows and efficient management across its marine farming facilities. The operating Wi-Fi network connects the pontoon with floating salmon cages, enabling real-time access of salmon's health status, feeding patterns, and other key metrics. The operator also relies on the Wi-Fi network for internal communications. Therefore, network reliability is critical for operational control, monitoring, and communications between the main pontoon and floating cages. Our distributor – Transworld and system integrator - Gtelecom were engaged to deliver the solution capable of meeting these unique requirements.

Challenges

Unpredictable marine conditions are the main challenges to maintaining stable Wi-Fi connectivity between the pontoon and the floating cages. According to the host of Salmon Farm, the previous network, based on multiple repeaters, suffered from frequent failures and higher

Customer:

Leading Salmon Farming Company in Chile
Transworld
Gtelecom

Deployment Location:

Pontoon and floating cages

Applications:

IoT applications and internal communications

Products:

- 1 x Altai AX600-S Dual-band Wi-Fi Access Point
- AltaiCare cloud service

Solution:

- Super dual-band coverage
- Native connectivity without Wi-Fi repeaters
- Durability for marine environment

Benefits:

- Reducing points of failure
- Improving power efficiency
- Easy management by cloud service
- Cost saving
- Durability and Reliability

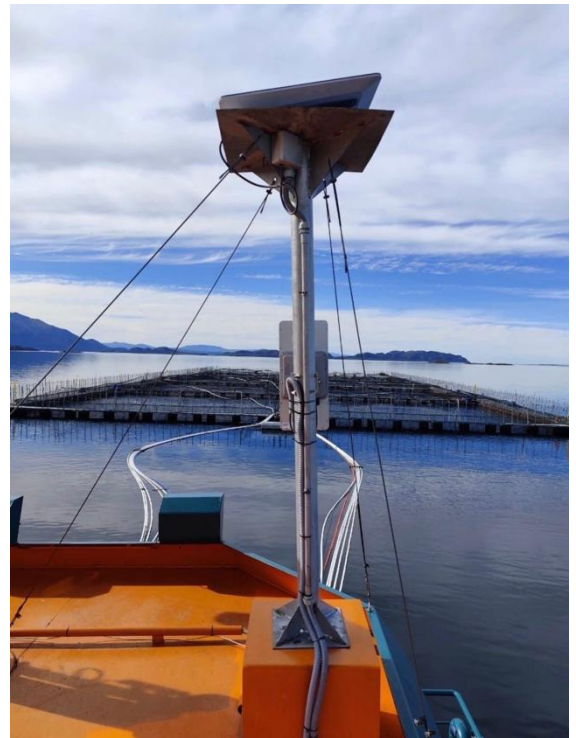
power consumption. Frequent maintenance and the need to power multiple devices increased energy consumption and maintenance workloads, resulting in high operational costs.

Solution

To address the connectivity challenges in the marine environment, an Altai AX600-S device was deployed, strategically installed on the salmon farm's main pontoon. This device was able to provide stable, long-range Wi-Fi coverage to the floating cages, eliminating the need for multiple repeaters.

By capitalizing on the AX600-S's extensive range and data capacity, the need for multiple in-between repeaters was fully eliminated, simplifying the entire network architecture. This optimization not only improved connection reliability but also reduced costs associated with operations in the floating environment.

AltaiCare WLAN management cloud service was incorporated, allowing Gtelecom's technical team and the farm owner to centrally monitor the status of the equipment and the Wi-Fi network in real time, ensuring consistent performance and greater visibility into the operation.



Altai AX600-S was deployed in salmon farm's pontoon to deliver reliable Wi-Fi coverage hundreds of meters offshore

Results

The implementation of the Altai AX600-S system enabled a robust and continuous Wi-Fi connection between the pontoon and the cages with a connectivity distance of approximately 800 meters, eliminating the need for intermediate repeaters. This resulted in a simpler network, with less infrastructure, lower energy consumption, and greater operational stability. The enhancement allows the farm to adopt advanced sensors, monitoring systems, and automation tools, supporting traceability and efficiency. It also positioned the company for future expansion, with the agility to support additional IoT devices and digital initiatives as needs evolve.

Furthermore, AltaiCare enabled proactive management of the system. The network management became more centralized and straightforward, allowing the technical team to focus on proactive optimization rather than constant repairs, improving efficiency and reducing response times to potential incidents.

