



## Overview

The Manantali Dam is located in the Senegal River basin of Mali in Africa. In order to fully utilize the dam's potential, a hydroelectric plant was established next to the dam in 1997. The two facilities are serving multiple beneficial purposes until now.

Altai's partner, Imperis Sarl, was approached for a project to deploy a full Wi-Fi network covering the plant and the 4,500+ workers' living quarters that includes both indoor and outdoor areas across nearly 100 hectares in total. During the site survey, it was found that the residences are primarily metal shipping containers scattered around an area more than 2 km away from the plant. All of the residential buildings are located in rural areas surrounded by gradient landscapes and trees - the worst obstacles for most radio signals.

The deployment team had to overcome the gradient slopes between the plant and the residential area to extend the Wi-Fi signal from the plant area to the workers houses. Altai Technologies' SuperWiFi were determined to be an ideal solution for delivering reliable wifi connectivity and throughput for this challenging environment. Today both the plant and residential areas for the workers enjoy a high speed, low latency Wi-Fi network with 100% indoor and outdoor coverage.

### Customer Name:

Manantali Dam and its associated hydroelectric plant  
Imperis Sarl (Distributor)

### Deployment Location:

Kayes Region, Mali  
Africa

### Application:

A Wi-Fi network covering the entire plant operational areas and the workers living quarters located 2 km away.

### Products used:

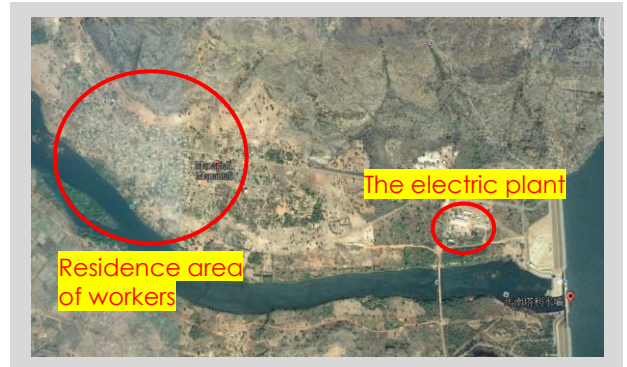
A8n, A2-Ei, A2, C1n

### Result:

All workers enjoy reliable WiFi connectivity while at the plant and at home no matter where they are on either area of the property. With Altai's SuperWi-Fi free, highspeed wireless connectivity is available to the workers despite the challenging structural aspects of the plant as well as the metal shipping containers used for their housing, online services.

### The Challenges

- Large area of coverage totaling nearly 100 Hectares
- Tall trees and sloping terrain creating natural obstacles for Wi-Fi signals
- Residences consist of, difficult-to-penetrate metal containers



### The Solution

After a thorough site survey and careful selection of base station locations, a mix of Altai's indoor and outdoor products were selected for deployment.

With precise calculations, Altai's flagship product – A8n was used for long range access in order to maximize its ability to cover large areas with minimal number of access points. Altai's A2 bridge units were utilized to support wireless backhaul for the Wi-Fi base stations, and C1n series access points were used for indoor connectivity. This arrangement formed an equipment array delivered exceptional performance across the entire coverage area.

### The Result

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### About Altai

Altai Technologies is a leading supplier of carrier-grade Wi-Fi products and technologies with a distribution network reaching 100 countries. Altai Super WiFi is the leading solution for vertical industrial markets, covering over 200 container ports globally. Altai's solution is unparalleled in its ability to address wireless connectivity requirements in challenging industrial environments and those involving expansive coverage areas.

The Altai Super WiFi Solution includes a complete portfolio of indoor and outdoor products for carriers, WISPs, and enterprises to support a wide range of applications such as mobile data off load, public access, WLAN access, and backhaul.

Utilizing patented smart antenna technology, throughput optimization and advanced interference mitigation software combined with a cloud-based network management system - AltaiCare, the Altai SuperWi-Fi technology is designed from the ground up to deliver WiFi networks with unprecedented performance, reliability, scalability, and manageability.

### Contact Us

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