

## Exporting trends.

From the outside, the Port of São Francisco do Sul is protected with fixed cameras around the entire perimeter. Inside, some PTZs support operational control.



### Organization:

Port of São Francisco do Sul

### Location:

Santa Catarina, Brazil

### Industry segment:

Transportation

### Application:

Perimeter protection

### Axis partners:

Eagle Soluções Tecnológicas, Digifort

### Mission

The Port of São Francisco do Sul, in Santa Catarina, is one of the top 10 ports in Brazil. When it came time to replace its old analog video surveillance system, the port authority sought a robust security plan that could withstand the location's salt air and fluctuating temperatures (the city has recorded temperatures ranging from 1°C to 41°C). The plan also needed to comply with Federal regulations on monitoring, surveillance and access control systems, which recommend installing cameras capable of capturing images clearly, even at night.

### Solution

The port put out a call for proposals that would cover both perimeter protection and interior surveillance. Drawing on its experience in the port sector, Axis partner Eagle Soluções Tecnológicas submitted the winning bid: for the perimeter, it proposed AXIS P1354-E Network Cameras installed every 40 meters or so, with a total of 98 of these cameras.

The system can thus detect persons around the entire extent of the perimeter (at a resolution of 50 pixels per meter) and to recognize persons at a distance of 20 meters from the camera (100 pixels per meter). The system only required six AXIS Q6045-E MK II cameras to cover the entire port yard area of 244,000 m<sup>2</sup>. All the images are managed using Digifort, a Brazilian software developer.

### Result

When the system was put into practice, its images turned out to be a valuable support for operations control. The PTZ cameras made it possible to better monitor the loading and unloading of cargo, to check whether employees were using their personal protective equipment (PPE), and to watch ships entering and exiting the port from a long distance.

**“We prioritize safety and were looking for agility in operations. That’s why these investments are critical to keeping the port modern and competitive.”**

**Paulo César Cortes Corsi, President of São Francisco do Sul Port.**

## Regulatory compliance

The port of São Francisco do Sul is a multipurpose terminal, set up to handle general cargo, containers, and bulk grain. Over time, investments in security became a priority, and the facility’s 40 analog cameras began to lag behind expectations.

“Part of the project’s efforts were directed toward meeting the requirements of the Brazilian Federal Revenue Service (Receita Federal do Brasil), ANTAQ (National Waterway Transport Agency), and CESPOTOS (State Commission of Public Safety in Ports, Terminals and Waterways),” explains the IT and Electronic Governance Manager of the Port of São Francisco do Sul, Sidney Rückert.

With clear rules for port facilities, the Brazilian Federal Revenue Service regulates the adoption of monitoring, surveillance, and access control in such sites and sets out basic requirements for the adoption of cameras.

According to Diego Bueno, Technical Supervisor at Eagle Soluções Tecnológicas, the supplier chose to bid using an Axis installation thanks to their image quality in low light scenarios and in situations where light falls directly on the camera, which can create blind spots. In addition, their decision was influenced by the equipment’s low bandwidth requirements and robustness—important factors given the port’s weather and operating conditions.

## Technological differences

Given the federal requirement for image quality even in low light, the Axis Lightfinder night view feature stood out from the other alternatives in terms of perimeter protection.

With an AXIS P1354-E fixed camera installed every 40 meters or so, it is now possible to keep an eye on anyone entering or leaving the port. “The cameras help control what happens around the wall, so that people can’t remove goods clandestinely or enter the port area,” explains Bueno.

Even at night, it’s possible to see details that help identify suspects, such as the color of their shirt, since the Lightfinder technology enables the capture of color images even under very low lighting conditions.

WDR, in turn—the image display feature that handles high contrast or backlit conditions—compensates for the reflection of sunlight off the water.

## Temperature variation and grain transport

Besides the contrast between light and dark, other challenges at the port include temperature variation and the nature of operations at São Francisco do Sul. The port sits on an island 215 kilometers from the capital, Florianópolis.

In addition to the salt air, the port complex deals with temperatures that can drop to 1°C in the winter and easily exceed 30°C in summer. What’s more, the port handles grain in transit. This means the cameras must be equipped to handle impacts from stray grain thrown onto the lens or into the protective housing.

## Operational benefits

The 98 AXIS P1354-E Network Cameras cover 100% of the perimeter and provide greater flexibility to the security team. “Today we can monitor the entire perimeter without any blind spots, and it’s very simple to retrieve images,” notes IT and Electronic Governance Manager Sidney Rückert.

AXIS Q6045-E MKII PTZ models help support operations at the Port of São Francisco do Sul complex. Altogether, there are six of these units, spaced about 300 meters apart from each other.

These cameras can capture the identification number on containers and ships, and—thanks to the 32x optical zoom—even license plates on trucks entering the port. In the words of Sidney Rückert, the Axis camera system “exceeded all possible expectations.”



Article 17 of RFB Ordinance No. 3518 of September 30 2011, states, “The location or enclosed area should have a monitoring and surveillance system for the premises, equipped with cameras that allow clear image capture, even at night, in areas where travelers and cargos pass through, where goods are stored, and at authorized access and exit points, and other points defined by the RFB.”

