

Axis keeps an eye on vegetables: video surveillance bears fruit.

Axis IP cameras enhance communication and security system designed for greenhouse complex.



Organization:
Agro-Invest Greenhouse
Complex

Location:
Kaluga region, Russia

Industry segment:
Critical infrastructure

Application:
Safety and security,
operational control,
process monitoring

Axis partners:
ST Solution, SeeTec

Mission

Agro-Invest is currently the largest greenhouse complex in Russia, growing vegetables for wholesale dealers and leading regional retailers. The greenhouses built from 2013 to 2017 cover an area of 68.5 hectares. The company uses the most advanced agricultural technologies and successfully expands its business. In the near future, it plans to double in size. Therefore, the integrated approach to security involving the video surveillance system is also a part of the corporate standard.

Solution

ST Solution, the system integrator, developed and implemented the integrated communication and security system based on a single structured cabling system (SCS) using IP-protocol covering the greenhouse complex.

There are slightly over 300 Axis IP cameras (the optimal number for the huge area of the complex) to monitor the site perimeter, processing areas, final product packing and shipment areas as well as to observe working discipline and construction of new facilities.

Result

According to Agro-Invest employees, the lost product rate at the greenhouse complex reduced after introducing the security system. It became much easier to fight theft and other incidents, detect those responsible and, consequently, to improve labor discipline. Network cameras are used to monitor the process, packing and shipment areas as well as to observe construction of new facilities.

“It was our intention to choose Axis for the integrated security system at our site, since we had no doubt that they offer the best solution than any other manufacturers of IP cameras – and we were right. With the clear high-quality image, continuous fail-safe operation and complete integration of Axis cameras with the video management system, we improved operational discipline, started to efficiently investigate incidents and significantly reduced product loss. And above all, we managed to use the minimum number of cameras for such a large-scale project and therefore optimize capital costs in the project.”

Oleg Vlasov, SB Agro-Invest.

Project features

The most important aspect of agricultural industry is scale. The territory of the complex is covered with huge greenhouses made of glass and metal and equipped with advanced technologies along with important elements of natural care for the crop: rain water is used to irrigate the soil while the plants are pollinated by bumblebees. The logistics center is no less impressive: fresh vegetables are sorted, packed and shipped to all regions of the country. The video surveillance system should perfectly match the environment: the cameras installed inside the greenhouses should have protection against excessive humidity, while cameras mounted outside must cover the large area in all kinds of weather and in various lighting conditions.

Several models of Axis IP cameras form the core of the video surveillance system at Agro-Invest greenhouse complex. Each camera makes its own contribution to efficient system operation. For example, AXIS P5534 PTZ Network Camera has IP51-rated protection against dust and water as well as 18x optical and 12x digital zoom with autofocus feature – all these make it an ultimate choice when you need to «capture» a small object in the greenery. The Gatekeeper function automatically zooms in, changes the image tilt and pan, if motion is detected in the surveillance area.

AXIS P1435-LE Network Camera is a compact camera used outdoor for 24/7 video surveillance of a large area. Discreet IR LEDs with variable illumination angles support Axis OptimizedIR technology and switch on automatically when darkness falls, if an incident is detected, or by the user command. Invisible to the human eye, IR illumination allows the viewer to distinguish objects even in complete darkness at a distance of 15 meters.

Cameras are watching

Axis cameras installed at the territory of the complex are integrated with SeeTec Cayuga Infinity video management system. This solution provides secure multi-user access to security data and PTZ control functionality.

Apart from this, the system also keeps an archive of the videos recorded by the cameras with the possibility to search by various parameters. When investigating an incident, employees can quickly find the required record in the archive. On the top of all that, Axis Zipstream technology reduces traffic and the memory required to store the records at least by 50%, while retaining all important image details.



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