



The D-Link unified Video Surveillance system monitors processes at Ecoparc del Mediterrani in Barcelona



“The installation of Network cameras inside the machines on our production lines allows us to monitor the correct operation of production processes from the control room and detect incidents at a very early stage. The new video surveillance system allows us to operate cranes remotely and safely in areas with little or no visibility”

— Client: Ecoparc



“The deployment of the video surveillance system was a challenge due to the high demands of the environment. However, the new technology and the convergence between cameras, switches, NVRs and monitoring software have greatly facilitated a clearer understanding of the project as well as aiding its execution.”

— Integrator: Konig Control, S. L

Ecoparc del Mediterrani is a Mechanical Biological Treatment (MBT) plant that recycles unsorted waste generated by the various Barcelona municipalities. The treatment of the waste consists, on the one hand, of selectively separating the various recyclable materials (paper, plastic, metal, etc.) by applying sophisticated mechanical processes and, on the other hand, converting organic waste into energy through a biological process.



Due to the characteristics of the various processing threads, they needed to be able to visually monitor the processes in order to prevent potential failures and, where they do occur, to be able to review the cause of the failures. Moreover, vehicle traffic entering and exiting the site also required monitoring. For both tasks, the Konig Control S.L integrator proposed a Video Surveillance solution by D-Link, as they are known to provide products that make use of the latest technology, comply with standards such as the ONVIF specification and, more importantly, offer a single unified solution that integrates video surveillance, switching and storage, all handled by the same provider.

Project Needs

Waste separation processes at Ecoparc deal with the incoming material on a production line. Therefore, any fault in a subsystem or separation process could bring production in the entire factory to a halt. Since in situ monitoring of processing machinery and belts is not possible by control staff, the client required a video surveillance system for viewing and monitoring processes from a remote central site.

Furthermore, the waste that is dumped into reception tanks is transferred to processing belts by a grapple crane. The client required the installation of cameras attached to the grapple cranes to allow monitoring of the operation of these machines, as there were several areas on site where visibility was poor. Finally, the plant has several entrance gates for vehicles. The client expressed the need to monitor the traffic passing through those gates.

The Solution

The broad D-Link portfolio, which includes Network cameras, NVRs and network electronic systems, has enabled us to deploy a unified, high-performing system, as all solutions are provided by the same supplier. This ensures IP synergy and convergence; a highly valuable asset when it comes to tackling projects where there is a need to handle both safety and IT infrastructure, as was the case here.

The installation process included:

- 38 video surveillance Network Cameras
- NVRs
- PoE electronic network with Gigabit Smart switches and transceivers

The wide range of D-Link's video surveillance cameras allowed us to find the right model for each environment. All the cameras are high-definition and some are also powered via PoE (Power Over Ethernet), which makes them easier to install and provides greater flexibility in the deployment of the cameras.

Video Surveillance Cameras

- Varifocal cameras with WDR for the area, with a wide input and high brightness (DCS-3716).
- DCS-7110 cameras with IR illumination and IP66 certification for installation in industrial environments.
- Wireless Cameras (DCS-5222L) with PTZ function, installed on the bridge of grapple cranes, where a wired connection is impossible.
- Dome cameras with IP66 certification (DCS-6210) in the yard where trucks are unloaded (outdoor).



Gigabit PoE (Power Over Ethernet) Switches

The network underlying the surveillance system had to be suitable for the transmission of large amounts of data and adapted to an industrial environment (possible electromagnetic interference), as well as suitable for long-distance connections.



DGS-1210 SWITCHES
SMART GIGABIT PoE

Network Video Recorders (NVRs) and D-ViewCam™ video management software

To record images, we installed D-Link DNR-326 NVRs, that come with the free D-ViewCam™ Video Management Software. The client-server architecture of the D-ViewCam™ main console software allows us to deploy a modular recording system. In this facility we transmitted the images recorded by the 38 cameras to the NVR. Since the remote live view allows us to configure logical groups of cameras, the location of the recordings made by each specific camera is transparent to the end user.



DCS-3716



DCS-6210



DCS-7110



DCS-7513



DCS-5222L



DNR-326

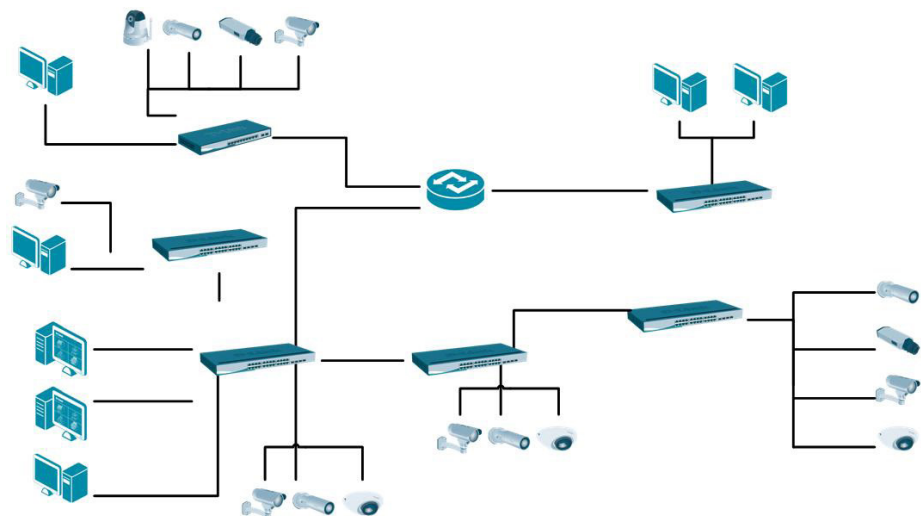
Therefore, it was decided to create an optical fibre network that would interconnect the main nodes and that uses FTP shielded cabling for the camera connections in this industrial environment. D-Link networking products proved especially useful by providing Gigabit Smart solutions, allowing us to use a fibre optic connection and, furthermore, providing power to the cameras via PoE (Power Over Ethernet). The following were installed:

- 4 DGS-1210-28P Switches
- 1 DGS-1210-24P Switch
- 1 DGS-1210-10P Switch
- 10 DEM-311GT Transceivers

The Benefits: a Vision for the Future

The installation of a unified video surveillance system across the production lines allows incidents to be detected at an early stage and the appropriate remedial actions to be taken. The recordings make it possible to analyse what happened in case of incidents or failures and identify possible causes, thereby ensuring the continuous improvement of the process.

The installation of cameras on grapple cranes allows operators to remotely operate these machines safely and easily in areas with low visibility; this in turn also improves workplace ergonomics for crane operators. Finally, the installation of cameras at entry points to the plant allows the detailed monitoring of trucks entering or exiting the plant and any potential incidents.



For more information: www.dlink.com

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