

KIA MOTORS adds value to production plant infrastructure with Axis network cameras.

Surveillance solution gives KIA MOTORS the ability to monitor equipment and guarantee worker safety.



Organization:
KIA MOTORS

Location:
Žilina, Slovakia

Industry segment:
Industrial

Application:
Equipment monitoring
and workers' safety

Axis partners:
Anect and
Canex Connections s.r.o.

Mission

In 2006, leading Korean car manufacturer KIA MOTORS built a production plant near the city of Žilina in Slovakia. The communications infrastructure company ANECT was assigned the task of designing an advanced IP-based infrastructure to perform multiple tasks such as server monitoring, security applications, IP TV and more. One of the applications in this infrastructure was a surveillance solution which gave KIA MOTORS the ability to monitor equipment and guarantee worker safety. The specifications included extreme reliability and safety, excellent video quality and advanced functionality such as easy remote control of the camera angles and data storage functionality.

Solution

ANECT built a solution based on Axis network cameras installed directly on the underlying Cisco IP infrastructure. The video feeds from the cameras are received at

an onsite monitoring facility including 56 monitors and control through advanced technology. Innovations feature touch screen control of the Axis network cameras and seven Advantech servers adding value for the customer with the possibility of recording of video streams from all cameras for thirty days.

Result

The implementation was very smooth mostly due to thorough analysis, high quality components and a smooth implementation process. Also, the surveillance solution was built according to Cisco's AVVID (Architecture for Voice Video and Integrated Data) architecture which resulted in a solution with extremely high reliability and flexibility. The solution has been up and running without any interruptions – performing perfectly.

"We are very pleased with both the technical solution and the way it was installed by ANECT. The Axis network cameras provide the operators with excellent image quality and rock-solid reliability."

Jin-Young Park at KIA MOTORS.

Absolute control through monitoring

Today's car manufacturing sites are among the most automated environments in the world. Computers controlling robots and other machinery today build cars faster and with much higher quality than what could be done by hand. But it is also a potentially dangerous environment where the automotive workers and specialists must be protected and operations need to be monitored in order to discover any problems before they cause disturbances to the production line.

Axis network cameras use robust IP technology to send high quality images over regular local area networks. Each camera works as its own server allowing it to operate autonomously and with high reliability. If one camera becomes unavailable, the others keep on working. By connecting a number of cameras into a central monitoring solution, KIA MOTORS can supervise the material/production flows, make sure safety regulations and procedures are followed and ensure the physical protection of the site.

The Axis network cameras were tested on the Cisco infrastructure before actual implementation at the KIA MOTOR site. Meanwhile, ANECT carefully planned the exact location and angle for each camera to maximize the efficiency.

Top-of-the-line technology and intelligent design

The monitoring system is built on a unified communication infrastructure platform that, apart from data also enables voice and video signal transfer. It is this sharing of different data types in a single IP network that makes it possible for a customer to take full advantage of the IP technology.

The high-quality video feeds from sixty five AXIS 213 PTZ, twenty AXIS 221, five AXIS 211, four AXIS 223M, eight AXIS 207, one AXIS 207W, five AXIS 216FD and five AXIS 216FD-V Network Cameras are collected by a state-of-the-art monitoring solution, c-Watch*, provided by Canex Connections s.r.o. using seven Advantech servers with disk arrays insuring that material is not lost even if a disk should fail. The solution also includes forty seven AXIS 292 Network Video Decoders, an AXIS 2490 Serial Server and an AXIS 295 Video Surveillance Joystick.

The information is displayed on 56 smaller flat screen monitors (20-21") and two large plasma screens – all from Samsung. In the current number of cameras and related equipment is also included the added site of Glovis, one of KIA MOTORS suppliers which opened up their own site next to KIA MOTORS.

*cWatch Enterprise is a program based on surveillance software cWatch PRO developed by CANEX connections. cWatch is based on client-server architecture. cWatch client supports MPEG4 multicast, which enable a greater number of clients to be connected to one camera without decreasing camera performance. cWatch allows recording of unlimited number of Axis cameras distributed to multiple servers. cWatch allows a rich control of PTZ cameras. Most prominent control is the Panorama extension, which enables to move camera to every possible position in one click. cWatch Enterprise was enriched by ability to control monitoring walls based on AXIS 292 Network Video Decoders connected to LCD and PDP monitors.

