

Korea Railroad builds safer security system by linking Axis network cameras and depot fire detection system.

Reinforcing security image management and monitoring capabilities, and securing the ability to respond to fires quickly and accurately with full HDTV images.



Organization:
Korea Railroad

Location:
Goyang, Gyeonggi-do,
South Korea

Industry segment:
Transportation

Application:
Safety and security

Axis partner:
TNX Systems

Mission

Korea Railroad is a public corporation in charge of managing the national railroad of Korea and related business.

The Goyang Rolling Stock Workshop of the Metropolitan Rolling Stock Maintenance Depot is the starting point and final destination of KTX (Korea Train eXpress). It sits on more than 1.3 million m² and consists of 31 buildings. The KTX rolling stocks, running more than 3,000 km for 17 hours a day and carry thousands of passengers, are maintained day and night.

Network cameras were installed inside and outside the buildings, such as the light maintenance inspection garage and heavy maintenance garage. They were also installed in the wheel repair shop to enable real-time recording, search and playback of recorded images. These cameras are integrated with the fire detection system for fire prevention and provide reinforcement of security so the head office in Seoul can monitor what goes on in the depot.

Solution

To ensure the safety of the large site of the Goyang Rolling Stock Depot, TNX Systems, an Axis partner, proposed and installed full HD-class Axis network cameras. This video management system not only secures high-resolution images, but also directs the cameras to where a fire started since the system is integrated with the fire detection system. This results in prompt assessment of the situation so corrective measures can be taken.

Result

The Goyang Rolling Stock Workshop uses AXIS Q6035/-E and AXIS M1114 Network Cameras to secure HDTV images, and capitalizes on software that integrates with the fire detection system to check and monitor incidents in real-time so the large rolling stock depot can be safely protected. As a result, it is now possible to manage the access records of visitors to the depot and ensure the safety of employees; and the clearer images of the KTX rolling stocks have reinforced security. In addition, the high-quality images have improved the ability to monitor blind spots such as the outside fences and vulnerable areas, enabling rapid response to any situation.

"The full HDTV-class high-resolution images, provided by the Axis network cameras, boosts security in the large lot of the depot, including the buildings, rolling stocks and blind spots. In particular, the interface with the video management software and the automatic fire detection system now make it possible to correctly and quickly respond to a fire in the depot, making for a safer and more effective security system."

The Security Manager of the Goyang Rolling Stock Workshop.

HDTV-class network cameras improve managerial ability

The Goyang Rolling Stock Workshop of the Metropolitan Rolling Stock Maintenance Depot covers a large area and consists of many buildings. Axis network cameras and the IP-based surveillance system ensure the safety of the depot through integration with the fire detection system, and the HDTV high-resolution images make it possible to monitor the facilities on the large site at a higher level. In particular, the elimination of blind spots in and outside of the buildings with a small number of cameras is the greatest benefit of the video surveillance system built with network cameras.

AXIS Q6035/-E PTZ Dome Network Cameras installed in the Goyang Rolling Stock Workshop not only provide excellent images of full HDTV quality and 20x optical zoom, but also have day and night functionality to provide high-quality images in places where there is almost no light.

Also, AXIS M1114 Network Cameras with CS-mount multifocal DC-Iris lens deliver 1 megapixel/HDTV high-resolution streams with 30 fps using progressive scan to provide excellent quality images without any motion blur.

Ensuring safety through integration with the fire detection system

The automatic fire detection system automatically detects heat or smoke in case of fire, indicates where the fire started, and triggers alarms. Axis network cameras and TNX video management software are linked to the automatic fire detection system and display accurately where the fire started on a map and show images taken with the cameras in a pop-up. With the ability to now correctly grasp the situation and respond when a fire breaks out, the loss of lives and property are minimized, and shortcomings of existing firefighting facilities are remedied.

Client/server architecture makes it possible to access images anytime, anywhere

The Goyang Rolling Stock Workshop used Axis network cameras and TNX's video management software IMVS to build the client/server-based video surveillance system that makes it possible to monitor images in real-time and search and play back recorded images not only at the central control room, but also in each office of the inspection garage. IMVS' perfect performance has been proven.

Using the optical communication network to install stable network cameras

Optical fiber was used to build the network infrastructure in the rolling stock depot on a large lot consisting of many buildings. As a result, it was possible to reduce the cost far more than with the existing analog system. Power over Ethernet (PoE) is supported so that power and cabling construction is not necessary, thereby reducing installation costs. Since the streaming is based on optical communication (RTSP; Real Time Streaming Protocol), which prevents image loss and noise due to transmission distance, the best image quality was secured.

