

## Huainan Mining Group improves logistics safety with Axis network cameras.

Huainan Mining Group builds a network video monitoring system for remote monitoring of coal mines.



Organization:  
Huainan Mining Group

Location:  
Anhui Province, China

Industry segment:  
Industrial

Application:  
Video monitoring of  
assisted logistics safety

Industry segment:  
AOBO

### Mission

Huainan Mining Group Materials Supply and Marketing Sub Company shoulders the task of the materials procurement and supply for the entire group and dozens of coal mines distributed over hundreds of square meters. To ensure the accomplishment of this task in a highly efficient and safe manner, it became necessary to build a flexible video monitoring system.

### Solution

The Materials Supply and Marketing Company installed AXIS 213 PTZ Network Cameras and protective wire balloons at the important positions and passages in 32 mine-based supply stations. The video streams from the network cameras of each supply station are transmitted via the IP network to the monitoring control center located in the city, where the operators can monitor and manage all network cameras and terminals. The administrators can access the server with live video view by using a web browser and they can monitor the network cameras after

authentication. A monitor wall has been installed in the control center. Digital signals are converted back into analog signals and sent to the monitor wall with live video from the cameras. The operators of the center can monitor remote video on the monitor wall in real-time.

### Result

Axis network cameras make it easy to use the existing network infrastructure, greatly reducing installation and equipment needs and costs, while largely reducing the complexity and difficulty in system implementation. This simplified the deployment of a complicated surveillance system involving dozens of sites distributed over hundreds of miles, in a rapid, highly efficient, and low-cost way. Besides, because they are stand-alone and scalable, additional AXIS 213 PTZ Network Cameras can be easily added just by connecting them to the network, making system expansion and upgrade quite simple in the future.

"It is incredible that we were able to complete the entire system with such a quality level in such a short time."

Liu Zhongyuan, Manager of Monitoring Department, Aobo Optoelectronic Tech (Hefei) Co., Ltd.

### Distributed remote monitoring

Huainan Mining Area, located in the hinterland of economically developed Anhui Province in East China, spanning across two cities (Huainan and Fuyang), currently has 9 pairs of production mines and 6 pairs of mines under construction. The Materials Supply and Marketing Company is responsible for materials supply for the Huainan Mining Group, with an annual supply worth more than US\$4.5 billion. Under the company, 10 business sections, 13 functional section offices, 19 mine-based supply stations, 1 motorcade, 1 storage and delivery center, 1 central warehouse, and 1 new zone delivery center are distributed across five districts and one county in Huainan and Yingshang county in Fuyang. The video surveillance system developed by the Materials Supply and Marketing Company, scattered in such a wide range, is a typical distributed remote monitoring system.

### Improved quality using QoS

Important factors to consider for the implementation of the network video surveillance system were network bandwidth and operation. The network used is not a private network because there are huge and important data to be transmitted. In order to ensure service isolation and safety, Quality of Service (QoS) has been configured for the switches, firewalls, routers, and other network equipment and servers to improve the transmission quality and the security of video streams. By using QoS, packet loss, delay, instability, etc. have been reduced, and both image quality and the control of the network cameras have been greatly improved.

### AXIS 292 digitized video matrix

The AXIS 292 Network Video Decoder converts the Motion JPEG video streams of the Axis network cameras directly into analog video signals and sends them to the analog-monitor wall. The video management software installed on the monitoring server can switch over multiple AXIS 292 devices to achieve 32-channel video matrix function, thus saving additional equipment and costs.

