

Axis solution implemented in new terminals of Vnukovo Airport. More than 2,000 Axis network cameras enhance video surveillance in Moscow's famous airport.



Organization:
Vnukovo International
Airport

Location:
Moscow, Russia

Industry segment:
Transportation

Application:
Airport safety and
security

Axis partner:
EcoProg

Mission

Installation of a highly reliable video surveillance system was needed to ensure a high level of security and process monitoring for the passenger and cargo terminals of Vnukovo airport in Moscow. The total area of both terminals is 327,000 square meters.

Solution

As the Department of Aviation Security was interested in improving counter-terrorism protection, preventing thefts, monitoring production processes and bringing up airport safety and security to a higher level, EcoProg, an Axis partner, successfully created an integrated system, which essentially relied on video surveillance system comprised of 2,100 Axis IP cameras. The project of IT-infrastructure of the "A" passenger terminal of Vnukovo airport, offered by EcoProg, was recognized by Global CIO as the best "Improving IT-infrastructure" solution.

Since 2004, EcoProg has operated as an engineering contractor for Vnukovo airport, and works on creating projects and building engineering communications infrastructure. The Axis solution was selected due to the following evident advantages: image scaling capability and high resolution; widest portfolio on the market; high performance and reliability of the equipment; and the open standard support needed to create infrastructure for highly complex applications.

Result

The result was effective detection of potential incidents or unattended cargos; prevention and assistance in crime investigations or damage of valuable property/cargo; secured zone access control and surveillance; and the monitoring of production and manufacturing processes, as well highly dangerous machines.

"Airport security and safety cannot be ensured without installation of an intelligent security system. One such system was installed for the "A" and "Cargo" terminals. The integrated digital video surveillance system based on Axis equipment ensures 24/7 surveillance and guarantees the highest security and safety for our passengers."

Dmitry Shmakov, Head of Vnukovo Airport Security Department.

CCTV surveillance

EcoProg installed Axis IP surveillance cameras both indoors and outdoors: checking zones, registration zones, passport and custom check zones, lobby, halls, all entrances and exits, elevators, stairways and parking. The system offers continuous monitoring of all internal and external areas of the airport terminal and the network surveillance system adds the following values:

- > Stability: if any DVR fails, the system automatically relocates video channels and switches to intact channels
- > Reliability: digital video data may be shared over the network or fiber optic, which features longer life and requires no additional equipment
- > Noise immunity: no distortions of digital signal transmitted over communication lines; protected fiber optic is resistant even to strong electromagnetic fields
- > Future-proof: bandwidth of existent fiber optic lines is sufficient to serve digital video cameras of next generations
- > Cost-effectiveness: resource savings due to lower power consumption and less equipment allows to increase archive capabilities of the system

The network cameras operate in pre-recording mode supporting 30-seconds buffer, while intelligent software supports motion detection within field of view of the cameras, virtual cross-line detection, and unattended cargo detection, identification in check zones and registration zones as well as integration with other security systems, including automatic fire-fighting equipment. For instance, if unauthorized persons try to enter the terminal outside of the checking zone, a cross-line detector automatically triggers video recording and initiates transmission of video and audio data to airport security service in real-time. Recorded video data is stored and can be viewed when needed.

Process monitoring

When the fire alarm system produces an alarm signal, the operator of the fire safety station receives images from the cameras located near the alarm area and evacuation routes. Taking into account the large size of the terminals, the new security system greatly assists in decision-making, differentiation of false alarms and effective evacuation in emergency cases.

For monitoring of elevators, travelators, cargo conveyors and other process equipment, automated workplaces are provided in the Maintenance Dispatch Center. Reliable performance monitoring of this equipment ensures fast response in case of incidents and helps reduce possible negative effects.

