

Russian Roads made smarter with reliable and dedicated information system.

Axis IP cameras – an integral part of the video system for PCC road information system.



Organization:

Russian Roads

Location:

Russia

Industry segment:

Transportation

Application:

Crime prevention, safety and security, road maintenance efficiency

Axis partner:

Minimax-94

Mission

The advanced traffic management of highways, streets and other highway facilities is absolutely impossible without a reliable and dedicated information system. This system records weather conditions along the route and on the road surface, provides video surveillance, measures traffic intensity and carries out traffic analysis. It then processes the collected data and displays it in a proper format for highway officials and drivers, prompts the decision makers and forecasts the possible scenarios.

Solution

The software solution "Production Control Center" (PCC) with integrated automatic road weather stations developed by Minimax-94 uses sensors to collect all the data necessary for dedicated services AND has been installed along Russian roads and highways.

Since monitoring the weather conditions at every section of the highway is impossible without auxiliary hardware due to the long mileage of the traffic system, apart from weather sensors each weather station is equipped with an Axis solution. Currently, AXIS P1364 Network Camera forms the core of this system.

Result

The video system, which is a part of the weather system, is used for direct visual inspection of the road, as well as monitoring the performance of the road crews and collecting up-to-date information about the weather at certain sections of the road. Today, the company has implemented about 2000 video systems on both federal and regional highways.

“Minimax-94 launches its own innovative solutions that consider the specific features of Russian roads and climate, market context and customer requirements for over 20 years. We also keep to this strategy when selecting hardware for our solutions. Axis cameras fully comply with all our requirements to image capture and transmission, light sensitivity and operation in harsh weather conditions.”

Razzhivin Sergey Viktorovich, executive director of Minimax-94

Smart roads: protection and monitoring

Deploying the Smart City concept at the national level became an important sequence of digitalizing all the aspects of Russian life. In the first place, the authorities of the major cities and regions started to pay attention to the quality of the roads, safety of drivers and pedestrians, as well as observance of traffic regulations. Hardware systems installed along the highways, city routes and at busy intersections combine video surveillance equipment, dedicated weather stations and various sensors integrated with suitable software. These systems are designed not only to prevent or detect traffic offenses, but also to warn drivers of possible dangers: slippery roads, fog, etc., as well as monitor traffic intensity and repair activities.

Innovative research and production company Minimax-94 is one of three companies that develop and implement intelligent transportation systems for Russian roads. The software solution “Production Control Center” developed by this company helps the security staff and public services to make important decisions by receiving and analyzing the information sent from equipment mostly located on poles along the roadsides. One or several IP cameras form the backbone of the video system depending on how complex the road section is. Such cameras feature excellent image quality, highly durable design and weather resistance.

Quality cameras – a key to success

According to Minimax-94 employees, AXIS P1364 Network Camera offers the best light sensitivity when compared to its peers even in infrared, which is crucial when cameras are used in highway sections with low light coverage at night. Furthermore, AXIS P1364 supports both day and night mode, while WDR – Forensic Capture in combination with P-Iris provides high-definition and highly detailed images in any environment.

Sending images to dynamic IP-addresses as scheduled is another significant functionality of Axis cameras proven to be useful in Minimax-94 projects. As for data communication, AXIS P1364 supports Axis Zipstream intelligent compression technology that significantly saves bandwidth and reduces required storage space. Moreover, the cameras are equipped with microSD/microSDHC slots for local data storage.

Cables are hidden inside the tripod supplied with the camera, while the enclosed metal housing protects the camera from rain, hail, strong wind, and foreign objects. In the future, it will be possible to use additional functionality; for example, if tampering attempts occur, the camera sends an alarm signal to warn the PCC operator.



МИНИМАКС-94

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