

CASE STUDY

Toya - quality video streaming of traffic for TV service

"We'd been looking for solutions that would ensure quality video streaming for TV services. We had no doubt about the choice of cameras – Axis Communications cameras equipped with the CamStreamer App were the only ones that fully answered our needs, and their integration with the existing system ran smoothly thanks to TOYA's internal R&D department."

Michał Dalecki, Research and Development TOYA.

About project

TOYA is one of the largest CATV operators in Poland. The company, which from the beginning has based its services on innovative technological solutions, delivers digital TV, Internet and telephone services to over 170 thousand households. One of the major challenges the company has faced so far is providing the people of Łódź, Piotrków Trybunalski, Przemyśl, Pabianice, Mysłowice and Kutno with live traffic news and an overview of the biggest crossroads and the most critical areas of their city. Soon the number of cities with cameras is due to rise and include Kraków and Kołobrzeg amongst others.

Technical solution

The assumptions of the project were fulfilled thanks to the use of network cameras that stream live video using specifically designed TOYA applications. Because of their supreme video quality, weather resistance and available functionalities Axis Communications cameras ([AXIS P1425-E/P1425-LE](#) and [AXIS M1145](#)) were chosen by TOYA with the CamStreamer application – the only application that performs its functions according to long established standards in TV industry (MPEG-TS video stream generated by [CamStreamer App](#)). TOYA's inner R&D department was responsible for the integration of the cameras with existing systems, and the project was successfully completed in a relatively short time.

Conclusion

With their wide configuration capabilities and innovative functions Axis cameras provide high quality video. Accurate camera optics and video dynamic range enable effective monitoring of the traffic, while the entire system is based on the [CamStreamer App](#). The camera system is cost effective and relatively easy to install and manage. Also, it does not require high computing power for the transcoding of video streams available from different platforms (Apple iOS, Android, PC, macOS, STB 3G).



Video quality	1080p
Camera models	AXIS P1425-E AXIS P1425-LE Mk II AXIS M1145
ACAP application	CamStreamer App
Used feature	MPEG-TS video stream
Streaming platform	Toya Go
Location	Poland



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The answer to the challenges of a developing metropolis

TOYA is the fourth largest CATV operator in Poland (providing services to over 170 thousand households). The widest network is based mainly in the urban complex of Łódź. The company bases its services on innovative technological solutions. One of its key tasks is getting to the people with important local information regarding safety and security or traffic volume at the major crossroads. To meet the expectations of its customers TOYA looked for solutions that would overcome the limitations related to the traditional TV transmission and enable sharing video streaming in mobile apps (the iOS and Android platforms), on websites (PC and macOS) and in 3G TV dedicated applications. The contents were to be easily available not only to the company's subscribers.

A wealth of benefits to the local people

Thanks to Axis network cameras, video streaming is accessed simultaneously on different platforms - a dedicated application is available for the iOS and Android platforms as well as for a desktop PC. Additionally, also available is an original version of the application for 3G receivers created by the TOYA R&D team. TOYA TV subscribers having DVB-C and IPTV sets with user-friendly applications can now display on their TV screens the Internet contents that used to be restricted for computers only.

Effective and efficient solutions

TOYA looked for solutions that would fulfil specific requirements. Project objectives considered the company chose network cameras. The key issue was finding optimal software solutions to ensure transmission had the quality and format appropriate for TV needs. At the initial stage of the project, once a series of tests had been carried out, it was decided the CamStreamer application compatible with Axis cameras would be used - its unique capability of running external applications was essential to create a system in the existing form and with the existing functionalities. The camera management system was devised by TOYA's R&D department. It aggregates camera streams and manages data transmission to the appropriate CDN nodes, as well as supervises all the connected cameras and alerts the technical department about any communication issues. Three Axis camera models were chosen to carry out the project - AXIS P1425-E/P1425-LE and AXIS M1145, all of which guaranteed the best quality to price and functionality ratio (for both individual devices and the system as a whole). In total, 57 cameras were installed in six cities. Because all the cameras are installed outdoors particular models were chosen on the basis of their resistance to the changing weather conditions.

Scalability and easy upgrade

Successful implementation of the system in Łódź along with a very positive reaction from the city's residents have led to similar implementations in other cities of the region and a continuous expansion thereof. The solutions used make it possible to easily connect subsequent devices without the risk of overloading the system. Thanks to the use of solutions from Axis Communications that are compatible with the largest number of video management solutions (VMS) in the market and in line with the ONVIF standards the system expansion presents no problem whatsoever.

