Project V: Keystone Electronic Solution's Video Surveillance Platform

Keystone Electronic Solutions identified the need for a video surveillance platform that could be deployed as an augmentation to existing Keystone remote monitoring and management solutions, such as our Remote Site Monitoring (RSM) Site Management System.

To that end, we have made our video surveillance solution, Project V, widely available.

This is aimed at providing centrally managed video surveillance: either through event and/or alarm triggered video streaming, or via a video-on-demand interface.

The stream on trigger platform provides Digital Video Recording (DVR) and archiving either on the central Project V server or at the remote site. Integration with customer systems, such as network management systems, access management systems, trouble ticket management and reporting tools, can be provided through an open integration Application Program Interface (API).

Video surveillance accessible through web browser without the need to install or maintain applications

Architectural Overview

Project V consists of remote site equipment in the form of Keystone's Remote Site Monitoring (RSM) unit and a central surveillance platform, which is deployed in a central data centre. All user access to the central surveillance platform is provided through a web user interface. This is accessible via a standard web browser without the need to install or maintain any user applications.

Video Streaming

The video surveillance platform provides a framework for routing incoming video streams and events to the other server components, a DVR subsystem to store and archive incoming video streams, and a web interface for users.

Remotely, the on-site components include the management of the incoming video streams from connected IP cameras. It also includes the RSM IO management system that collects and manages the IO inputs and outputs which serves as alarm and event triggers for the IP cameras.

A permanently connected, bidirectional, command and event pipe (CnE) exists between the Project V server and the RSM on-site unit. The CnE provides robust communication and network backhaul over a GSM connection.
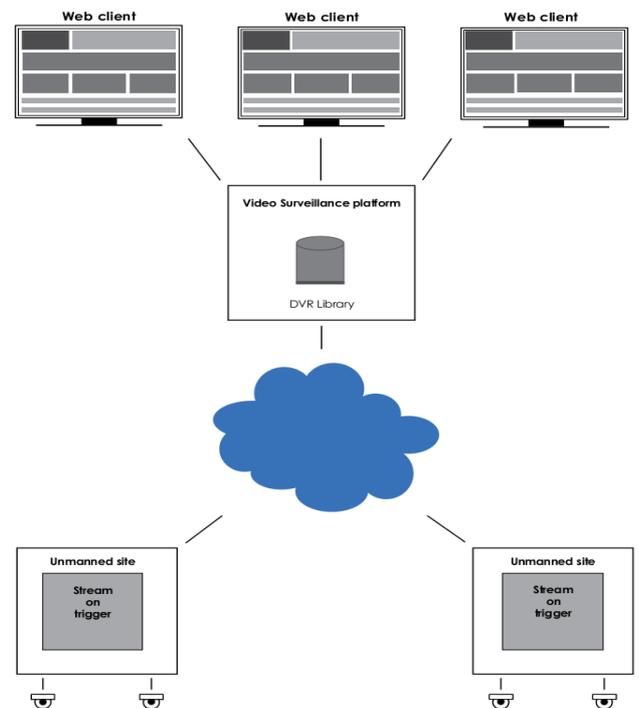
Key Features

Record keeping: Certain video triggers can be set up to either start or stop the video recording and/or streaming.

Security: Real-time streaming makes it possible for security teams to determine how to respond to a security incident. For example, in the event of an intruder detection alarm, security teams will be alerted and will be able to see live video streaming. They can then more effectively judge how to respond to the particular event.

Bandwidth: The bandwidth can be selected on each on-site unit. Depending on the selected bandwidth, the audio/video (AV) video will either be streamed to the Project V server or recorded locally on the board. In both cases the alarm events will be transmitted across the CnE over the network. Operators can also request AV streams/recording from the web graphical user interface (GUI).

Audio visual: The RSM unit is permanently connected

to the available IP cameras and will pull available AV streams from the cameras depending on the alarm/event triggered. Streams can be stored locally or be pushed up to the Project V server, for remote recording or viewing of the stream.

NMS Backhaul: The video surveillance platform allows for the backhaul of the CnE pipe and the AV streams, either across an Ethernet WAN interface or the onboard 3G GSM modem.

Camera integration: The platform integrates with any IP camera. Additionally, any I/O interface that a camera might provide (such as zone or movement triggers) can be integrated with the platform as part of the site security profile.

Scalability: The platform has been designed to be highly scalable from an interface point of view. The number of I/Os available to the system is easily scaled from a standalone device to a large installation by adding further RSM IO modules.

Training and Support

Keystone Electronic Solutions' team of experts provides training to customers and supports personnel with installing and integration of the system.

About Keystone Electronic Solutions

Keystone Electronic Solutions is an electronics research and development company, offering organisations the opportunity to outsource their design and product requirements to a highly skilled team of electronic engineers.

The company's team of experts is able to create new and innovative ways of creating electronic products, making use of the best available technology and maximising efficiencies to substantially reduce manufacturing and implementation costs. Their expertise includes both electronics and IT hardware and software, enabling them to develop a total solution for their clients' product creation, as well as integrating the resulting product into any existing

manufacturing or IT environment.

Founded in 2007 by two Directors, John Eigelaar and Ivan Popov, Keystone provides local support and design updates to clients, resulting in quick turnaround time, cost savings and reduce the time to market.

Contact:
Keystone Electronic Solutions
469 Julius Jeppe Street
Waterkloof
Pretoria
Tel: 012 460 4135
Email: info@kses.net