IoT CONNECTIVITY FOR SMART VIDEO SURVEILLANCE SYSTEMS

HIGHLIGHTS

- KeySIM is a British provider of IoT SIM cards remote access and management capabilities. Together with its partners, CSC Covert Security Ltd. and RE:SURE, it provides video surveillance systems across Ireland and the U.K.

- In order to set up a joint IoT network for their systems, they needed a single router model that is compatible with a wide range of CCTV cameras, including legacy devices, used in their systems.

- The perfect device for the job was the RUT360 industrial cellular router by Teltonika Networks. Backed by key remote access, management, and control capabilities of RMS, the RUT360 ensured seamless LTE Cat 6 connectivity and added customizability.

THE CHALLENGE – REMOTE CCTV CONNECTIVITY

CCTV security companies provide video surveillance systems for a wide range of applications, from homes and small businesses to large-scale public facilities. Reliable connectivity and remote access to their video equipment are essential for CCTV companies to provide high-quality and effective surveillance solutions.

Reliable connectivity is necessary for CCTV companies to ensure that their video equipment is always connected to the network and able to transmit video data. A reliable connection minimizes the risk of downtime, which can result in lost footage and reduced security.

Remote access to video equipment is also important for video surveillance systems, as it allows security companies to manage and monitor their systems from anywhere, at any time. Remote access also enables video surveillance providers to quickly respond to any technical issues that may arise, such as a camera malfunction or network outage, without the need for a technician to be physically present at the site.

These benefits are what KeySIM and its partners, CSC Covert Security Ltd. and RE:SURE sought to establish for their joint video surveillance systems. RE:SURE would monitor the CCTV systems that CSC Covert Security would install for its clients throughout Ireland and the U.K. KeySIM would then maintain a private and secure circuit between RE:SURE and KeySIM's data centers.

This IoT network cooperation would result in all three companies having critical remote access to all equipment regardless of location, which allows them to effectively service their clients in an increasingly competitive market.

However, in order to set up this sophisticated IoT network, they needed a single router model that is compatible with the wide range of CCTV cameras, including legacy devices, dispatched by CSC Covert Security. Luckily for them, Teltonika Networks had exactly the connectivity device they needed.

TOPOLOGY

WIRELESS DATA CONNECTION	RMS MANAGEMENT CONNECTION
WIRED DATA CONNECTION	RMS CONNECT CONNECTION
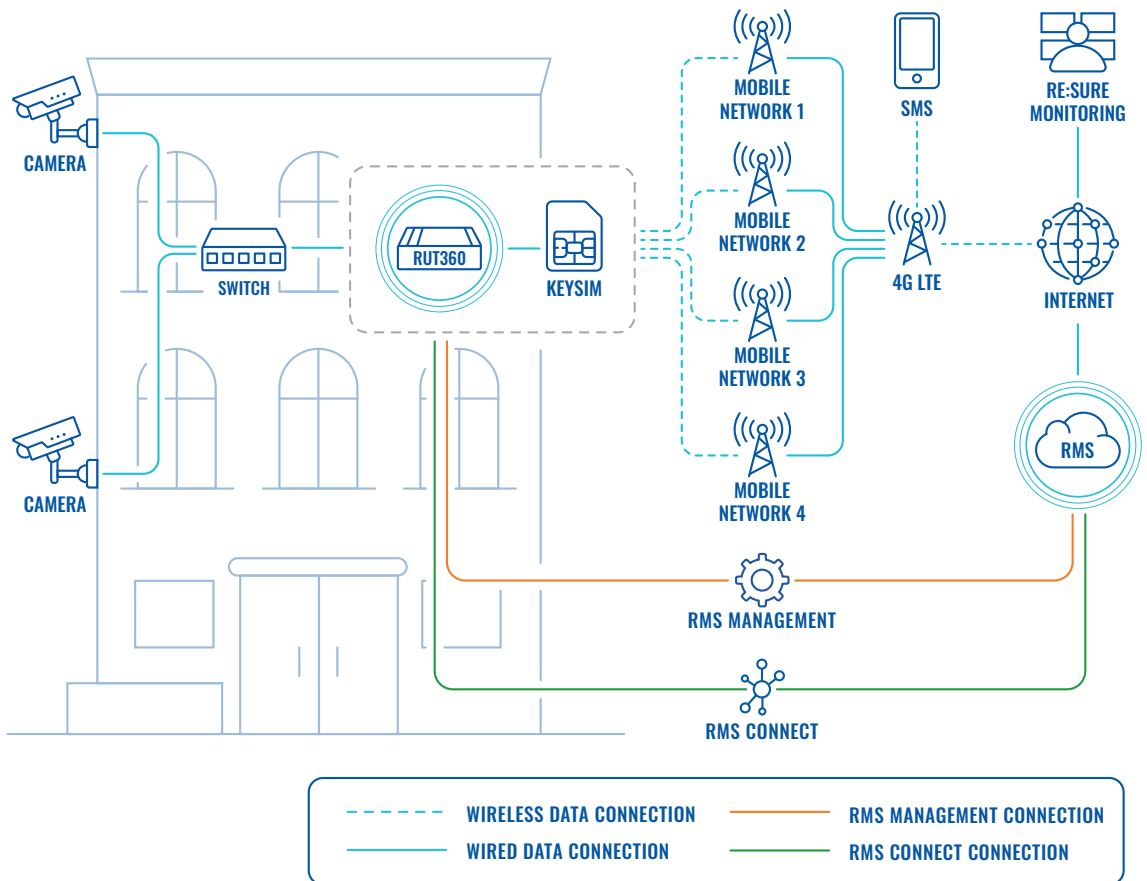
THE SOLUTION – 360-DEGREE SMART CCTV

KeySIM, CSC Covert Security, and RE:SURE chose the RUT360 industrial cellular router by Teltonika Networks for their joint video surveillance solution. Using its LAN port, this router allows for a seamless connection to all types of CCTV cameras deployed CSC Covert Security. But versatility is not the only reason this networking device is perfect for this solution – it's only the tip of the iceberg!

Since the RUT360 industrial router includes the RutOS operating system of Teltonika Networks, KeySIM and CSC Covert Security are able to configure custom port forwarding rules to connect RE:SURE to this network of devices using a private IP address. This network is then provided with the RUT360's LTE Cat 6 connectivity, which can reach robust cellular speeds of up to 300Mbps with carrier aggregation.

If the environment allows for a wired Internet connection, the RUT360's Ethernet ports can be used to establish that wired connection. Using the router's load balancing feature, traffic can even be portioned to save data costs. KeySIM also relied on the device's SMS command functionality for managing and updating its APN. This was essential for ensuring the router can establish a mobile connection.

In addition, one of KeySIM's services is the remote toggling of SIM cards between different mobile networks, depending on the connectivity challenges in the environment of any particular CCTV camera in the network. The ping reboot feature of RutOS was critical for preventing the router from locking up once the network is switched. Also supporting the network's reliability is RUT360's WAN failover feature, which automatically switches to an available backup connection in case the connection is interrupted.

Importantly for this solution, RUT360 is compatible with the Remote Management System (RMS) of Teltonika Networks. This compatibility enables a host of key remote access, management, and control capabilities that elevate the value of this IoT solution. These include remotely accessing the CCTV equipment via RMS Connect; managing, updating, and troubleshooting the fleet of RUT360 devices; and ensuring that the entire network is fully secured thanks to RMS VPN.