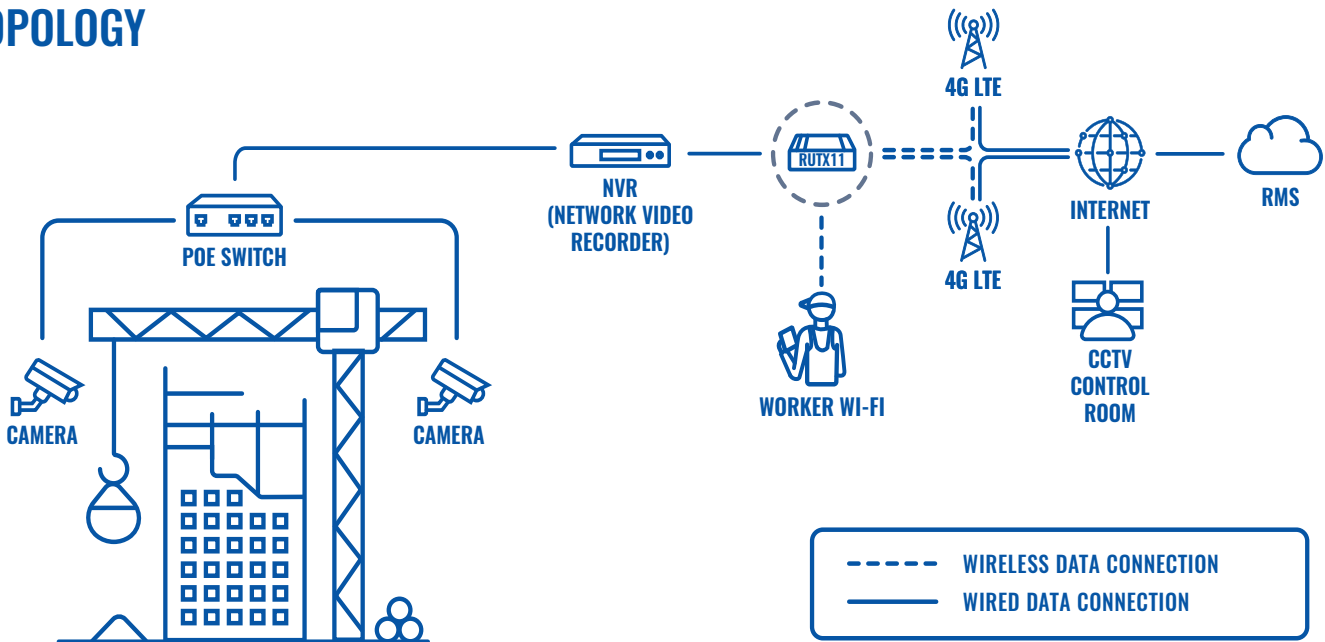# CCTV CONSTRUCTION SITE MONITORING

SUMMARY

In recent decades, closed-circuit television (CCTV) surveillance has emerged as a mainstream crime prevention measure used around the world. Technology development in camera and data transfer fields has given CCTV a massive boost in popularity due to lower costs of equipment and more capable wired and wireless networks. Despite being used in most crime or fraud prevention areas, CCTV is also crucial to protect construction sites from unauthorized access and theft.

CHALLENGE

A construction site is rarely considered as an infrastructure that attracts significant unwanted criminal attention. However, The National Equipment Register (NER) reports that construction site theft is a low-risk, high-opportunity activity for thieves, which can have a severe impact on operational costs with estimated annual value of stolen construction items between $300 million - $1 billion in US alone. CCTV is widely used to deter criminal activity and thefts, help recover lost equipment and, most importantly ensure that all construction rules and regulations are followed during the times of operation. Commonly, CCTV footage is stored on-site; however, it may get compromised or stolen; therefore, it is not the most secure option. The main challenge is to be able to access CCTV footage independently from on-site storage, because the engineering networks, including wired Internet access are only implemented at a late stage of most construction projects.

TOPOLOGY

4G LTE

4G LTE

RUTX11

NVR (NETWORK VIDEO RECORDER)

POE SWITCH

CAMERA

CAMERA

WORKER WI-FI

INTERNET

RMS

CCTV CONTROL ROOM

----- **WIRELESS DATA CONNECTION**
——— **WIRED DATA CONNECTION**

SOLUTION

As we indicate in the topology above, CCTV cameras need to be connected using PoE (Power-over-Ethernet) switch to a Network Video Recorder (NVR). It stores all footage for convenient access; however, it can only be accessed on-site. To be able to access NVR outside of the construction site, which is essential for security companies that are contracted to ensure perimeter security, it must have a secure and reliable connection to the Internet. RUTX11 by Teltonika Networks is a popular solution across CCTV use cases due to its powerful LTE Cat6 cellular connection, able to reach 300 Mbps speeds and Gigabit Ethernet interfaces for fast data transfer. Besides, it has Dual Band AC Wi-Fi to provide added value of worker hotspot on-site and has GPS, which helps to identify different sites for security operators, monitoring multiple networks through Teltonika Remote Management System (RMS) interface.

BENEFITS

• Reliable connectivity – Dual SIM functionality makes it possible to have a backup cellular data provider for increased solution reliability.

• Quick to deploy – no need to wait for wired Internet access deployment, the solution can be preconfigured before installation on-site.

• Easy to manage – with Teltonika Remote Management System, system administrators can be in control of remote infrastructure with a convenient user-friendly interface.

• Secure - data will be safe due to advanced security features of the RUTX11, such as VPN, IPsec, Firewall and Access Control.

WHY TELTONIKA?

RUTX11 is the most advanced industrial cellular router by Teltonika Networks, and it follows our product design philosophy to be secure, reliable, and easy to use. It is powerful, but simple to deploy and is capable of providing high cellular data speeds for multiple CCTV 1080p30 video streams. Even better, it is compatible with Teltonika RMS, which allows to manage and monitor all Teltonika Networks devices conveniently and remotely.