ThruLink™ Enables Early Flood Alerts in Jeddah

Secure and reliable remote transmission for geotechnical data and video helps save lives

Case Study

Background

Historically the port city of Jeddah in Saudi Arabia has suffered from flooding caused by unexpected intense rainfall and runoff along drainage pathways, or wadis, as they are commonly referred to in the region.

This unusual phenomenon of urban flooding in the country's second-largest city is a threat to human lives and physical structures, as was experienced in 2009, 2010 and 2011.

In order to minimize tragic losses, the city installed an early flood warning system with specialized SISGEO geotechnical instruments.

The Challenge

The flood warning system was installed throughout the surrounding mountain ranges with instruments and devices in key locations to gather and record relevant data. During regular operation, personnel would routinely visit the remote locations to extract the recorded data for analysis.

To enhance response time and save property and lives, the city required a better understanding of the weather conditions with real-time data analytics coupled with live video images from the remote sites.

Data streaming from various remote devices required special transmission consideration. The reliability and security of the transmission was vital since any interruption or interference could lead to delays and devastating consequences.

The Solution

Technofalak was responsible for the design and implementation of the solution considering the city requirements of performance, uptime and data security as lives and property must be protected.

Given the remote site locations, 4G/LTE were the only available networks. Jeddah's early flood warning system utilized ThruLink™ to connect all remote devices and to transmit live video and sensor data in real-time.

As an industrial hardware VPN, ThruLink™ offered a fast, affordable and safe solution, providing a fully encrypted path, using a two-way authentication process, with AES, Camelia and Blowfish encryption, over the existing public 4G/LTE infrastructure.

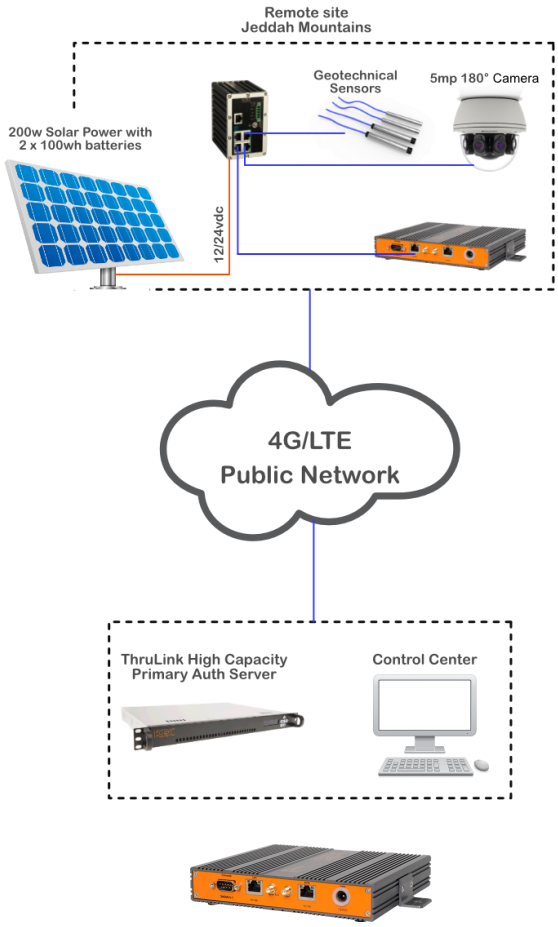
The ability to work over any IP network, whether fixed or mobile and supporting point-to-point and mesh configurations, allows ThruLink™ to select the fastest path through the network to prevent video freezing and jitter without any special IP expertise for installation.

Outcome

Employing ThruLink™, the customer receives secure, live data feeds from all remote geotechnical instruments, while at the same time, can view cameras installed at key points to see any developing situation as it unfolds.

It is no longer necessary for someone to go collect the data at each site, not only saving valuable time but also saving costs and human resources.

ThruLink™ is now an essential link in safety awareness that has helped make the city and its inhabitants of Jeddah less vulnerable to the risk of flooding.



ThruLink

KBC
data delivered