CELLULAR CONNECTIVITY FOR POLICE VEHICLES

SUMMARY

Whenever an accident occurs, police are usually the first ones to respond. There is no need to explain why it is essential to streamline their job to the smallest possible detail and supply the best equipment available to carry out their tasks, where time is critical. Police cars have changed tremendously over the last years with the development of IoT. The use of technology and digitalization helps to increase the efficiency of officers' duties, but at the same time, it ensures accountability, and most importantly – safety. However, the technology will not be as helpful without a secure and reliable connection, and achieving this in a moving vehicle may be complicated.
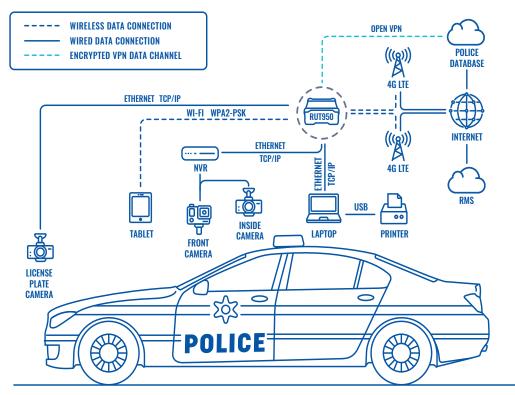
CHALLENGE

The current police vehicles are far from being just a conventional car. They are packed with various devices and technology that all need to be connected via Wi-Fi, Ethernet, and mobile network. License plate reader, inside and outside cameras, tablets, laptops, and a printer - all need to be connected to the internet and to the police database to securely transfer sensitive data. The police car is constantly moving around, sometimes in locations where the connectivity is limited, so depending on one network operator is not an option. Backup connectivity is a must. A moving vehicle also creates vibration so the device needs to be quite sturdy and also function well in cold and hot temperatures.

SOLUTION

RUT950 provides 4G LTE connectivity to the police vehicle systems. This router has dual SIM functionality, allowing to use SIM cards of two different operators and automatically switch to the secondary one in case of low signal. Multi PDN feature on primary SIM separates the traffic into the usual and private LTE and allows accessing the police database and special applications through private LTE. The license plate camera is connected to the router via a direct Ethernet link and communicates using TCP/IP. It keeps constant interaction with Police Database and monitors all traffic. If the system finds that the vehicle has broken the law, the officers can either stop it or leave it for the system to issue a fine automatically.

The tablets are using the internet from a pre-configured wireless network provided, again, by the same RUT950. With a range of up to 100 meters in an open area, it allows the officers to fill in reports, take and upload pictures, and reduce the time for paperwork. The front and inside cameras connect to the Network Video Recorder via Ethernet, which holds a week's worth of footage. The front camera is for evidence collection, and the inside camera proves to be an efficient tool for bribery prevention.

The laptop is connected to the router using an Ethernet interface communicating TCP/IP. It enables checking information on the database and plays an integral part in automatic monitoring and reporting solution empowered by the license plate camera. The system is secured with Open VPN end-to-end encryption, and the password for Wi-Fi and the router is changed periodically. The Remote Management System is used for data consumption reports, remote configuration, automated firmware updates, and alerts.

BENEFITS

• One router for the whole solution – RUT950 provides 4G LTE, Wi-Fi and wired connectivity options for all kinds of devices used in this case.
• Secure – VPN end-to-end encryption ensures system security; periodical password change keeps the Wi-Fi network free from unwanted guests.
• Reliable – 4G LTE connectivity with dual SIM for backup ensures the devices are always connected to the internet.
• Rigid – the RUT950 comes in an aluminium housing and operates in temperature range of -40 °C to 75 °C.
• Automated processes – the data is uploaded to police servers automatically once the RUT950 router senses that the Police Vehicle is back to the Police Station, saving time and ensuring privacy, as no human involvement is required.
• Remote Management – Teltonika Networks RMS data consumption allows to carry out reports, remote configuration, automated firmware updates and alerts to ensure the whole router fleet can be managed without any physical connection.

WHY TELTONIKA NETWORKS?

Teltonika Networks RUT950 with Remote Management System is a solution used by dozens of police forces all across the globe. It is validated in mission-critical scenarios and trusted by private and public entities because of its' reliability, security features, and ease of use.