SIMPLE EV CHARGING MANAGEMENT WITH AN LTE ROUTER

CIRCONTROL
Movilidad y Seguridad
Mobility and Security

HIGHLIGHTS

✓ Circontrol is a manufacturer designer of efficient mobility and electric vehicle charging solutions. With its IoT solutions spread throughout 52 countries, it needed a reliable and convenient way of providing each electric vehicle charging station with robust network connectivity support and efficient remote control.

✓ The company opted to choose the Teltonika Networks RUT241 – an LTE router designed to equip strong Internet signal via multiple WAN interfaces, enable easy remote management and control capabilities over third-party endpoints, and ensure seamless data transmission.

✓ Beyond acting as an intermediary between each endpoint and Circontrol's COSMOS cloud-based platform, this router plays a crucial role in enhancing user experience. It supports efficient subscription management, payment operations at every station, and much more.

THE CHALLENGE – THE QUEST FOR EV CHARGING STATION CONNECTIVITY

There's no denying that the future of vehicles is electric. Given the current trends of exponential growth, electric vehicles (EVs) are leading the way as the preferred vehicle type, and for good reason. EVs are a more environmentally friendly choice, have lower operating costs, and, most notably, are seeing improved accessibility and convenience in charging options.
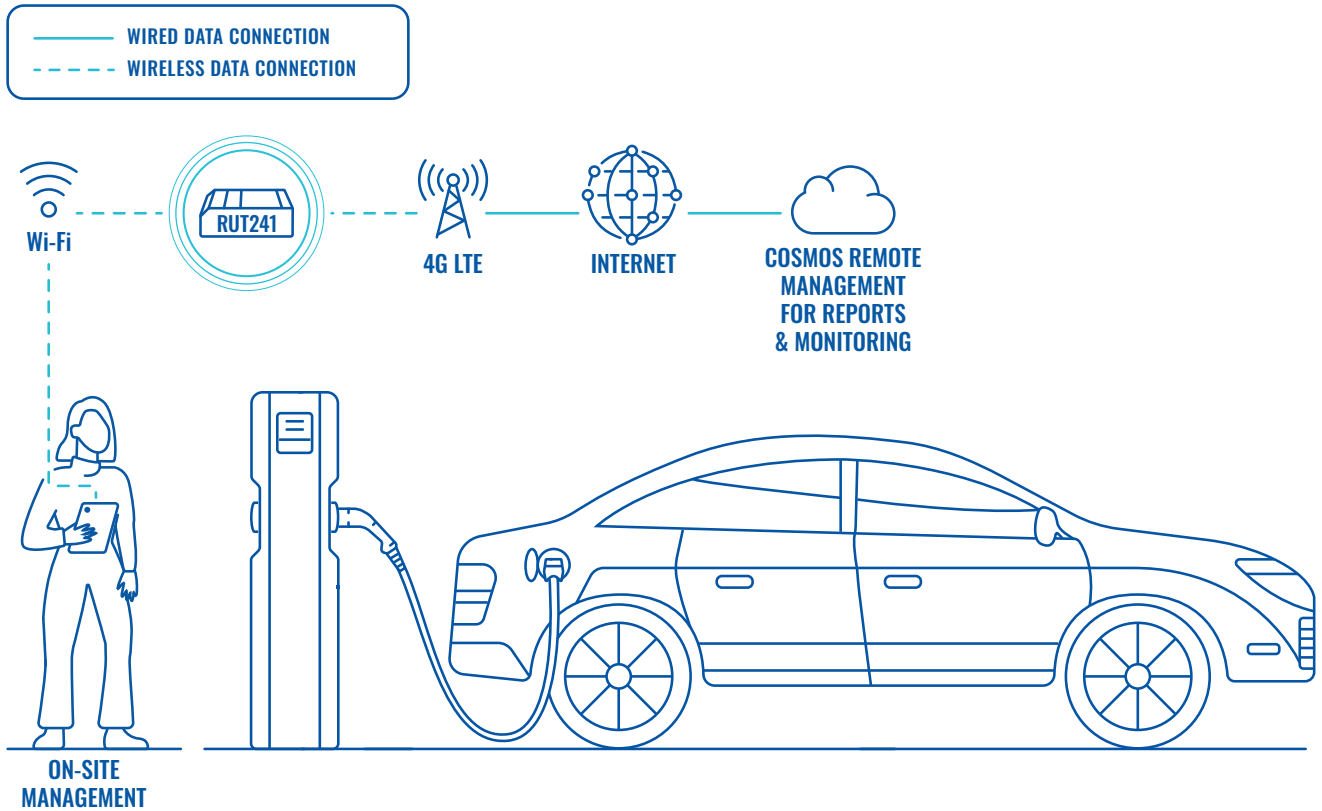
However, nothing worth having comes easy.

Even though the EV charging infrastructure is growing just as exponentially as EVs themselves do, multiple considerations must be taken into account before any implementation can happen. Factors such as installation location and electrical grid capacity are crucial to acknowledge, yet most of them ultimately boil down to the need for robust network connectivity.

Companies like Circontrol deploy thousands of electric vehicle charging stations in different cities and countries, meaning the scale of its solution is vast. This scaling, while beneficial for business growth, introduces significant challenges in managing such extensive IoT solutions.

A pivotal challenge involves ensuring robust network connectivity to support real-time monitoring of EV chargers, allowing for the observation of each station's status, energy consumption, and any technical issues that arise. Of course, what indeed cannot be forgotten is the entire EV charging infrastructure's software updates and maintenance.

To complicate matters even more, connectivity is essential for providing a seamless user experience and facilitating swift and smooth authentication and billing processes.

TELTONIKA | Networks

TOPOLOGY

WIRED DATA CONNECTION
WIRELESS DATA CONNECTION

Wi-Fi

RUT241

4G LTE

INTERNET

COSMOS REMOTE MANAGEMENT FOR REPORTS & MONITORING

ON-SITE MANAGEMENT

THE SOLUTION – YOU CAN'T GO WRONG WITH AN LTE ROUTER

Luckily, most concerns can be easily solved if you come to the right place. That's what Circontrol did when it turned to Teltonika Networks in a quest to provide secure, robust, and convenient network connectivity. It's answer – the RUT241.

The RUT241 is a 4G LTE router equipped with three types of WAN interfaces: mobile, Wi-Fi, and wired. Connected to the EV charging station through Ethernet, it ensures reliable network connectivity for the charger and connects it to Circontrol's COSMOS cloud-based platform via the mobile network. From this point, this LTE router becomes an intermediary within the EV charging infrastructure.

What comes after this? Complete control over this IoT solution!

The RUT241 transmits each EV charging station's real-time status data to Circontrol's cloud platform, where it is collected and stored for remote management, monitoring, and reporting purposes. Of course, this also means that the 4G LTE router enables remote software updates over each endpoint.

The RUT241 plays a significant role in ensuring each station's top-notch operation and efficiency. How so? If any part of the EV charging station isn't working properly, the RUT241 can send predefined alarms to the platform for quick resolution and minimised downtime.

This LTE router enables platform-based command issuing to each EV charger or station, facilitating user subscription management, permission adjustments, profile configurations, and payment operations as necessary. Enhanced network support translates to superior customer experience, allowing for swift payment transactions and accommodating.

To elevate this solution, the third WAN interface now comes into play. This LTE router can also act as a wireless access point thanks to its Wi-Fi and hotspot functionality. Via this interface, Circontrol's engineers can easily connect to each EV charging station and perform management tasks and inspections of each station on-site.

So simple, yet so effective. The RUT241 4G LTE router comes equipped with the perfect balance of functions and features. Whenever employed, the RUT241 offers a wealth of benefits for such IoT solutions.