SIMPLIFYING BORDER CONTROL WITH A VEHICLE LICENSE READER

SUMMARY

Crossing the border is often a sign of good things to come, from going on a much-needed vacation to setting forth on a promising new business opportunity. But these aren't why the border patrol keeps constant track of who goes in and out of the country. It is the other side of the spectrum that requires such vigilance; the ones attempting to smuggle something illegal, stolen, threatening to the local ecosystem, or of other shady intentions of dubious legality.

It's for the sake of protecting national, economic, and environmental security that crossing the border can be a bureaucratic hassle for everyone involved.

But does it have to be?

CHALLENGE

Imagine a tourist wanting to cross the border with their car. The border patrol needs to input the car's license plate and check the database for its border crossing history and any registered red flags. Then, they have to do the same thing again when our tourist comes back.

Done manually, this is an inefficient use of time and human resources. It also leaves room for human error, as a slightly incorrect number input can result in the misidentification of a vehicle and consequent security risks. The more vehicles cross the border, the more pronounced this risk becomes.

The ideal solution would be to automate this process – relaying on some intelligent license plate recognition technology and installing it somewhere on the border. The technology for that does exist, but in order to do the check-the-database part of the process, the part that identifies needs to be able to communicate with the database.

Since the border checkpoint can be in the literal middle of nowhere (or between two nowheres, if you think about it), far away from the nearest town, establishing this communication is more challenging than it sounds.

PARTNER - ADAPTIVE RECOGNITION

Adaptive Recognition is a Hungarian developer and manufacturer of AI-based image processing technologies. Their technologies enable identity and traffic recognition for ensuring security, used by governments and businesses worldwide.

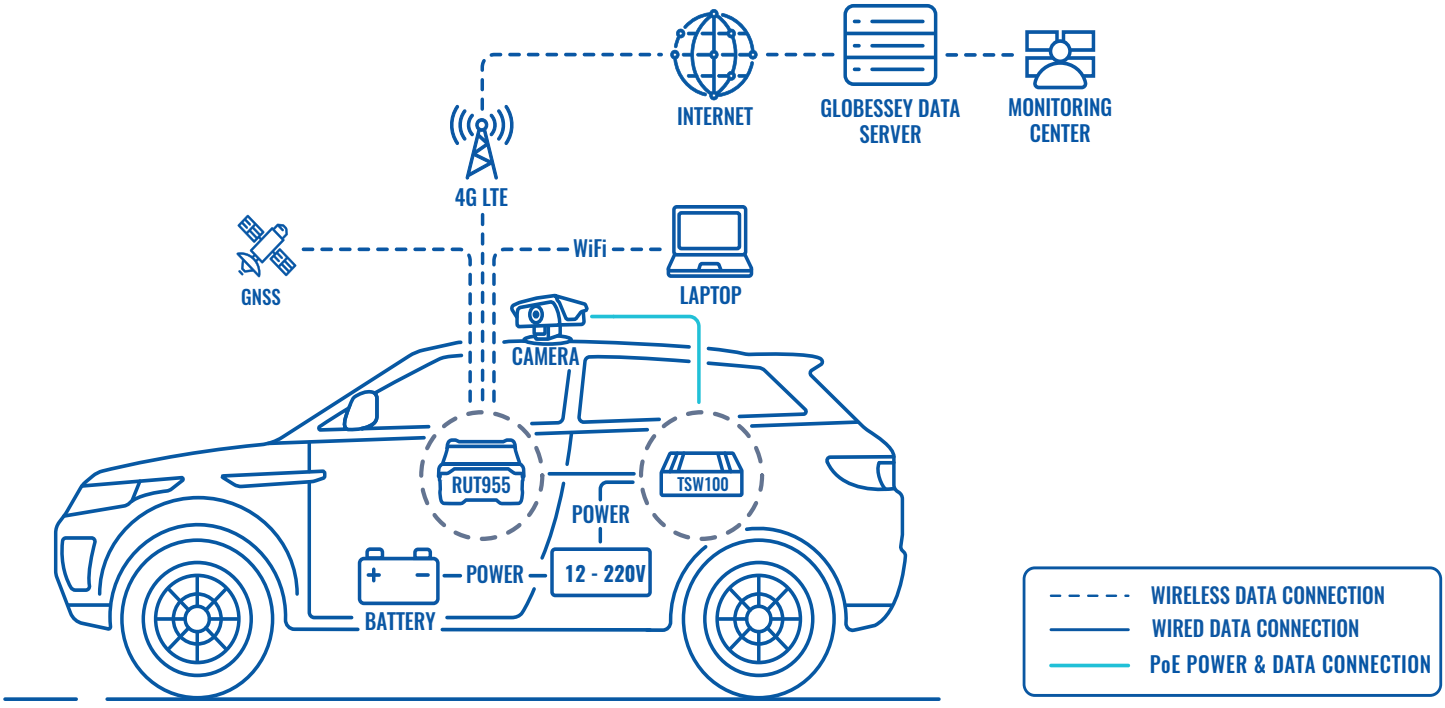
SOLUTION

Adaptive Recognition's solution was to mount an M402 mobile ANPR camera on a vehicle and position it at the border checkpoint. Alongside the camera is our RUT955 industrial cellular router, providing it with a stable, high-performance internet connection.

The camera recognizes the license plate of the vehicles wanting to cross the border. Provided with the RUT955's internet connection, it's then able to send the data to the server, which in turn sends personnel a notification if any given vehicle requires intervention.

The setup also includes our TSW100 industrial switch, which is compatible with a power converter that allows the voltage range of the vehicle to power this setup, thanks to TSW100's PoE+ capability. This ensures that both the RUT955 and the camera are powered without requiring additional wiring, and the vehicle inspection process at the border is automated, simple, and precise.

TOPOLOGY



BENEFITS

• TSW100's PoE+ capability allows for a simple setup that ensures all devices involved are powered no matter how remote the border checkpoint is.
• RUT955 provides a reliable, high-performance internet connection with GNSS location capabilities, making it a superb choice for solutions that need to be replicated in a wide variety of different locations.
• Its Dual SIM failover feature guarantees a stable connection at all costs, a crucial feature for applications where precision and consistency are key.
• Compatibility with RMS enables easy access to the setup no matter how remote it is and offers additional security measures, such as a dedicated VPN.

WHY TELTONIKA NETWORKS?

When multiple levels of security are on the line, choosing the right devices for an IoT solution is more important than ever. Cutting corners on quality, performance, and reliability is simply not optional. Our products find a home in such solutions precisely because they fulfill these requirements, often while exceeding expectations. When you choose Teltonika Networks, you choose not to compromise.