

CONNECTING A SECURE BIKE STORAGE BOX

SUMMARY

Getting around with your bicycle is great on many levels. No traffic to slow you down, it's good for the environment, and you even get exercise done. The downside is that stealing a bike or its parts is much easier than stealing a car, and the world never seems to run out of thieves.

Unless you have a safe place to store your bike whenever you arrive at your destination, a chain lock is your best option. But best doesn't always mean good, and you're still allowing the universe to roll the dice on whether your bike will still be there when you come back.

Is this a problem IoT can solve?

CHALLENGE

While a worldwide educational campaign about stealing being bad would undoubtedly help to a certain extent, a more realistic solution would be readily-available storage boxes designed with bikes in mind and placed strategically based on demand per area. Kind of like a highly-specialized mailbox.

This sounds easy on paper, but ensuring the security of such storage boxes requires quite a bit of forethought and planning. Any cyclist should be able to open an empty storage box, but one that's already occupied should only be accessed by whoever stored their bike in it.

In other words, whatever software the user interacts with needs to be able to communicate with the internal lock system. Otherwise, the solution stops being secure, and we simply can't have that.

PARTNER -

JUHUU BikeBox is an Austrian company that set out to solve this very problem. Its team considers the switch from car to bike as a fundamental build block for achieving climate goals and founded the company to offer the world an intelligent, theft-proof solution.

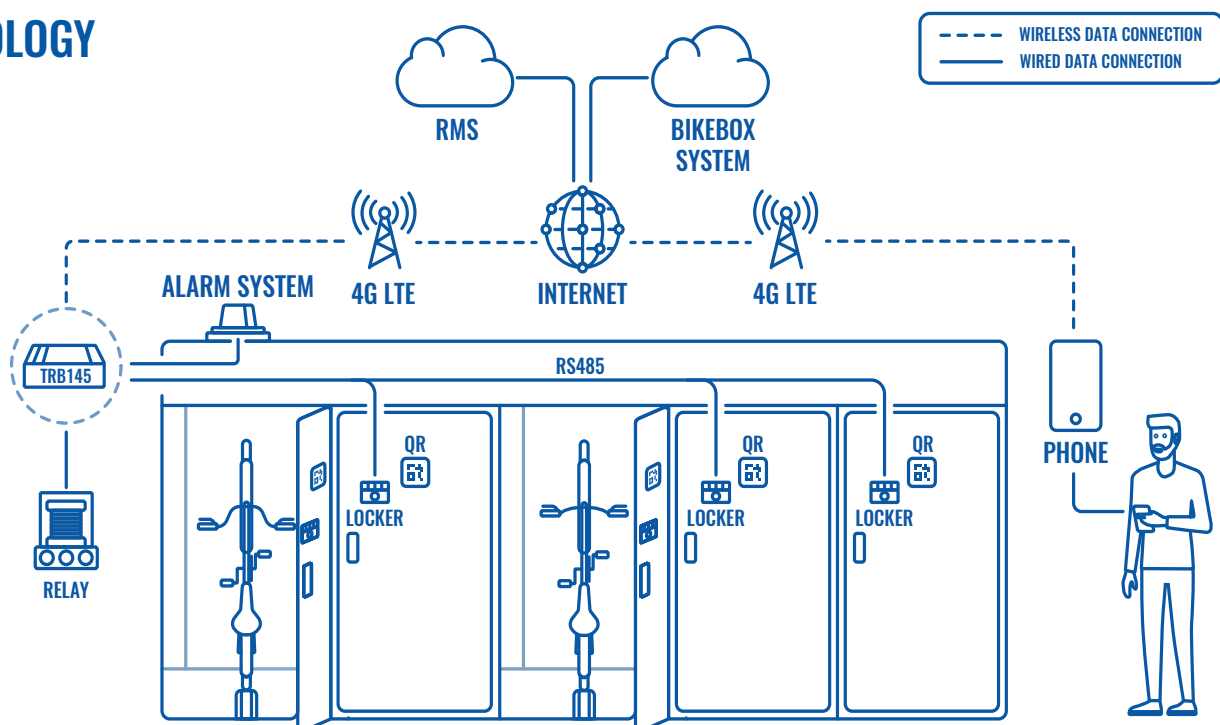
SOLUTION

The BikeBox JUHUU developed is a specialized metal storage box to mount your bike and gear in. Each storage box has a lock and a QR code the user can scan using the BikeBox app. When you scan the QR code, the BikeBox system checks whether the box is occupied or not. If it is, it checks the other boxes on location and tells you which one can be opened. If it isn't, the relay opens the box and you can safely and comfortably store your bike.

This communication between the app and its server, the relay, and the locks is provided by our TRB145 industrial gateway. The relay communicates with the BikeBox hardware via an RS485 interface, ensuring that the locks and the alarm system never fail. The connection to the server and app, on the other hand, is wireless.

Providing both wireless and RS485 connectivity is what makes the TRB145 excel in remote IoT setups like the BikeBox. Being compact and easy to install also helps keep the hardware of the setup as simple as possible, as space is a luxury when the service you offer is literally space.

TOPOLOGY



BENEFITS

- Featuring 2 configurable I/O pins and supporting a variety of different interfaces, including RS485, the TRB145 is an ideal and cost-effective role player in a wide range of IoT setups.
- Its reliable wireless internet connection ensures that different parts of your solution communicate with each other quickly and effectively.
- Compact design and a DIN rail mounting option allow this gateway to easily slot into solutions where space is a premium without adding complexity to the setup.

WHY TELTONIKA NETWORKS?

Flexibility of application and consistency of quality are often two elements that must be juggled carefully, as investing too much in one tends to diminish the other. This isn't the case for our catalog of connectivity devices. We know they will be used in many different ways, requiring flexibility, but also that all of those ways will value security highly. Our solution to this is simple: always find the sweet spot for offering the best of both worlds.

