Challenge

Ekinex wanted to design a new kind of embedded controller device for monitoring and logging data locally. Typical applications would be energy monitoring and consumption systems, wind, solar and mini-hydro plants at unmanned sites, but the product could also be used in a wide variety of other applications.

The device necessitated easy and secure remote access for updating software and data exchange. The remote sites have to be viewed from multiple locations and also on mobile simultaneously.

Ekinex wanted the solution to have a secure remote connection with VPN technology in direct connection. The company wanted to do the integration through software, ideally with no external hardware required. The best solution would be having TOSIBOX® Lock functionalities integrated in the controller as a software license or chip protection. The product would be an important all-in-one solution for cheaper applications where the customer needs a small controller and needs to monitor it remotely.
Solution

Ekinex integrated TOSIBOX® technology into its solution and created the SMART-U PLC product, a remote control and monitoring unit that integrates in one device the features of an I/O PLC, Web HMI HTML5 and teleservice. The SMART-U is ideal for data monitoring and remote control applications, the ideal alternative to the developing of an expensive custom electronics. Typical applications can be machine monitoring, water treatment plants, remote equipment management, power generation plants, industry implementation 4.0 and building automation.

The SMART-U integrates the TOSIBOX® technology to enable a fast and secure remote connection. Thanks to the patented TOSIBOX® system, users can connect to SMART-U via a direct VPN tunnel without having to pass data from a cloud server. Additionally, SMART-U can be added to a set of previously configured TOSIBOX® devices, enabling an expansion of the machine network without requiring structural changes.

The TOSIBOX® Key, based on 2048-bit RSA encryption, is the only means of remote access to SMART-U, so the security of connections is guaranteed at the highest level. The integration into the TOSIBOX® system allows the user to communicate with standard routers and TOSIBOX® Virtual Central Lock, thus allowing continuous monitoring on remote stations from the central data collection point.

The SMART-U provides the possibility to monitor the machine data through graphs and indicators, alarm logging and the data logging can be saved or consulted by remote connection to the device. The minimal response time allows real-time visualization of the application data.

Benefits

- Fast and secure remote connection
- Fully scalable system
- Allows real-time data visualization
- Cheaper solution than buying an industrial PLC and TOSIBOX® products separately

“We are very pleased to have the award-winning TOSIBOX® technology on board our product. The high level of security brings added value to our solution.”

Francesco De Antoni,
Product Development,
SBS S.p.A.
The hub for your TOSIBOX® VPN connections

Cloud / Local virtual Environment

Tosibox Central Lock

Sub Key

Virtual Central Lock

TOSIBOX® Mobile Client

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