

## Tosibox provides cost savings through secure connectivity for building automation in police premises

DEOS AG uses TOSIBOX® technology to collect data from building automation system for remote maintenance



# DEOS.AG

Technology for intelligent buildings

**DEOS AG** has been developing and producing intelligent and holistic digital energy optimization systems in the field of building automation for more than 50 years. Today, DEOS AG is an owner-managed and internationally active company with over 250 employees at a total of 12 locations worldwide.

**Berliner Immobilienmanagement GmbH (BIM)**, a wholly owned subsidiary of the State of Berlin, is responsible for more than 5,000 state-owned buildings and plots of land. In addition, the 100 % subsidiary of BIM, **Berliner Energiemanagement GmbH (B.E.M.)**, operates and implements energy efficiency measures in the field of technical building services and electrical engineering.

### Challenge

The products and solutions of DEOS AG combine HVAC and lighting to form an efficient overall system. Significant synergy effects are achieved using state-of-the-art IoT and cloud products. DEOS AG's patented efficiency solutions ensure maximum energy savings and climate comfort. The high transparency of the DEOS solutions provides the user with comprehensive information about the building in terms of energy costs and efficiency, the condition of the technical installations and the parameters for temperature, humidity and air quality.

The increasing requirements in the management of properties and the digitization in the field of building automation requires a property-spanning software for monitoring and controlling the building's operations. Monitoring, control and regulation functions are used to monitor the operation of technical building systems. This way, the inefficiencies, malfunctions and defects can be quickly identified. As a result, energy consumption and the associated CO<sub>2</sub> emissions as well as costs are to be optimized.

The motivation for the end customer was to operate the buildings in the Police Academy Berlin Spandau property with optimized consumption and to save energy. Energy meters are read remotely, eliminating the need for manual recording. Real-time data of energy consumption is read, and trend values displayed via the central building management system on site server. In addition, fault messages from buildings were to be routed to the system. Through notifications the service personnel can quickly become aware of the condition of the system.

## Solution

DEOS implemented networking and remote access to the police buildings in Berlin with the highest security requirements using TOSIBOX® technology. The project has started with the first property, where DEOS' central OPENweb building management system is located. The buildings are connected with TOSIBOX® Lock and TOSIBOX® 4G Modem via the secure network in Rheine to the DEOS OPENweb in the property. Remote access is currently available to 12 users.

Various status and temperature values are transferred to the building management system as well as the energy meter. Now the building management system can be viewed remotely and the cause of problems in HVAC systems identified through networking. This makes it possible to efficiently select the right external service provider and save unnecessary travel costs and time. In addition to energy consumption optimization, the savings effect is also high here.

The old building structure did not allow a new cabling structure. Moreover, the broadband connection to the property was not high-performance enough to operate the building management system smoothly. TOSIBOX® Lock 500i with integrated LTE modem was the solution.

To ensure high availability, the Lock 500 is connected to the Internet in two ways: DSL and SIM/mobile. If the LTE network is not available, the connection runs over the DSL line as a hot standby solution. The Lock 500 continuously checks for the fastest connection. Moreover, the TosiOnline™ feature automatically reconnects any dropped VPN connections making the solution extremely reliable.

TOSIBOX® Virtual Central Lock is the hub of VPN connections that was used to provide two-way communication to all sites, including continuous monitoring, real-time data collection and data logging. The Virtual Central Lock cuts access management work time from days into minutes, making the management of big networks a breeze.

The important issue of IT safety was solved by a dial-in using two-factor authentication, HTML5 dial-in, and the firewall function. TOSIBOX® technology ensures secure, encrypted point-to-point data flow between sites and users.

This year more buildings from other properties will be connected. The police headquarters in Berlin includes other properties that will gradually be added to the network.

## Benefits

- Remote access to police buildings that meets the highest security standards.
- Two-way communication offers the benefits of IoT plus remote maintenance with one technology.
- TOSIBOX® Lock 500 offers several connection methods for increased reliability.
- Central building management system to DEOS' data center

“We were convinced by the central DEOS building management system – OPENweb combined with the IT security mechanisms of TOSIBOX® to network the buildings. Now we have better control over the energy consumption of the buildings and thus save money.”

Niels Mühlmann,  
Property Manager, BIM

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