

## CASE STUDY

# TBEA Shenyang Transformer Group Co., Ltd.



## HID Global's Network Access Control Solution Provides Centralized Management and Advanced Access Level Settings to Improve the Overall Security at Shenyang Transformer Group Co., Ltd. in China.

As a wholly-owned subsidiary of Tebian Electric Apparatus Stock Co., Ltd. (TBEA), Shenyang Transformer Group Co., Ltd. (Shenyang TBEA) is one of the largest transformer manufacturers in China, and a major exporter in the industry with manufacturing and R&D capabilities. Shenyang TBEA is the first transformer company publicly listed in China and has an annual productivity that has reached 30 million kilovolt-ampere (KVA). It is the only company that provides 840,000 KVA/500KV main transformers and converter transformers for the left bank of the Three Gorges Project.

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Mr. Yu Liuyi  
Project Manager  
Shenyang TBEA

### Challenges

Shenyang TBEA has a world-class industrial park occupying 720,000 square meters for production of UHV AC and DC electricity transformers. Featuring dispersed entry points over a large area, the company needed a new access control system to safeguard the plant's integrated factory, R&D building, administrative offices, elevators, mixed working areas and key equipment rooms.

In particular, stringent access control for the general manager's office, financial department, conference rooms, elevators, and core mechanical room was mandatory and the new system needed to also perform time and attendance and data generation for night patrol. In addition to security and stability, the access control system needed to enable seamless integration with the plant's existing security equipment from third-party vendors, and be interoperable with the cards already deployed in the field to save cost.

To address these challenges, Shenyang TBEA required specific technical features for the new physical access system including TCP/IP connection and high-speed processors, as well as data generation and communication capabilities. In addition, each access point needed to execute all commands offline in case of network failure.

### Solution

After a thorough analysis of Shenyang TBEA's requirements, HID Global provided a comprehensive solution that included 17 VertX® V1000 network controllers, 107 VertX® V100 door/reader interfaces, 173 iCLASS® R10 contactless smart card readers and ten iCLASS® R30 contactless smart card readers. The new system leverages Shenyang TBEA's existing TCP/IP network for a centralized, web-based access control solution that provides central monitoring, report generation, the ability to establish staff access level settings and visitor management.

iCLASS R10 and iCLASS R30 readers are installed at each access point and connected to VertX V1000 network controllers through the VertX 100 reader

#### Products / technologies:

- VertX® V1000 Network Controller
- VertX® V100 Door/Reader Interface
- iCLASS® R10 Contactless Smart Card Reader
- iCLASS® R30 Contactless Smart Card Reader

interface to transfer entry records to the host. Each entry point can still execute all commands when communication is lost with the central station. By integrating with the system software, the administrator can restrict staff access based on job function. For example, only authorized staff members are allowed to use the elevator to access specific floors.

HID Global's solutions also meet Shenyang TBEA's access control system requirements and perform the following functionality:

**Staff management:** The solution is integrated with system software and main entrance and factory monitors. When a cardholder presents his/her card to the reader, the cardholder information and photo is displayed on the monitors. The security officer on duty can then verify the employee's identity to prevent unauthorized entry, enhancing the efficiency and internal security.

**Enhanced Security:** HID Global's iCLASS readers and credentials deliver increased security with the readers' data encryption and mutual authentication capabilities. Additionally, HID Global's VertX networked access solutions enable access level settings and area control to prevent unauthorized entry to specific areas. All employees must present their cards when entering or leaving the main gate of the site, and the entry records are transmitted to the central server to further improve security management.

**Interoperability:** VertX access control solutions are interoperable with a wide range of hardware and management software, enabling additional deployments such as time and attendance, remote area control, visitor management and more. The readers support the factory's existing MIFARE credentials, offsetting the cost of swapping out all of the cards at once.

**Integration with other sub-systems:** The solution can seamlessly integrate with multiple sub-systems such as surveillance and fire control systems. When any abnormal alarm signals are received, the new access control system can activate a pop-up camera to perform video monitoring and screen capture. For fire control, the system can determine the incident type and location and unlock emergency doors for evacuation in the case of a fire.

## Results:

"After our extensive assessment, we selected HID Global and its physical access control solutions for its leading technology and comprehensive product functionality. We had an experience where some HID Global controllers were accidentally submerged under water and the products still functioned properly without any defects, validating HID Global's robust product design and quality," said Mr. Yu Liuyi, project manager with Shenyang TBEA.

"As a global leader in secure identity solutions, HID Global offers a lifetime warranty to their customers. HID Global and its channel partners has promptly responded to our requests and provided quality support to achieve satisfying results, eliminating our concern regarding post-sales service and support," Liuyi added.