



Biometric Access Control Solution with SpeedFace-V5L and Saturn S1000 Swing Barriers for Shadowfax in India



About Shadowfax

Shadowfax, India's premier logistics and supply chain service provider, specializes in end-to-end solutions for e-commerce, express parcels, and hyperlocal delivery. With a robust distribution network spanning over 2,500 cities and 15,100 PIN codes, the company has spent a decade redefining logistics through intelligent automation and AI-driven technology. Renowned for its operational agility and speed, Shadowfax serves as the preferred logistics partner for India's leading brands, consistently setting industry benchmarks in efficiency, security, and last-mile service excellence.

Requirements

Enhancing Security and Efficiency of Access

Shadowfax's logistics warehouses located across the country originally used general card swiping verification, combined with security personnel, for employee access control management. Firstly, card swiping cannot accurately identify the true identity of the cardholder. Even with the aid of visual identification by security personnel, omissions and errors are inevitable, creating security loopholes. Additionally, Shadowfax has over 20,000 employees, and the daily traffic volume at each warehouse is immense. Especially during peak hours of inbound and outbound shipments, employees swiping cards one by one to pass through access control often creates crowds, hindering logistics operations. Shadowfax hopes ZKTeco can provide an access control solution that balances both security and efficiency.

Concerns

Precision of Identity Authentication and Efficiency of Access

To improve security and eliminate illegal entry by card impersonation, accurate identity authentication is required, which may further slow down the speed of employee entry and exit.

Multi-location Access Control and Management Difficulty

Shadowfax's logistics warehouses are distributed nationwide. If each warehouse sets up a complex access control system but lacks effective data collection and management, access control management could be extremely difficult, causing heavy workload on the management personnel, and resulting a decline of human resources efficiency.

Large-scale Deployment and Daily Operations

As the deployment of access control and entrance management devices inevitably affects daily operations, as a large-scale logistics provider, Shadowfax concerns the caused suspension of operations, and therefore hopes to minimize the impact brought by the solution.



Solution Details

ZKTeco deployed a biometric access control solution consisting of SpeedFace-V5L Biometric Authentication Standalone Terminals, Saturn S1000 series Swing Barriers, and the ZKBio CVSecurity Security Management Platform Software, for all warehouses of Shadowfax.



Saturn S1000 & S1200

SpeedFace-V5L

Warehouse Access Control

At the main entrances and exits of all warehouses, two-way multi-channel entrances composed of Saturn S1000 and S1200 swing barriers are installed. At both ends of each channel, a SpeedFace-V5L is installed for entry and exit identity authentication. All Saturn S1000 and S1200 barriers, and SpeedFace-V5L terminals are connected to ZKBio CVSecurity for centralized access control management.

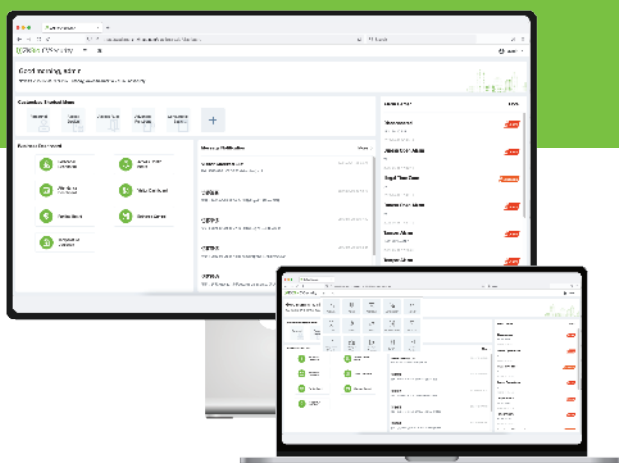
All employees register their personal profiles and biometric templates (fingerprints and faces) on ZKBio CVSecurity. Then, when entering or exiting the warehouse, employees no longer need to swipe cards but only need to have their faces or fingerprints scanned by the SpeedFace-V5L. The SpeedFace-V5L compares the extracted biometric features with the biometric templates in the database to authenticate the employee's identity. Upon successful matching, access is granted.



Facial Recognition



Fingerprint Recognition



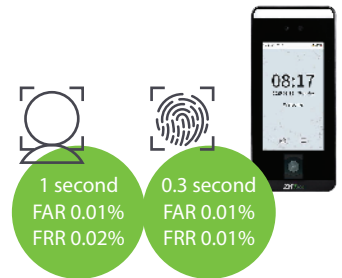
ZKBio CVSecurity

Centralized Access Control Management

All access control devices are connected to ZKBio CVSecurity for centralized management. Shadowfax's access control management personnel are enabled log into ZKBio CVSecurity via a computer browser anytime and anywhere to perform real-time monitoring of access status across different warehouses, check access records, add or delete access permissions, and change access rules (such as setting specific transit periods, groups, etc.) on its access control module.

Enhancing Security Level

ZKTeco SpeedFace-V5L is a standalone terminal specifically designed for high-accuracy biometric authentication. It can accurately identify fingerprints and faces, with a False Acceptance Rate (FAR) equal to or less than 0.01%, and False Rejection Rates (FRR) equal to or less than 0.01% and 0.02%, respectively. Moreover, SpeedFace-V5L is equipped with anti-spoofing functions that can identify print attacks (such as color or B&W photos), video attacks, and mask attacks. Additionally, each set of Saturn S1000 series gates is equipped with four infrared (IR) sensors to prevent tailgating, effectively preventing malicious intrusion.

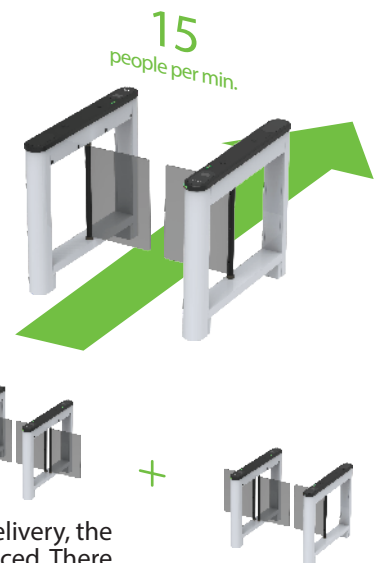


Improving Entry and Exit Efficiency

ZKTeco's access control solution improves identity authentication accuracy, which not only ensures security but also maintains speed, making transit more efficient. The face recognition speed of SpeedFace-V5L can be completed within 1 second, and fingerprint authentication can be completed within 0.3 seconds, which is more efficient than card swiping where employees need to take out and hold a card for verification.

Regarding face recognition being affected by changes in ambient light or the position of the person being identified, SpeedFace is equipped with a high-performance WDR (Wide Dynamic Range) lens and adjustable LED supplementary lighting; the recognition distance can reach up to 170cm, effectively maintaining stable and efficient biometric authentication.

The Saturn S1000 series gates are designed for multi-channel and bidirectional transit, effectively handling large crowds. Furthermore, the throughput is as high as 15 people per minute, maintaining efficient entry and exit even during peak hours.



Reducing Solution Costs and Impact

The ZKTeco Saturn S1000 series swing barrier is designed with a modular concept. Before delivery, the pre-assembly process is completed, so the actual on-site installation difficulty is greatly reduced. There is no need to assemble equipment; only simple deployment and wiring are required. Moreover, the combination of S1000 single-channel barriers and S1200 intermediate barriers can flexibly and easily form multiple channels to suit actual site conditions, without needing complex site modifications to accommodate the gates. Thus, the installation cost of the solution is significantly reduced, and the impact of installation on daily operations in terms of time and space is minimized.

Managing Access Control Anytime and Anywhere

Since all Saturn series gates and SpeedFace-V5L standalone units are connected to ZKBio CVSecurity for centralized management, the web-based browser-server architecture of the software allows managers to log in via a browser to manage access control at all different locations. This includes real-time monitoring of access status, checking access records, or configuring access control such as changing rules, time periods, or adding/deleting users and their permissions. Managers can complete these tasks on ZKBio CVSecurity without manually collecting and organizing data from independent systems, and the software can automatically generate various formats of access reports.

Flexibility of System Expansion

ZKTeco's products possess strong integration capabilities and can seamlessly integrate with different equipment and systems. If scale expansion is needed, such as adding warehouses, or if there are existing devices like video surveillance systems or alarm systems, there is no need to discard them for the new solution; simply connect the newly added devices to ZKBio CVSecurity for integration. Furthermore, ZKTeco's products can integrate with a large number of third-party devices and systems. ZKBio CVSecurity's open API capability offers strong flexibility for seamless integration with third-party systems, as RESTful API offers standardized interfaces, enabling different systems to interact in a consistent manner, simplifying the development process. Thus, the customer's existing systems, such as Human Resource Management Systems, can be retained without a system reset, saving solution costs while adding value on top of original functions.

