



Face Recognition Entrance Control Project - Vinfast Factory - Hai Phong City, Vietnam

Industry

Vinfast Factory

Location

Hai Phong City, Vietnam

Solution

Face Recognition Entrance Control Project

Project Description

VINFAST is a Vietnamese electric car and motorcycle manufacturer founded in 2017, with a primary assembly and production plant located in Dinh Vu Industrial Zone, Cat Hai, Hai Phong. The VINFAST car factory is built on an area of over 500,000 m2 within the total 335 hectares of the entire complex, and is one of the most modern and advanced in the world, built to meet the trend of Industry 4.0 technology.

Address: Dinh Vu - Cat Hai economic zone, Cat Hai district, Hai Phong.

Project Requirements

Factory Access Control Management

VinFast is a large-scale factory with 10,000 workers and a total area of up to 500,000 m2, divided into multiple areas such as operations, electric motorbike production, automobile production, supporting industries, training center, and R&D development institute.

To ensure safety and convenience for employees, VinFast needs to deploy an effective access control system with quick verification speed and features to minimize the impact on the production process.

The access control system needs to be integrated synchronously and centrally managed on one software, which can be integrated with the factory's existing customer management software. Access control devices need to operate at high speed to avoid congestion at entry and exit points during peak hours.

This will help ensure efficiency and save time for employees when entering and leaving the factory premises while reducing the negative impact on VinFast's production process.

Management of the Bus to Pick up Employees

VinFast organizes transportation of most employees by bus from home to the factory and vice versa every day. In order to manage the bus system most effectively, employees are required to register in advance to use this service.

Only registered employees are allowed to use the bus, avoiding dishonest outsiders using the bus and causing loss and other security problems.

Solution

Management of Access to the Factory Area

ZKTeco has deployed a partitioned gate control system for access control using new technologies such as the SBTL300 swing barrier gate and the SpeedFace M4 facial recognition terminal at different entrances and exits of various workshop zones.

The system requires all employees to pass through the partitioned gate and authenticate themselves with their face or card for access.

The SBTL300 swing barrier gate is kept locked until the user's information is successfully verified through the SpeedFace M4 access control and time attendance terminal, after which the barriers automatically retract to allow the user to enter the area.

The entire partitioned gate security system, including the SBTL300 and SpeedFace M4, is integrated with the ZKBioCVSecurity overall management software to manage and store data, allocate access time, and report access information to the factory management team.

For Factory Bus Management

ZKTeco has deployed a system of 100 FaceDepot 7BL devices on 100 employee shuttle buses for Vinfast. The FaceDepot 7BL is a Linux-based terminal device that supports facial and Visible Light palm print recognition technology with fast speed of less than 1 second. These devices are installed at the bus entrance to authenticate the face or palm print of employees who have registered for the company shuttle service.

End User: VinFast Factory

Configurations

System	Type of Model	Name of Model	Quantity
Entrance Control	Swing Barrier ZKTeco	SBTL300	2
		SBTL320	2
	Face Recognition Access Control & Time Attendance Device	SpeedFace M4	148
		FaceDepot 7BL	100
SoftWare	All in One ZKBioCVSecurity		

Technical Feature

The ZKTeco SBTL300 Series Swing Barrier is a one-lane turnstile gate designed to operate smoothly and quietly. The device is made of stainless steel, making it highly durable.

The ZKTeco SBTL300 Series has expandable connection modules, making it easy to connect to auxiliary control devices. The ZKTeco SBTL300 can be integrated with additional access control readers or time attendance devices to enhance access control levels.

SpeedFace M4 is a Linux-based multi-biometric access control time attendance device with Face and Palm Recognition using Visible Light technology. Anti-spoofing algorithm, resistant to most types of printing attacks (laser images, color and black and white images), video attacks and 3D masking.

- Multiple verification methods: Face / Palm / Card / Password

- Available card modules: ID / IC / HID / iClass / Felica / Desfire EV1 / EV2 / Legic
- Supplement light with adjustable brightness
- Capacity: 6,000 face samples; 3,000 brush samples; 10,000 cards; 200,000 records
- Designed with many features suitable for outdoor installation such as IP66 standard & dedicated waterproof cover.

FaceDepot 7BL is a linux-based hybrid-biometric access control terminal with visible light facial recognition & palm recognition

- Visible light facial recognition, and palm recognition
- Anti-spoofing algorithm against print attack (laser, color and B / W photos), video attack and 3D mask attack
- Multiple verification methods: Face / Palm / Fingerprint / Card / Password
- 125kHz ID card (EM) / 13.56MHz IC card and fingerprint (Optional) and palm
- Huge capacity of 10,000 facial templates
- Compatible with turnstiles of ZKTeco and the third parties
- Supplement lighting with adjustable brightness
- 7" LCD touchscreen

