



ZKTeco Integrated One-Card System with Entrance Control, Access Control, Time & Attendance, Parking and Consumption Management For JINYU Tire in Vietnam

Industry

Tire

Location

JINYU Tire in Vietnam

Solution

Entrance Control

JINYU Tire Group Co., Ltd., founded in 1995, is an enterprise specialized in tire development and manufacturing. With total assets of over 5.5 billion RMB, JINYU Tire.

Has advanced tire producing, developing and testing machines and professional techniques, management teams and complemented quality warranty systems. With a production capacity of all steel radial tires of 6 million units annually, the products have been distributed widely throughout China as well as other 100 overseas countries and regions.

The company has recently commissioned production at its truck & bus radial factory in Vietnam, which is the company's first factory outsider of China. ZKTeco had the honour to serve JINYU by providing an integrated solution.

Solution Details

A. Reliable Entrance Control

As the factory employees over 1,000 workers, it requires an efficient access control for both of the main entrance and exit which enables quick yet precise access of the employees.

Solution

- ZKTeco deployed an entrance control system which consists of 5 units of FBL2011 Pro flap barriers and 3 units of FBL2211 Pro flap barriers, the barriers are combined to build multiple lanes to ensure smooth access and exit for the peak flow of pedestrian traffic.
- The FBL Series barriers enable speed of RFID access throughput of 30 times per minute to ensure quick access and exit.
- ZKTeco also deployed an SBTL3011 swing barrier which enables speed of RFID access throughput of 42 times per minute to ensure ultimately quick access and exit.
- ZKTeco FBL Series Flap Barriers and SBTL Series Swing Barriers are embedded with RFID card readers, employees are only required to present their staff cards on the readers for access through the entrance and exit.
- During emergencies the barriers automatically retract, thereby ensuring users fast unencumbered exit to safety.

B. Efficient Access Control

As the factory is large size and is divided into multiple departments and areas, it requires more than just securing the main gate of the factory, but the various access points inside the factory in order to prevent illegal access.

Solution

- ZKTeco deployed 20 units of ProRF-T access control terminals, 12 units of MiniAC Terminals, and 1 unit of SpeedFace V5L Terminals in the various areas which requires access control including offices, laboratories and data centers etc.
- Only authorized staffs can access the particular areas with their RFID staff cards after successful RFID card verification by the access control terminals.

C. Convenient Time & Attendance Management

As there are multiple wide dispersed workplaces in the factory, it requires a convenient punch-in and punch-out method for the staffs to take attendance in different areas.

Solution

- ZKTeco deployed 11 units of ProCapture-T standalone terminals in various workplaces for attendance taking of staffs. The staffs are only required to swipe their staff cards on the terminals for punch-in and punch-out.

D. Efficiency of Access & Exit of Carpark during Peak Hours

- As the local people commonly ride motorcycles to commute, there are enormous needs of motorcycle parking, especially in factories with intense labour, the entrance & exit of the carpark of the manufacturing plant face huge traffic of motorcycles accessing and exiting during the peak hours of work.
- To efficiently manage entrance and exit of the carpark, apart from multi-channel entrance & exit, the speed of access and exit is also critical, and the keys are quick yet precise recognition of staffs' identities and quick access & exit granting.

Solution

- ZKTeco deployed 4 BG4030 Parking Barriers and 4 units of PB4030 parkin barriers at the entrance & exit for motorcycles, with each customized booms with shortened body length suitable for motorcycles' width, which enable 4-channel access & exit in a limited space for huge traffic.
- For each channel, ZKTeco deployed 14 sets of LPRS1000 License Plate Recognition System and MiniAC Access Control Standalone Terminals oppositely for the verification of staffs' identities and their vehicles. Thus, each channel can be instantly switched for both access exit uses according to the actual needs of the carpark for smoother management.
- Staffs are registered with their personal information and the license numbers of their vehicles, and are issued with their personal staff cards. They are required to swipe their staff cards on the MiniAC terminals for recognition of identity. In the process, the LPRS100 Cameras automatically capture their motorcycles' license plates and recognize the corresponding license numbers and match them with the data in the database. Upon successful of recognition of both staffs identities and license numbers, they are immediately granted access or exit.
- LPRS1000 System has ultimately long range of recognition distance as long as 10m, and is able to recognize license plates of the moving vehicles under 15km/h, with average recognition speed under 200ms. Also, the BG1000 and PB4030 Barriers have quick boom rising and dropping speed of 1.5 seconds and 3 seconds. The devices altogether enable quick and accurate recognition of both staffs' identities and license numbers for efficient access & exit management.

E. Canteen Consumption Management

As there is a staff canteen in the factory, it is expected to deploy a smart method of purchase in the canteen with better cost efficiency.

Solution

- ZKTeco deployed 10 units of ProMerc-10 terminal, which is a new model of consumption machine launched by ZKTeco. It is a hanging type offline consumption machine with dual color screens (IC). Data of balance and limit is saved and encrypted in MIFARE card itself as well as the results are also written back into the card after transaction. Users can master operations of the product quickly.
- Apart from access to the factory, different areas and attendance taking, staff cards are also utilized for consumption in the canteen.

F. Centralized Management of Entrance Control, Access Control, Time & Attendance, Parking Management and Canteen Consumption

- As mentioned, there are entrance control, access control, attendance, parking and canteen consumption systems deployed over the multiple and dispersed workplaces in the factory.
- If manual and separated management of the systems are carried out, it would cause heavy burden to the human resources and an unnecessary cost of time.

Solution

- The solution is to establish an all-in-one card management system for the factory area in Vietnam. The system is built on a B/S architecture and use IC cards as the medium for consumption, access control, and canteen sales.
- All the above devices are connected to a single management system – ZKBioSecurity, management staffs can view and manage the entire operation of the entrance control, access control and time attendance systems.
- ZKBioSecurity is deployed as a unified platform for enterprise card management to manage staffs' data, account data, transaction data, and public function modules. The all-in-one card system will have multiple applications, such as canteen dining consumption, access control management, and attendance management etc.
- ZKBioSecurity enables blacklist, whitelist, or cancellation of lost access control cards for enhance safety.
- Time attendance functions like shift arrangement, leave application, review and approval etc. are also enable for flexible setting.
- The all-in-one card system in the factory area can be connected to different third-party systems and terminal equipment, with a unified interface specification established to support access certification tests. The system will provide identification functions for various applications in the factory area and share information resources such as identity information and black (white) lists in real time.



Configurations

System	Device Name	Device Model	Device Quantity
Access Control	Biometrics Standalone Terminal	PRORF-T	20
		MINIAC PLUS(CH)	12
		SPEEDFACE-V5L-RFID	1
Time Attendace	Biometrics Standalone Terminal	PROCAPTURE-T	11
Pedestrian Entrance Control	Flap Barrier	FBL2011 Pro	5
		FBL2211 Pro	3
	Swing Barrier	SBTL3011	1
Parking Management	License Plate Recognition	LPRS1000(VNM)	14
	Parking Barrier	PB4030	4
		BG1000	4
	Radar Sensors Vehicles	VR10	6
	Parking Barrier Photocel	PSA26	4
Consumption Management	Consumption machine	ProMerce-10	10



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