

An Integrated Entrance Control Management Solution for **AirAsia**

REQUIREMENT

An Effective Entrance Control for the RedQ

As one of the operational core of the aviation of Malaysia and even the entire Southeast Asia, AirAsia serves critical hub of air transport. As a result, the RedQ experiences a high volume of traffic of staffs up to approximately 2,000, managing a significant amount of sensitive data including business records and personal information. Any illegal intrusion could threaten AirAsia or even public safety and asset security, causing severe losses in and infringing on public interests. AirAsia originally used staff card swiping for identification, causing human resource management challenge with the inability to confirm whether the cardholder is the actual owner. Given the limitations of conventional authentication methods, AirAsia needed a highly accurate entrance control system.

CHALLENGES

Efficiency of Biometrics

Biometric systems such as facial recognition enable accurately identification of individuals and prevent the use of fake cards, card theft, or password breaches, making them an ideal choice for access management. However, AirAsia is concerned about the efficiency of these systems in high-traffic areas. If the recognition speed is inadequate, even a slight delay in identifying each employee can lead to significant congestion during busy work hours. For a large aviation organization like AirAsia, the consequences can be severe.

Cost-Effectiveness of Replacement of System

Despite needing an effective entrance control system with precise identity authentication of staffs, AirAsia already has an effectively operating internal human resources management system in place for managing attendance records, payroll calculations, performance evaluations, and access right setting etc. Any changes to entrance control management that require abandoning the existing system would not only be cost-ineffective but also burden human resource personnel with the need to adapt to a new system. However, deploying a standalone entrance control system without replacing the current human resource system could lead to data integration challenges. Since the access right setting are also processed in the system, the human resource personnel may have to frequently transfer data manually between different systems, severely impacting efficiency



About Client

AirAsia, a Malaysian multinational airline headquartered near Kuala Lumpur, Malaysia, established in 1993 and commencing operations in 1996, is the largest airline in the country by fleet size and destinations, with scheduled domestic and international flights to over 166 destinations across 25 countries.

AirAsia's primary hub is Kuala Lumpur International Airport (KLIA), and its global headquarters, known as the Red Quarters (RedQ), was opened in 2016 adjacent to Kuala Lumpur International Airport Terminal 2 (KLIA2). The RedQ corporate office spans about 18,000 square meters and accommodates up to 2,000 employees.

Appearance of Entrance Control Devices and Corporate Image



Typically, entrance control management equipment at entry and exit points, such as immigration, customs, judicial institutions, and railway stations, can effectively manage foot traffic. However, large entrance control devices often occupy considerable space and may not align with the aesthetic style of commercial organizations. As the leading airline in Southeast Asia, AirAsia needs to ensure that the equipment does not negatively impact its corporate image.

SOLUTION DETAILS



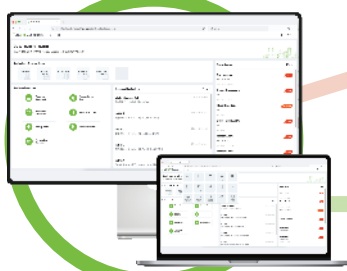
ZKBio CVSecurity

Third-Party HRM System



Integration with Existing HR System

Via RESTful API, ZKBio CVSecurity is integrated with AirAsia's internal Human Resource Management System for instant data synchronization including staffs' access information and rights.



Entrance Control Central Management

As all devices are connected to the ZKBio CVSecurity, the web-based platform serves as the centralized hub for all entrance control operations, including personnel, biometric data, devices, and access rules into one interface. Authorized AirAsia security administrators can log into the system via any web browser to monitor gate status in real time, view entry logs, and manage user permissions.

Also, as the RS100 OCR document scanners are also connected, the visitor registration is also processed in the interface. Security administrators can issue cards with specific access area restrictions and visit schedules.



Comet Series Swing Barrier



RS100 OCR Scanner

ZKTeco deployed its Comet Series Swing Barriers for the entrance control system. All staffs are required to access the RedQ through it. Each Comet Barrier is under-mounted on the top lid, with a multi-credential modules with facial recognition, RFID and QR code reading modes. Each swing of the barriers are printed with AirAsia's corporate logo.

Entrance Control of Staffs

All staffs of AirAsia are preregistered with their staff information and facial recognition template in the system.

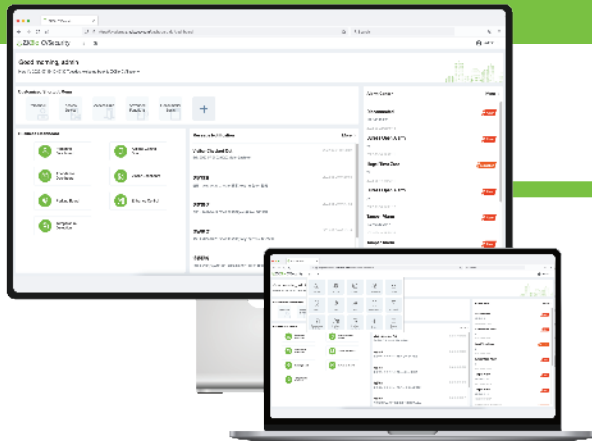
To access through the entrance, staffs are no longer needed to scan their staff cards. Instead, they only need to stand in front of the barrier, and have their faces scanned by the facial recognition modules. The facial recognition module then automatically performs matching and verification. Upon successful identity authentication, access to the building will be automatically granted.

ZKTeco deployed its RS100 OCR Document Reader, for scanning visitors' identity documents with OCR (optical character recognition) technique for automatic registration.

Visitor Management

For visitors who are not pre-registered with their personal information and facial recognition templates, a simple walk-in registration is required. Instead of manual form filling, they only need to have the visitor's identity document scanned by the RS100 OCR document scanners, the text containing the visitor's personal information such as names and ID numbers, will then be automatically extracted to create a profile.

Upon successful verification, a Mifare RFID card is issued as a temporary pass to the visitor. By scanning the pass on the Comet swing barriers, access will be automatically granted.



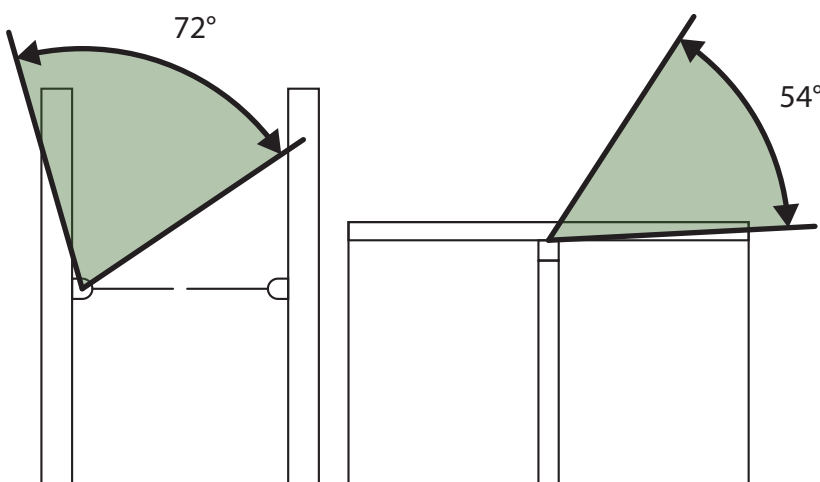
ZKBio CVSecurity Entrance Control Management Efficiency Significantly Enhanced

As all devices are connected to ZKBio CVSecurity, there are no more manual separate operation for record review, data extraction, data input and changes of setting are needed, the efficiency of human resources is thus significantly enhanced with the decrease of manual workload.

Also, as ZKBio CVSecurity is a web-based platform, security administrators are enabled to access and manage via any web browsers, instead of having to manage on a specific computer. Thus, entrance control management are centralized with any limitation.

Facial Recognition with Comet Series Ultimate Precision of Identity Authentication

ZKTeco Comet Series Barriers are equipped with facial recognition modules with ZKFace 5.6.2 Algorithm, which offers anti-spoofing feature against both print attack (laser, color and black & white photos) and video attack with over 99% accuracy, which truly addresses the problem of the ineffectiveness of identity authentication of physical credentials like cards.



RESTful API



Third-Party HRM System

Existing System Remained for Maximized Efficiency

Instead of replacing the original system with a new one, ZKTeco always put cost effectiveness of the solution the first priority. Considering that AirAsia's existing human resources management system operates effectively with their already familiarized with, ZKTeco remains the system, and integrates ZKBio CVSecurity with it via RESTful API. 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, for new hires, departures or role changes, the relevant data is automatically synchronized from the HR system to ZKBio CVSecurity. For example, when a new staff is added in AirAsia's human resources management system, the staff is also then registered in the entrance control system to assign the appropriate access rights. Likewise, if someone leaves the company, their access privileges are revoked immediately via the integration.



Quick and Convenient Access

With outstanding biometric feature, the entrance control system does not requires staffs to present any physical credentials or insert passcodes. The staff is only required to stand in front of the barrier, then the biometric module automatically performs facial recognition process, and is able to recognize faces from up to 3 metres, in a recognition speed as quick as 0.5 second.

To achieve an optimal balance between streamlined design and functionality, ZKTeco Comet Barriers are designed with well repositioned monitor, PCB (printed circuit board) and camera. The camera is strategically placed just above the movement mechanism, offering superior viewing angle of up to 72 horizontally and 54 vertically, that accommodates individuals of varying heights, including children, the elderly, and people with disabilities.



ADVANTAGES

Design Tailored to High-End Customer Scenarios

ZKTeco Comet Series Swing Barriers are specifically designed for corporate use applications. Unlike most bulky barriers on the market, the Comet Series Swing Barrier features a compact chassis with a width of only 115mm. The facial recognition module is installed using an under-mount approach, eliminating the need for separate installation of typical facial recognition devices, which helps maintain the aesthetics of the environment. Additionally, the main components of the Comet Series barrier are made from cast aluminium alloy and transparent materials, giving it a sleek and minimalist outlook. Its LED display offers 7 RGB colors, effectively complementing corporate settings and enhancing branding.

As equipment designed for large enterprises and institutional environments, ZKTeco also offers customization options for clients. For example, in this proposal, the company logo can be printed on the barrier, and they can provide a gold aluminium alloy casing based on corporate needs. The passage width can be expanded from the standard 660mm to 900mm to accommodate various individuals. The transparent acrylic components can also be optionally upgraded to reinforced glass. With its simple and elegant design, combined with flexible customization features, the Comet Series is an ideal choice for access control solutions in different enterprises.



Enhanced Efficiency of Visitor Registration

RS100 is a compact, fast and multi-functional document reader based on OCR technology. It is designed for extracting data from ICAO standard travel documents. It provides ideal solutions for identifying passports, Visa, ID cards, Driver License and other travel documents. Precision and Quickness Are thus both enhanced for data entry for visitor registration.

