

*"In order to secure airport operations against attacks on air traffic security, the airport operator is required to secure the airside area against unauthorised access and, as far as restricted areas or sensitive parts of the restricted areas are concerned, to grant access only to authorised persons"*

LuftSiG §8 par.

## Use of palm vein scanners at the airport

#biometrics

#palmveins

#accesscontrol

### The challenge

Air traffic and aircraft are not the only relevant targets of attack and therefore not the only vulnerability. The entire airport infrastructure, with its complex security systems, is also vulnerable in many respects. Extensive parts of the airport are highly sensitive restricted areas, which may be accessed only by authorised persons.

Air traffic, airport operations and security systems must be as safe, easy to handle and attractive in terms of design as possible, to keep the airport microcosm stable and running smoothly. Therefore, highly sensitive restricted areas require the implementation of extreme security measures, with the lowest possible susceptibility to error. Optimisation of the airport infrastructure should speed up and streamline the operations.

It is a real challenge for airport operators, with increasing numbers of new security requirements being introduced. Passenger control is becoming more extensive, meaning that its speed is decreasing. According to the German Airports Association (ADV), airports are the most heavily regulated infrastructure facilities and are fully monitored by the responsible aviation security authorities.

Another aspect that has become even more important since spring 2020 is hygiene. The COVID-19 pandemic requires the highest standards of hygiene to prevent its further spread and future pandemics. For example, up to 80,000 people work at the Frankfurt Airport, and the majority of them come into contact with passengers. It is therefore particularly important to prevent the spread of viruses by maintaining high standards of hygiene in this area.

### Legal requirements

#### Regulation (EU) No. 185/2010

"In order to prevent the misuse of vehicle passes, a system shall be in place to reasonably ensure that the attempted use of vehicle passes that have been lost, stolen or not returned is detected. Upon detection, appropriate action shall be taken."

At German airports, security measures are regularly checked by internal monitoring of those involved on the one hand, and by the European Commission and the Federal Police on the other. The Federal Police are represented by the National Quality Control Agency for Aviation Security (NQS).

### Solutions by iCOGNIZE

The ManuScan Indoor palm vein scanner is designed for highsecurity biometric access control in data centres, office buildings, development labs, power plants and airports, based on Fujitsu Palm Secure technology. With the unique biometric "palm veins" feature, this system offers the user not only maximum security but also the highest level of comfort. This is because the ManuScan indoor palm vein reader works contactlessly and non-invasively, and its unique optical hand positioning system ensures intuitive use and high user acceptance.



The ManuScan Indoor palm vein scanner can be easily integrated with existing security infrastructures through all common hardware interfaces and ensures maximum system availability thanks to the inbuilt software and hardware backup systems.

## Advantages of the ManuScan indoor palm vein scanner

- RGB-LED user guidance
- more reliable than an iris scanner
- FAR < 0.00008% (false acceptance rate)
- FRR < 0.01% (false rejection rate)
- sabotage detection (contact, shock)
- easy integration with existing systems
- in-built PIN code reader
- CE- and BSI-certified (components)

## Advantages of using both products

- Approval from the Federal Ministry of the Interior is not required, but the system should be approved by the aviation supervisory authority and the airport works council.
- PIN codes can be stolen or passed on, which cannot happen with the contactless access systems by iCOGNIZE.
- Contactless scanners can also be used with hygiene gloves to ensure a high standard of hygiene.
- Due to data protection requirements, the “Template on Card” method is predominantly used, which means that the scanned palm vein pattern is stored on the airport ID card. Data is not stored in a database and each user always carries their personal data with them.
- iCOGNIZE products are robust and need maintenance only once per year.

Its compact construction allows its inconspicuous integration into the existing environment, since the indoor version can be combined with the Gira Esprit switch range. The installation is extremely simple and corresponds to that of a light switch. Various materials such as aluminium and glass in various colours and shapes are available as design variants. The outdoor version of our palm vein scanner is the first palm vein detection solution for outdoor use, and meets the EMC and EMP military requirements. The V2A housing is resistant to all weather conditions and even sea water, is extremely robust and, with its integrated thermal management, suitable for temperatures from -35° to +85°.

## Advantages of the ManuScan outdoor palm vein scanner

- can be used in almost any environment
- very user-friendly
- more reliable than an iris scanner
- FAR < 0.00008% (false acceptance rate)
- FRR < 0.01% (false rejection rate)
- easy integration with existing systems
- IP68 standard
- CE- and BSI-certified (components)

## Implementation scenarios

- Integration with existing airport access control systems for employees / federal police / suppliers, etc.
- Securing the transition points in accordance with the Schengen Agreement.
- Securing various rooms used by the Federal Police (e.g. armoury, interrogation room, detention cells).
- Securing the IT infrastructure at the airport.
- Authentication of employees at the boarding pass control when accompanying a passenger (e.g. wheelchair user).