

# Face recognition using artificial intelligence

## **State-of-the-Art face recognition with 99.38% accuracy**

Advances in neural networks have led to a considerable improvement in the recognition performance of faces. With this "deep learning" algorithm, biometric access control using face recognition is not only more secure, but also functions reliably in difficult lighting situations.

Adatis has implemented this new algorithm in the compact "FaceAdmin-AI" DIN rail server. "-AI" stands for "Artificial Intelligence". Thanks to accelerated processing with many parallel GPUs, the calculation is so fast that up to 16 door terminals can be equipped with central face recognition. Despite supercomputer computing power, power consumption remains so low that the server can also be supplied by Power over Ethernet (PoE Plus).

The server also takes over the central administration of the users and a door and time-dependent access control. The administration is done via a web browser. A graphical user interface on a connected monitor allows to follow the work of the server and the last recognized persons in real-time.

## **Dedicated terminals for high secure 3D recognition**

The FaceAdmin-AI server works with all Adatis door terminals. Depending on security requirements, the user can decide whether to use 2D, 2.5D or 3D camera technology. In the case of 2.5D and 3D cameras, the system first checks whether it is a real face or a photo. This reliably prevents the access control system from being outwitted by photos.

In conjunction with the FaceAdmin-AI server, the terminals are operated in an AI server mode in which the AI server makes the decision on access and forwards it to the terminal.

## **GDPR-compliant processing of data in protected areas**

In addition to the advantages of using artificial intelligence for face recognition, the server also offers a GDPR (European Union General Data Protection Regulation) -compliant mode of operation in which no biometric data is stored in the terminals.

All biometric templates are stored in an encrypted SQL database on the server, which is located in a secure server room. This ensures that data protection requirements are met.

## **Enrollment also via App**

Adatis offers an app for mobile devices such as smartphones and tablets, which allows users to conveniently enroll. For this purpose, the enrollment on the server must be activated for the corresponding mobile device, for the persons to be enrolled and for a configurable period of time. This reliably prevents abusive enrollment.