Brochure

LifePass

Biometric personal authentication middleware based on palm vein recognition

Content

Highest security level

Ease of use

Convenience

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General information

Who is BioSec?

BioSec Group Ltd. is one of the leading R&D companies in the field of biometric technology, which has been developing on palm vein recognition based solutions for almost a decade. BioSec is specialized in physical- and IT security solutions and it has a unique expertise in biometric mass authentication.

What is biometric authentication and palm vein recognition?

The biometric authentication system is a technology, which measures and records the individual physical characteristics of a body and uses the data for personal authentication.
In our case, the palm vein scanner measures the vein structure within the hand in 5 000 000 reference points by the emission of infrared light. In opposite to other biometric technologies, which use surface characteristics (e.g. fingerprint), the vein structure is an inner characteristics, which is not visible from the outside, thus it cannot be copied, reproduced, stolen or used for secret data collection. Surface injuries on the palm do not influence the identification quality.

Main benefits of using BioSec's biometric technology:

- No need for RFID cards, chips, bracelets, passwords
- The vein ID cannot be stolen, copied, reproduced
- BioSec solutions are easy to integrate into existing systems via standard interface
- Compatibility through standard interfaces
- Cost effective solutions
- Environmental conditions (e.g. cold weather, sunlight) do not affect the authentication method

Security classification of the technology:

Common Criteria

The palm vein recognition based technology and the authentication procedure meets the standards of the Common Criteria Classification, which is the highest technical certificate concerning IT security. The qualification procedure examined the life detection, authentication quality, data protection functions.

What is the LifePass?

LifePass is a palm vein recognition based biometric personal authentication middleware, which can be easily integrated into any third party system via standard interface. The LifePass was specially developed to integrate the security of palm vein recognition based technology into any system, thus replacing or completing low security passwords, cards or other identifiers. By using LifePass, the highest security level can be provided in any system, where the client only needs his/her hand for personal authentication. The LifePass is the core module of all BioSec solutions, as it includes the authentication solution itself, without any additional features.

LifePass in a nutshell


Highly secure


Simple to use


User-friendly


Easy to integrate


Fast authentication


Cost-effective

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Main benefits of using the LifePass:

- Can be easily integrated into any 3rd party system via standard interface, since it works as a middleware
- Enables 1:n identification, database based verification, template on card verification and template printed on card methods
- Active Directory compatible, thus IT and physical access right management can be done on one surface
- Can be combined with other BioSec products, thus one server will serve all solutions (complex security concepts can be created, e.g. combining logical access control with physical security products etc.)
- Already integrated with globally used system, such as Honeywell and Kantech
- By using LifePass, anonymous database can be also created
- ~1 second authentication time for an unlimited number of users

Possible authentication methods with LifePass:

- 1:n identification
- database based 1:1 verification, where we need only the user ID number from the ID card
- template on card 1:1 verification, where we read out the enrolment template stored on the ID card and make the matching
- template printed in QR code, ideal for paper ID's or chips without necessary space or cards without chips

Biometric verification on paper:

By using our „Security Paper" technology, we can „place" the biometric template with double encryption (once the hash and the datamatrix itself is separately encrypted with AES 256 bit) onto a paper or plastic card and read out the data within 0,5 seconds (for one template), therefore the biometric hash does not have to be stored on any chip.

Main fields of use of the LifePass:

- Via LifePass palm vein recognition can be integrated into any primary access control system (usually RFID) to replace or extend RFID cards or IT solution/software to raise the security level
- Pharmaceutical, chemical industry (replacing low security identifiers)
- Healthcare, hospitals (patient registry for fast and automatic patient check-in)
- Justice (personal authentication)
- Prisons (authentication of imprisoned people, prevent theft and violence at the canteen)
- Discos, night clubs (creating visitor blacklist in one location, or in many places together)
- Gambling, lottery, casino (authentication of customers for keeping out underage/addicted people)
- Safe deposit (authentication of safe owners)
- Theme parks (integrating biometric authentication into ticketing to prevent the misuse of tickets)

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Technical parameters

Main elements:

Hardware:

- **Triple1/Triple1+/TimeKeeper/desk terminal**
- **Client device:** Can be any computing device operating on Microsoft platform
- **Management and registration PC**

Software:

- **Server software:** Core module of the LifePass as server software
- **AdminSuite:** Registration and management software
- **Client SW:** Client software on the local computing device

Possible devices for use:

Mouse

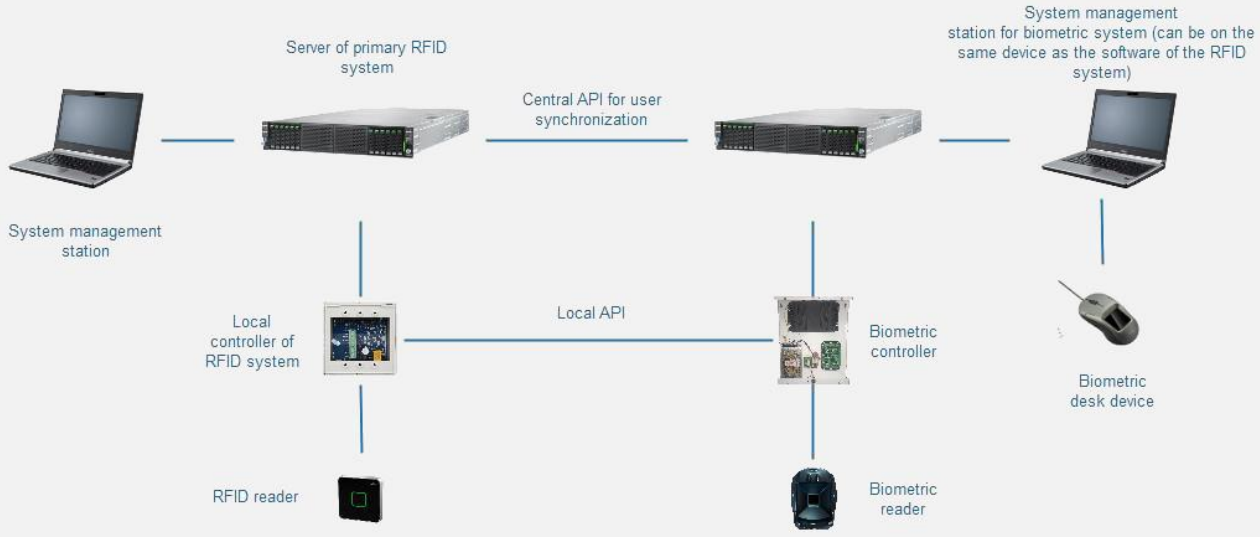
PS Guide

PS Guide Kit

Technical parameters for integration with access control system:

- **Used OP system for administration software:** Windows 8, 8.1(64 bit), Windows 10, Linux Ubuntu 16
- **Database:** MSSQL, PostgreSQL
- **Active Directory:** completely compatible
- **Necessary hardware:** biometric reader, controller, biometric desk device
- **Necessary server OP system:** Microsoft Server 2012 or newer
- **Potential local interface communication options:** Wiegand, TCP/IP, serial, soap etc.

System architecture for integration with RFID system:



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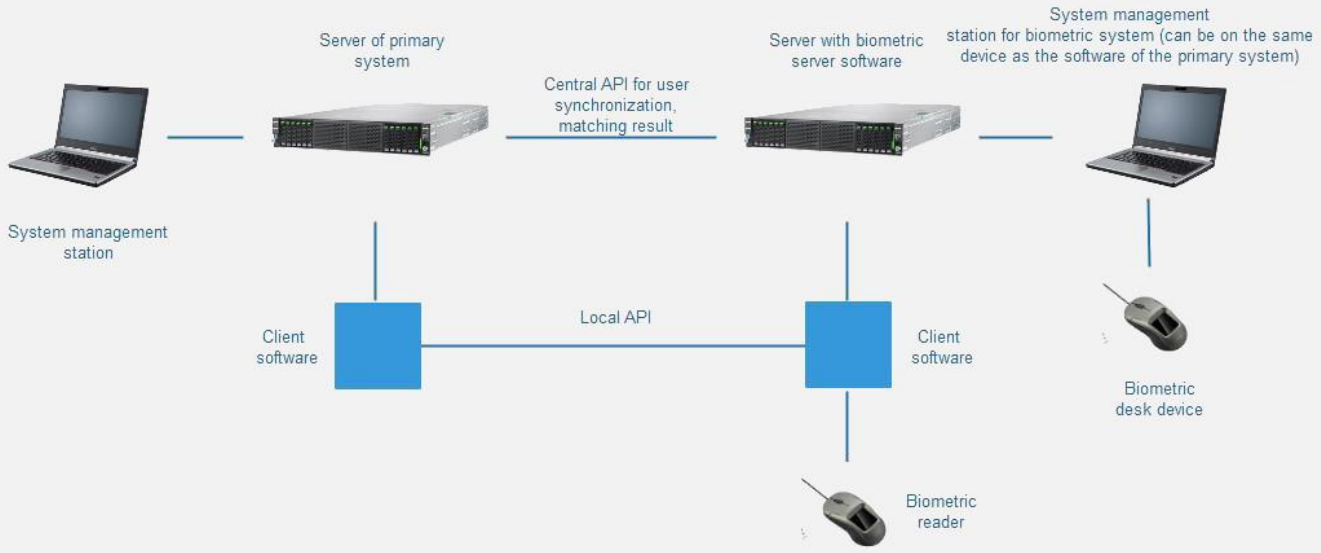
For the integration two APIs are needed:

- **Central API** for real time user synchronization. Only those users can be registered in the biometric system, who are already stored in the primary RFID system. User ID and name will be taken over via API.
- **Local API** for communication between controllers for 1:1 or 1:n authentication. In each case LifePass acts as external verifier and the primary system is responsible for right management and access point control. **Possible types of communication (serial, Wiegand, TCP/IP)**

Technical parameters for integration with 3rd party IT solution:

- **Used OP system for administration software:** Windows 8, 8.1 (64 bit), Windows 10
- **Database:** MSSQL, PostgreSQL
- **Active Directory:** completely compatible
- **Necessary hardware:** biometric desk devices, server
- **Necessary server OP system:** Microsoft Server 2012 or newer

System architecture:



For the integration two APIs are needed:

- **Central API** for real time user synchronization and depending on the case, also for the communication of the results of the matching procedure. Only those users can be registered in the biometric system, who are already stored in the primary system. User ID and name will be taken over via API but can be customized.
- **Local API** for communication between local softwares (if that is needed) for 1:1 or 1:n authentication. In each case LifePass acts as external verifier and the primary system is responsible for right management.

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Possible devices for LifePass combined with an access control system

Access control devices for indoor environments

Triple 1 – modular biometric terminal



Triple 1+ - modular biometric terminal with RFID reader



Time and attendance device

TimeKeeper – modular biometric terminal with RFID reader and touchscreen



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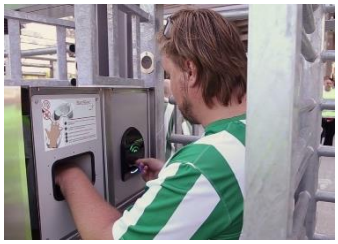
More information

Besides LifePass, the BioSec product portfolio contains the following solutions:
For further information please visit www.biosecgroup.com

GateKeeper
Biometric physical access control system



StadiumGuard
Stadium security- and services solution package

BLogin
Biometric Windows log in system

CityGuard
Integrated access management

RapidGuard
Rapid deployment biometric authentication

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BioSec Group Ltd. is a dedicated developer of innovative security solutions based on palm vein recognition. BioSec is specialized in biometric mass authentication, logical- and physical access control solutions, ensuring highly secure, simple to use and convenient solutions in every fields of life.