ManuScan

Biometric Identification System

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BIOMETRIC IDENTIFICATION SYSTEM

ManuScan is a biometric identification system that uses palm vein scanning technology. The system significantly improves security by providing highly accurate user identification and eliminating risks associated with lost, duplicated, stolen, or transferred identifiers. The palm vein scanning method is hundreds of times more reliable than the commonly used fingerprint scanning and is contactless, which is crucial for maintaining hygiene.

In terms of reliability, this method directly competes with more complex and expensive systems like retina or iris scanning while remaining more user-friendly and straightforward.
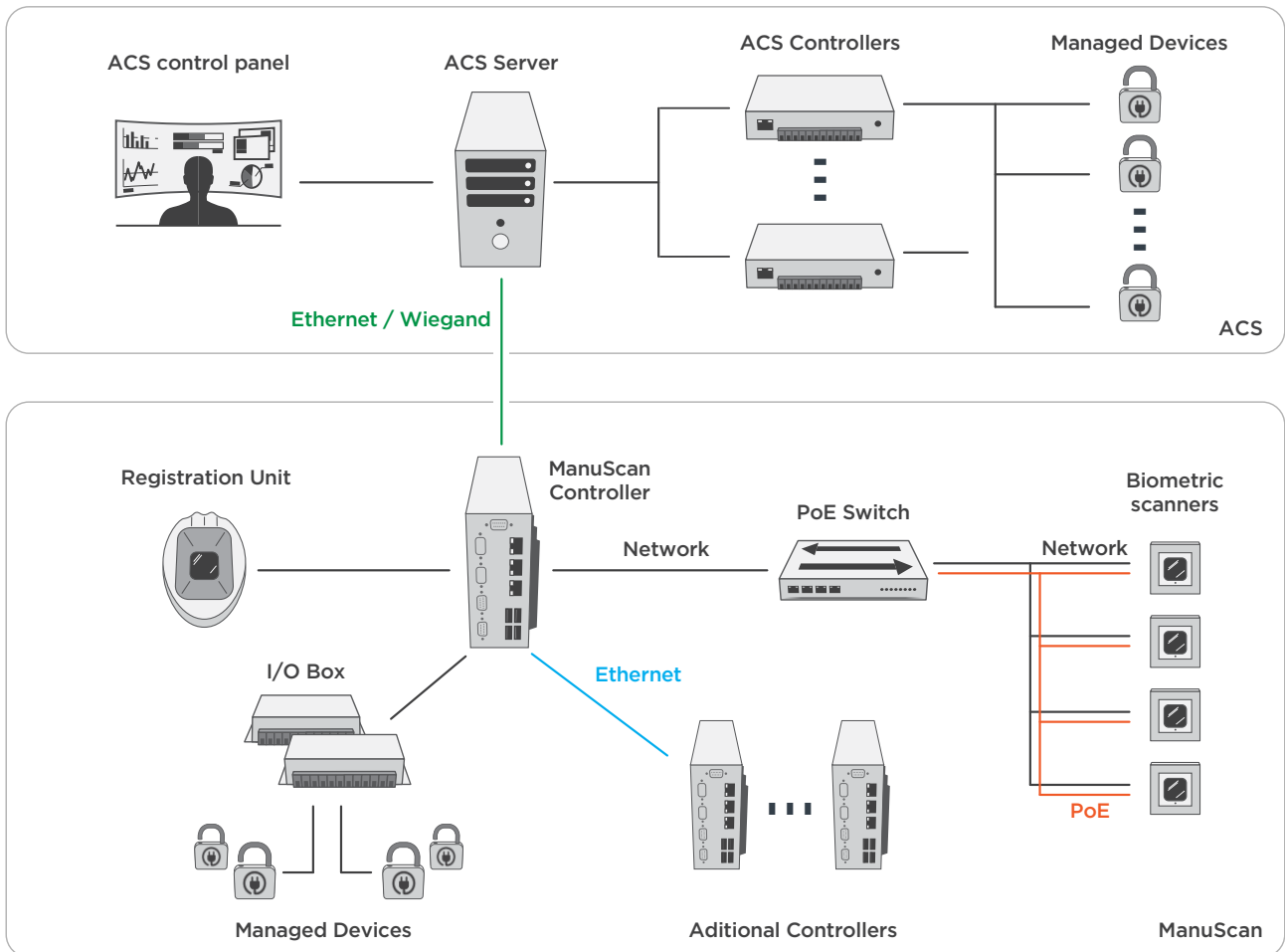

The ManuScan system can be equipped with two types of scanners: external and internal. External scanners are installed on building facades and/or at entrances to the premises, while internal scanners are placed at the entrances to individual rooms. Both types serve the same purpose—to identify individuals entering the premises or restricted areas and to restrict unauthorized access. In addition to the ManuScan system controller and external/internal scanners, the system includes a registration station, which, along with specialized software, is used to register new users.

The operation of the ManuScan system is based on reading the infrared radiation reflected from the human palm. Since deoxygenated hemoglobin in blood absorbs infrared radiation, the veins in the palm reflect radiation with lower intensity compared to the rest of the surface. This allows the system to recognize the unique vein pattern of each person's palm during scanning and use it as an identifier.

The ManuScan system can function as part of an access control and time tracking system or in standalone mode. In standalone mode, the ManuScan controller can independently manage up to four devices via a USB-I/O Box (locks, alarms, etc.) by receiving data from four separate scanners. If there is a need to control more devices or install more biometric scanners, additional ManuScan controllers can be networked together. Once networked, all controllers gain access to all connected biometric scanners and stored databases, enabling the registration of new users via the registration station on just one controller, without the need to enter data into each controller separately.

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ManuScan in Combination with an Access Control System

When integrated into an access control system (ACS), ManuScan performs biometric user identification and transmits relevant data to the ACS server. Each additional registered position of a user's left or right palm (or both) relative to the biometric scanner is assigned a unique identifier. This allows implementing various algorithms at the ACS level depending on the presented hand and palm position (e.g., opening or closing doors, activating or deactivating alarms, summoning security, etc.), thereby extending the standard capabilities of access control systems by enabling additional management and notification algorithms.

ManuScan, as part of an ACS, retains the ability to autonomously control up to four devices directly connected to the controller. This allows the creation of a completely autonomous and independent zone of control and access (e.g., a server room, a bank vault, or an armory) separate from the main management system.

ManuScan offers:

• Accurate and fast identification.
• Integration with most ACS and industrial systems that require precise user identification.
• Triple encryption / Non-replicable identifiers.
• Ease of use.
• Hygiene (contactless interaction with the sensor surface).
• Simple and quick installation.

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