

Optical Fingerprint recognition with Mifare smart-card reader

Why Biometrics?

Unlike cards, biometric details cannot be stolen or lent. Unlike PINs, they cannot be disclosed so as to allow entry to more than one person.

Simply the best

Not all biometric solutions offer the same benefits.

This product combines a number of features and characteristics to make it one of the best in the world.

Don't replace your entire system

These readers can be retro-fitted to many existing access control systems, providing an immediate and significant improvement in security.

To benefit, it is not even necessary to replace all readers with Biometric ones. If the main access points are secured by biometrics, it is usually sufficient to secure the internal doors with basic Mifare readers.

Easily accepted by users

There is no way of re-creating the fingerprint image from the information stored. And because the information is stored on the card, the user can rest assured it cannot be used for any purpose other than allowing them access.

Biometric Security from TDSi



Features at a glance

- Optical finger sensor for enhanced reliability and longevity
- Template stored on Mifare card = enrol only once with no networking
- Every reader can be used as an enrolment terminal – with no PC or software
- Fingerprint verification in less than 1 second
- Multiple finger enrolment for some or all users as required
- Only one Mifare sector used per finger, plus one sector for the card number, leaving 13 or 14 sectors free for other applications.
- Administrator-selectable security levels with option of individual settings
- Easy-to-follow LED and LCD instructions
- Unlimited capacity

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Elegant, Reliable, Secure

More about Mifare

Card security doesn't get much better than Mifare. Each card carries 16 sectors, each with its own password-protection - with high-level encryption - for both reading and writing.

The TDSi Mifare card, when used with the biometric reader, uses only 3 of the sectors. All other sectors are therefore available for use with other systems.

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Technical data

Size	Depth: 60mm Width: 120mm Height: 190mm
Weight	0.75 Kg
Temperature	Operating range: 0°C to 40°C
Humidity	10-80% rH non-condensing (not suitable for out-door installation)
Power	12V DC +/- 2V @ 800mA
Mifare card specification	Card identity: Sector 9 TDSi format Template 1: Sector 1 Template 2: Sector 2
Interface	Clock&Data; Track2 ABA format
Capacity	Unlimited - the reader stores no information

Principles of operation

During enrolment, information about the user's fingerprint is stored onto a Mifare card. This is referred to as a "template", and is not stored anywhere else in the system - not the reader, controller or computer. Nor can the template be used in any way to re-construct an image of the fingerprint.

When the user wants to gain access, the card is presented to the reader and the template is retrieved from the card into temporary memory in the reader. The user then presents their finger which is scanned, and the reader then compares the original record of the finger (i.e. the template) with the new scan. If there is sufficient similarity, the number of the card is sent by the reader to the controller, and the access control system decides what to do based on all of the access control rules that may apply.

If required, two templates from two fingers can be stored on the card; this helps overcome problems where one finger becomes harder to read (for example, through being injured).

Of course, the ability of the reader to read, and identify, fingers can be affected by several factors: the condition of the finger, the "readability" of the finger (which varies between individuals), and the way in which the user presents their finger. This product is designed to minimise the inconvenience of "false accept" and "false reject" that can occur with all biometric identification technologies. For situations where security is of the utmost importance, biometric recognition offers the ultimate solution.



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