

DERMALOG

Fingerprint Scanner ZF 1+

Verifying identity with match-on-card feature.



Outstanding Features

- > Supports all MCU-based cards
- > Additional Liveness Detection
- > Excellent quality for both wet and dry fingerprints

Key Benefit

The perfect solution for any authentication system with integrated fingerprint biometrics based on smart cards.

ZF1+ Smart Card Reader – verifying Identity by Fingerprint and MCU-based Card.

The perfect solution for any authentication system with integrated fingerprint biometrics based on smart cards.

DERMALOG ZF1+ Smart Card Reader extends the outstanding qualities of DERMALOG ZF1 fingerprint scanner – combining a space-saving design and easy handling. The self-explanatory ZF1+ guides users to place their finger on the scanner in the correct position automatically. Furthermore, the ZF1+ Smart Card Reader recognizes and captures wet and dry fingerprints flawlessly.



Fingerprints

The optical scanner provides a 500 dpi fingerprint image (PIV and BSI-TR-03121 certified). Due to the automated fingerprint optimisation, results will be fully applicable even in poor conditions (and dry fingerprints).



Liveness Detection

High security will be ensured by using the latest liveness detection technology. Exclusive security features detect fake fingerprints or manipulation.

Product Features

- > Supports all MCU-based cards (Micro Controller Unit)
- > Excellent quality for both wet and dry fingerprints
- > Robust against disturbing light sources
- > High quality fingerprint images – no reference images required
- > No initialization required - for fast capturing
- > Liveness detection to prevent attacks using fake fingers (optional purchase)
- > Ease of use in fingerprint capturing
- > Durable platen glass and a rugged scanner surface



Ease of Use

The device combines usability and easy handling. The self-explanatory ZF1 design leads users to put a finger on the scanner in a correct way without needing assistance.



Smart Card Reader

Once the fingerprint of the card holder is captured and saved on the smart card, he can easily identify himself as the legitimate owner by putting the card into the reader and his finger on the fingerprint scanner.



Certified Image Quality

The German Federal Office for Information Security has certified the DERMALOG ZF1+ fingerprint scanner according to the "BSI-TR-03121" standard. Since the ZF1+ stores fingerprint information in German ePassports. The ZF1+ furthermore meets the criteria of AFIS Image Quality Standard Appendix F.

Specifications Fingerprint Scanner ZF1 + Smart Card Reader

Technical Features

Fingerprint scanning window size	25 mm x 18 mm
Optical scanning area	24.4 mm x 16.3 mm
Image resolution	480 x 320 pixels, 500 dpi
Bit Depth	8 bit, 256 gray levels
Raw fingerprint image file size	Approx. 160 kByte
WSQ compressed	Approx. 18 kByte
Interface	USB 2.0 high-speed with 1.8 meters standard USB cable
Dimensions (H x W x D)	60 mm x 99 mm x 49 mm
Weight (including USB cable)	235 g
Operating temperature	-10 °C to +55 °C (14 °F to 131 °F) at a humidity of 20 - 75 % non-condensing
Storage temperature	-10 °C to +60 °C (14 °F to 140 °F) at a humidity of 10 - 90 % non-condensing
Light source	Infrared light-emitting diode (LED)
Supply	DC 4.5 - 5.5 V / 200 mA (USB powered)
Certificates	CE, BSI-TR-03104, FBI-PIV, FCC Part 15 Subpart B Class A

Smart Card Reader

Standard/ Certifications	ISO7816-1/2/3, PC/SC, EMV2000, CCID, WHQL
Supported card types	5 V, 3 V, and 1.8 V smart cards
Supported protocols	T=0, T=1

SDK Features

NIST Quality Check	NFIQ 1.0: calculation of the NIST quality from a given image. The quality is calculated in the NRQ range from 1 (good quality) to 5 (bad quality) using the official NIST standard NFIQ 2.0: calculation of the NIST quality from a given image. The quality is calculated in the NRQ range from 100 (good quality) to 0 (bad quality) using the official NIST standard
WSQ Compression	FBI-certified
Operating Systems	Windows, Linux, Android

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