DERMALOG

Fingerprint Scanner **F 1**
Small size - big solution.

Federal Office for Information Security

Certificate
according to Technical Guidelines of BSI

BSI-TR-03121

Certificate-ID:
BSI-K-TR-0065-2010

Outstanding Features

> Space-saving dimensions of 31 mm × 53 mm × 68 mm

> Excellent quality for both wet and dry fingerprints

> Additional liveness detection

Key Benefit

Due to its compact size the F1 is a solution for mobile applications or easy installation into fixed units.

DERMALOG F1 – One of the World's Smallest Optical Fingerprint Scanners.

A space-saving and easy to integrate fingerprint solution.

Its compliance with international standards makes the F1 suitable for a wide range of biometric documents and applications. It is able to capturefingerprints for ePassports, ID cards and verification-processes within the blink of an eye. The self-explanatory DERMALOG solution meets international standards defined for biometric workflows.

Fingerprints
The optical scanner provides a 500 dpi fingerprint image. Because of the automated fingerprint optimization, results will be fully applicable even in case of poor conditions (and wet and dry fingerprints).

Liveness Detection
Highest security is ensured by using the latest live-ness detection technology. Exclusive security features detect fake fingerprints or manipulation.
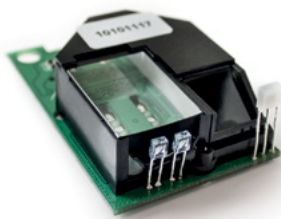

Ease of Use
The device combines usability and easy handling. The self-explanatory F1 design guides users to put their finger on the scanner correctly without assistance.
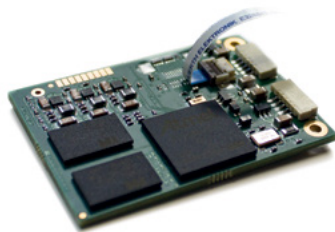
Product Features

> Excellent quality for both wet and dry fingerprints

> Robust against disturbing light sources

> Space-saving dimensions of 31 mm × 53 mm × 68 mm

> Flexible and easy integration also as OEM

> High quality fingerprint images – no reference
  image required

> Durable platen glass and a rugged scanner surface

> Liveness detection to prevent attacks using
  fake fingers (optional purchase)

OEM Device

DERMALOG's F1 design offers all the benefits of flexible and easy integration into OEM equipment. It enables a wide range of applications while delivering images of highest quality.

Embedded Board

The F1 can optionally be supplemented with the embedded board. This ensures support for fingerprint scanning with DERMALOG scanners even on low performance platforms such as POS devices. The embedded board provides the necessary computing power for fingerprint capturing, coding and matching for the cost of a little increment in power consumption.

Certified Image Quality

The German Federal Office for Information Security has certified the DERMALOG F1 fingerprint scanner according to the "BSI-TR-03121" standard, since the F1 stores fingerprint information in German ePassports. The F1 furthermore meets the criteria of AFIS Image Quality Standard PIV.

Specifications **Fingerprint** Scanner **F1**

Technical Features

Fingerprint scanning window size	25 mm × 18 mm
Optical scanning area	24.4 mm × 16.3 mm
Image resolution	480 x 320 pixels, 500 dpi
Bit depth	8 bit, 256 gray levels
Raw fingerprint image file size WSQ compressed	Approx. 160 kByte Approx. 18 kByte
Interface	USB 2.0 high-speed with 1.8 meters standard USB cable
Dimensions (H × W × D)	31 mm × 53 mm × 68 mm
Weight (including USB cable)	122 g
Ingress protection	IP54
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 voltage	+ 5 V ± 0.5 V (USB-powered)
Power consumption	230 mA
Certifications	CE, FBI-PIV, FCC Part 15 Subpart B Class A, BSI-TR-03121 , BSI-CC-PP-0062-2010

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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