TST Biometrics
TOUCHLESS SENSOR TECHNOLOGY

BiRD

Fingerprint-Sensor

- For High Sensible Areas
- For High User Quantities
- For Multiple Applications
- For Wide Recognition Ranges

Fingerprint-Sensor BiRD

Touchless Sensor Technology for High-End Security Systems

Touchless Image Capturing

The finger will be guided and placed over the sensor surface without touching it. This leads the user to several unique advantages.

- **NO LATENT FINGERPRINTS**
  No possibility to copy the fingerprint from the sensor-surface – the finger does not touch it.
- **LOW MAINTENANCE COSTS - ROBUST**
  No abrasion or contamination, the sensible sensor parts are all covered under glass. The sensor-surface will not get dirty.
- **USER FRIENDLY**
  No need to clean the surface after a certain number of users. The sensor could be installed as well on non personal guided sites. The finger guidance will ensure the right placement, different pressure is not a problem.
- **HYGIENE**
  The next person on the sensor should get as little as possible skin rash, sweat, dirt, bacteria and whatelse from the former user. No Touch – no issue.

High Reliable Live and Falsefinger Detection - LFD (optional)

In a second simultaneous process besides the capturing of the fingerprint, four spectral colours will check the finger via subcuteanous illumination. Each light colour will be absorbed or scattered in a special and unique way from a living finger. The LFD has to be adjusted on site. Leading Institutes were not able to cheat this system and confirmed it. A supplementary feature, which increases your security.

Optical Image Capturing

- **CONTAMINATION INSENSITIVITY**
  Optical and touchless image Capturing are providing an insensitivity against dirty, humid or dry fingers
- **WIDE RECOGNITION RANGE**
  Some people are impossible to enroll, this is fundamental in biometrics. Best case is the ability to enroll as much as possible persons. Challenging areas are children, older people, different races. The BiRD's range is far more, than the ones of touchbased devices.
- **WIDE TEMPERATURE OPERATING RANGES**
  Either warm, nor cold fingers are creating any issues for the BiRD Fingerprint Sensor. An optional heating device is available for extreme temperature changes on-site or cold environnements like cold-storage plants etc. The sensor could be installed in environnements down to -20°C, a thermostate fixes the inner sensor temperature at +28°C.
- **REAL IMAGE CAPTURING**
  In the first step, the sensor is capturing a normal picture. Depending to the algorithm, templates could be generated as minutiae-, pattern- or image-based.

Headquarter
TST Biometrics GmbH
Richard-Strauss-Str. 71 Phone +49(89)99 88 55-0 info@tst-biometrics.com
81679 Munich, Germany Fax +49(89)99 88 55-11 www.tst-biometrics.com

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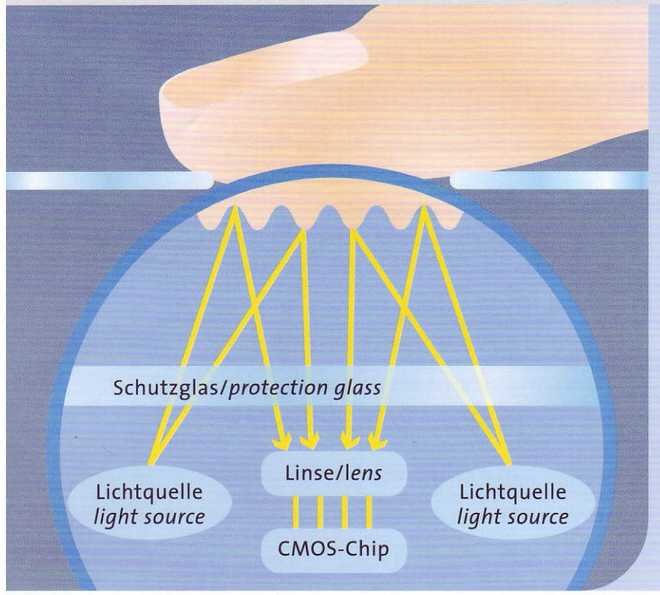

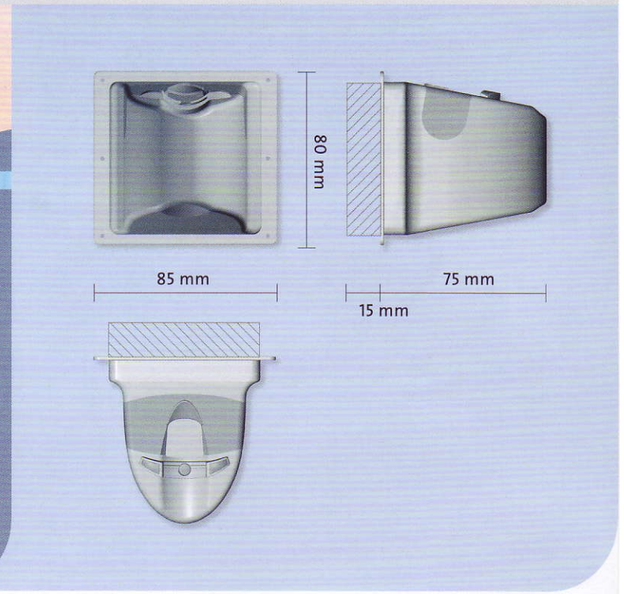

Technology:

The finger is guided above the sensor surface without touching it. Light sources illuminate the finger, while the camera is taking a sharp picture. All other procedures happen in the software (see separate data sheet)

The BiRD-Fingerprint-Sensor is available in four different versions:

Desktop
On-Wall
OEM - Components

Options:

- Live- and Falsefinger Detection (LFD) Software License
- Heating device for enlargement of the operational temperature range down to – 25°C (only BiRD 3)
- AC Adaptors 5 V
- Connecting Cables

Software:

- TST – API
- TST – SDK Software Development Kit
- TST – Biometric Manager
- DEMO – Software for your presentations
- Trial-Software Kit (120 day evaluation)
- Algorithms (various suppliers)

Do not hesitate to contact us, we would appreciate it very much.

Yours

TST Biometrics GmbH

Technical Data

TYP	BiRD IIi	BiRD 3
Com	Ethernet (10 Base-T)	USB 2.0 (II/2006)
System	Windows 2000 / XP / 2003	
API Conformity	TST-API	
Algorithms	Neurotechnologija BioScrypt Ikendi (others could be easily adapted)	
SDK	Well documented SDK available	
LFD (optional)	Subcuteaneous spectral analysis	Subcuteaneous spectral analysis temperature compensated
Optic	Glas-Lens-System	
Image	500 dpi, max. 640 x 480	
Illumination	520 nm (green)	470 nm (blue)
Working distance	45 mm	50 mm
Temperature Range	+ 5°C to + 50°C	
With Heating (opt.)	- 20°C to + 50°C	
Autostart	Optical Approach Device	
CMOS Sensor-surface (effektive)	16 x 19 mm	
Current supply	5 V DC ± 5% stab. via AC adapter or POE	via USB (Heating requests AC Adaptor)
Power consumption	800 mA	400 mA
Image taking time	< 1 sec	
Interface		
Plug	50 pol. 0,5 mm, for Flat Ribbon Cable FFC	
Camera Data	8 bit parallel, min. 12 MHz Clock In	
Camera Control	I²C	I²C
Illumination Control	digital	I²C

TST Biometrics Holding AG
Bächtoldstr. 4
8044 Zürich/Switzerland
Phone +41 (43) 8838088 Fax +41 (43) 8838880

TST Arabia LLC
Three Sails Tower Suite 1605, Corniche Road
Abu Dhabi/ United Arab Emirates
Phone +971 (2) 6818584 Fax +971 (2) 6811676