

DERMALOG



DERMALOG AFIS



DERMALOG AFIS

The World's Fastest Automated Fingerprint Identification System

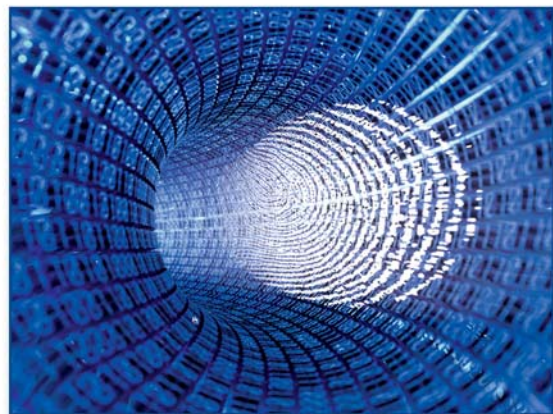
DERMALOG AFIS



The World's Fastest Automated Fingerprint Identification System

DERMALOG AFIS is the result of more than 20 years of experience in the development of Automated Fingerprint Identification Systems, DERMALOG's core product. Being a pioneer in the field of automated fingerprint identification DERMALOG's AFIS has helped tremendously to revolutionize forensic fingerprint analysis more than two decades ago. Since then, DERMALOG's AFIS has been implemented in numerous large scale mission critical projects all over the world. Due to continuous advancements DERMALOG has

managed to develop an identification system that is far ahead of its time, being the first ever AFIS in the world capable of matching more than 129 million fingerprints within one second on a standard server without loss of accuracy. The renowned international SGS INSTITUT FRESENIUS has acknowledged that this combination of speed and accuracy is unique throughout the world. Simple and intuitive to operate, DERMALOG AFIS is synonymous for the highest levels of reliability and security.



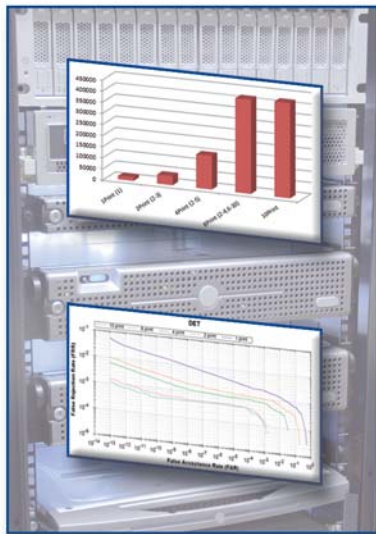
Outstanding Features of the DERMALOG AFIS

- AFIS for law enforcement and civilian identification
- Database with tenprints (TP), palmprints (PP) and latent prints (LP)
- Includes TP-TP, TP-ULP or PP-ULP / LT-TP, LT-ULP, or LP-ULP searching
- World's fastest AFIS coding and matching while maintaining highest accuracy rates
- Best performance in recognition rates
- Lowest FAR and FRR on the market
- No proprietary hardware necessary as standard COTS hardware is used
- Runs on all hardware platforms and common operating systems, such as Windows and/or Unix/Linux
- Use of standard databases, such as Oracle
- Customizable workflow and GUI
- Coding and matching of shape, global and local similarity checks, heuristics
- Integration of digital photos and signatures
- Available in multiple languages
- Expandable to multi-biometric identification systems
- High usability, easy to integrate, outstanding performance, unique security



Unique Identity: The DERMALOG Civil AFIS

With its technology, DERMALOG Civil AFIS provides a crucial contribution to fraud prevention. Anybody who is trying to register for the same institution with multiple personalities can be identified through their fingerprints and therefore multiple enrolments can be prevented.



In order to achieve reliable results, DERMALOG puts highest priority on the continuous improvement of its core product: the algorithm to identify fingerprints (duplicates) in large scale biometric database. The DERMALOG AFIS is unbeaten in **performance** of fingerprint matching, without any loss of **accuracy**.



In addition, DERMALOG Civil AFIS reliably traces duplicates and "ghosts" in connection with driver's licenses, passports, gun licenses, voters registration of persons entitled to vote, payment of pensions, localization of alimony payment deniers, etc.

Civil AFIS for:

Biometric Documents	Civil Services	Border Management
<ul style="list-style-type: none"> • National ID Cards • ePassports • Driver's licenses • Seafarers' Cards • Civil Servants' Cards • Weapons Licenses • Health Insurance Cards • Armed Forces ID Cards 	<ul style="list-style-type: none"> • Anti-Drug Agencies • Tax Agencies • Social Welfare • Pension Funds • Elections • Anti-Corruption Agencies • National Registration • Pilgrim Registration 	<ul style="list-style-type: none"> • Border Control • Biometric Gate • Visa Management • Foreigner ID Cards



Effective Crime Solving: The DERMALOG Criminal AFIS

The DERMALOG Criminal AFIS – employed by police departments, federal police, intelligence services as well as military and judicial authorities all over the world – provides comprehensive support for the investigation of crimes and thus consequently for protecting society.

The use of fingerprint identification (dactyloscopy) and the corresponding biometric application (AFIS) is sanctioned by legal systems throughout the world. Therefore, the Criminal AFIS can be applied to convict criminals solely based on identified fingerprints found at a crime scene. In many countries this requires that at least 12 minutiae can be identified.

DERMALOG actively participates in numerous advisory committees of police organizations worldwide. The results of this work constantly contribute to the advancement of the DERMALOG AFIS and ensure that it remains a cutting edge product and will always be best suitable for a wide variety of different fields of application.



Product Features	Coverage
<ul style="list-style-type: none">• State of the art Card Scan Application for conversion of fingerprint slips/cards as well as palmprints from paper• Live Scan Application for capture of finger- and palmprints, photo and signature• Automatic Image Processing for quality control of the captured prints• Forensic Workstation for editing and visualenhancement of latent finger- and palmprints• Verification Application for managing biometric and demographic data with easy to handle candidate list• Crime History/Case Management• Reporting and Statistics• Print Application (e.g. Certificate of Good Conduct)	<ul style="list-style-type: none">• Central Police and Regional Police Forces• Prisons• Special Security Forces



Technical Specifications

- **Hardware Platforms** Only COTS hardware is used. No proprietary hardware is required.
- **AFIS Workstation** Standard PCs and laptops.
- **Operating Systems** Microsoft Windows, Linux, AIX, Solaris.
- **Database** Standard RDBMS, e. g. Oracle
- **Software** DERMALOG AFIS workstation software packages with customizable workflows.
DERMALOG AFIS server software packages with customizable workflows, interfaces and database.
- **System Design** Modular and upgradeable, with local and remote stations.
- **Document Scanner** Standard flatbed scanners with TWAIN interface (ADF supported).
- **Live Scanners** Various devices are available with optical scanning and chip reading features (PC-connected or network connected); live scanners for palmprints are supported as well. The DERMALOG fingerprint scanners support Spoof Detection.
 - 8-bit gray scale image (256 colors).
 - Image resolution between 200 DPI and 2500 DPI. A minimum of 500 DPI is recommended.
 - Image dimensions between 96 and 5000 pixels both in x and y direction.
- **Fingerprint / Palmprint Images**
- **Template Formats** ANSI/INCITS 378:2004, ISO/IEC 19794 family (ISO/IEC 19794-1:2005, ISO/IEC 19794-2:2005, ISO/IEC 19794-4:2005, ISO/IEC 19794-5:2005, ISO/IEC 19794-6:2005), Minex MIN:A
- **Image compression** WSQ fingerprint compression standards set by FBI and conforming to NIST standards for fingerprint data exchange. As such, the DERMALOG system is open for future image and data exchange platforms with any other AFIS, as well as JPEG, and JPEG2000.
- **Common Biometrics Exchange Formats Framework (CBEFF)** ANSI/INCITS 398, Common Biometric Exchange Formats Framework (CBEFF).
- **Interoperability** ANSI/NIST-ITL 1-2007 and ANSI/NIST-ITL 2-2008 with FBI EBTS 8.1, Interpol INT-I version 5, Prüm (2008/615/JHA)
- **Adaptability** The DERMALOG transformation engine is the part of AFIS, which is responsible for translation of incoming and outgoing AFIS transactions. It is based on modules making it easy to extend the existing system to future standards. Hence, the DERMALOG system is open for future image and data exchange platforms with any other AFIS.
- **Other supported standards** ILO-SID-0002
- **Template Size** 256 Bytes up to 4 kBytes, depending on the application.
- **Matching Algorithm** Combines four features:
 - Shape
 - Global similarity checks
 - Local similarity checks
 - Heuristics to increase matching speedIt is completely invariant against arbitrary rotation or translation of compared fingerprints, very fast, accurate and robust against noise.
- **Matching** 1:N (one-to-many, identification) search with a matching rate of over 129 mio matches/sec on one standard 12 core server, 1:1 (one-to-one, verification) search integrated.
- **Types of Searches** All variants of tenprint (TP), palmprint (PP) and latent prints (LP): TP-TP, TP-UL or PP-ULP LT-TP, LT-UL, LP-ULP, or LP-PP Any combination (e.g. 2 fingers ; 4 fingers) is supported.
- **Matching Results** Results list/hit list with split-screen view and results printout, hit list adjustable.
- **Storage Capacity** Unlimited, depending on specific hardware configuration.
- **Mugshots/ Photographs** Fully integrated according to ISO/IEC 19794-5.
- **Personal/ Criminal Data** Fully integrated/ easy to interface with existing database.



DERMALOG



Head-Office:

DERMALOG Identification Systems GmbH

Mittelweg 120 • 20148 Hamburg • Germany
Tel. +49-40-41 32 27-0 • Fax +49-40-41 32 27 89
e-mail: info@dermalog.com
internet: <http://www.dermalog.com>