

RESEARCH



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ANALYSIS

# SecureMetric Technology

# SecuGen Fingerprint Reader

# **Fingerprint** Identification

Humans have been using biometrics for identification since the Stone Age. Historians believe that finger and hand prints alongside cave paintings were used as the artist's signature. The modern concept of using fingerprint as a unique identifier started in the 19th century when Sir Willam Herschel used handprints on the backside of his workers contracts.

The ridges on fingers start forming when we are in our mother's womb.

0011110100 1010010010100 101110011011101 01001111010011

0100100101001 001101

A Minutiae is a major feature of a fingerprint. It uses to compare one print with another to identify the print of a specific person.



A finger print is unique per individual. No one can have the same fingerprint





















Ending Ridge Short Ridge Enclosure

Fork or or Island Bifurcation

Hook

Specialty Eye

Bridge Crossover

# Smart Capture™

It is a Self-Adjusting-Fingerprint-Brightness technology that ensures quality fingerprint scanning of different kind of fingers may it be dirty, scarred or anything difficult to scan.

By automatically adjusting the brightness of the sensor, Smart Capture allows the fingerprint reader to capture high quality fingerprints from a wide range of difficult fingers such as dry, wet, scarred, aged skin or even in bright ambient conditions like being under direct sunlight.

# Auto-On™?

Auto-On allows the sensor to automatically detect the presence of a finger on the reader. With this, it would be easy and faster to identify yourself in the scanner making biometrics even more convenient to use.









Durable

Maintenance

Accurate

Cost effective





# SecuGen Hamster™ Series



## Hamster<sup>™</sup> Pro 20

SecuGen Hamsters are the industry's most accurate, rugged, and affordable USB fingerprint readers. These high-performance, versatile readers feature advanced optical sensors engineered with patent-pending technology to give you the highest quality in fingerprint biometrics.

Interface: USB 1.1 Full-Speed, USB 2.0 Hi-Speed Supported Operating Systems: Windows, Windows Server, Java, Linux, Android 3.1 and above Image Resolution: 500 DPI Image Grayscale: 256 levels (8-bit) Fingerprint Capture Speed: 0.2 ~ 0.5 sec with Smart Capture Supported Standards: ANSI INCITS 378, BioAPI, FIPS 201 and FAP 20 (PIV-071006), ISO/IEC 19794-2, ISO/IEC 19794-4, SP 800-76 Compliance: FCC, CE, RoHS, FBI, GSA FIPS 201 APL, STQC, IP65

# Hamster<sup>™</sup> Pro Duo/CL

SecuGen Hamster Pro Duo/CL is suitable for any contactless smart card application where dual factor authentication is needed for higher security without sacrificing convenience. Featuring a sleek, ergonomic design, the Hamster Pro Duo/CL is built with the industry's most rugged and advanced optical sensor using patented and patent-pending fingerprint technology.

Interface: Hi-Speed USB 2.0 (fingerprint reader), USB 2.0 Full-Speed (card reader) Supported Operating Systems: Windows, Windows Server, Java, Linux, Android 3.1 and above Image Resolution: 500 DPI Image Grayscale: 256 levels (8-bit) Fingerprint Capture Speed: 0.2 ~ 0.5 sec with Smart Capture Supported Standards: FIPS 201 (HSPD-12), FBI PIV-071006 & Mobile ID FAP 20, INCITS 378, BioAPI, ISO/IEC 19794-2, ISO/IEC 19794-4 Compliance: ISO 18092, ISO 14443, ISO 7816, PC/SC, CCID, LASCOM, EN60950/IEC60950, VCCI, MIC, KC



# BENEFITS



#### Convenient and Interactive

Reduced password reset requests, decreased risk of security breaches and improved accountability; all in a convenient and intuitive method for almost any user.



#### Consistent

Provides consistent performance and security for a growing number of applications while supporting a wide range of operating systems, computing environments and international biometric standards



#### **User Friendly**

User friendly application to install and use that acts as your password but can't be lost, stolen or forgotten.



#### Guarantee

Being backed by the industry's best quality and over a decade of field use and proven performance under extreme conditions; this helps avoid the cost and inconvenience of replacing damaged units







### Hamster™ Plus

SecuGen's popular and versatile fingerprint reader, with Auto-On™ and Smart Capture™. SecuGen Hamster Plus can be used for authentication, identification and verification functions that let your fingerprints act like digital passwords that cannot be lost, forgotten or stolen.

Interface: USB 1.1 Full-Speed, USB 2.0 Hi-Speed Supported Operating Systems: Windows, Windows CE, Windows Server, Android, Java, Linux Image Resolution: 500 DPI Image Grayscale: 256 levels (8-bit) Fingerprint Capture Speed: 0.2 ~ 0.5 seconds with Smart Capture Supported Standards: ANSI INCITS 378, BioAPI, FIPS 201, ISO/IEC 19794-2, ISO/IEC 19794-4 Compliance: FCC, CE, RoHS

### Hamster™ IV

SecuGen Hamster IV works together with SecuGen's MINEX Certified Template Generator and Matcher to develop PIV-Compliant biometric applications. The MINEX Certified Template Generator and Matcher are available in a variety of SecuGen SDKs .

Interface: USB 1.1 Full-Speed, USB 2.0 Hi-Speed Supported Operating Systems: Windows, Windows Server, Android (HSDU04P only), Java, Linux Image Resolution: 508 DPI Image Grayscale: 256 levels (8-bit) Fingerprint Capture Speed: 0.2 ~ 0.8 sec with Smart Capture (HSDU04P), 0.4 ~ 1.2 sec with Smart Capture (HFDU04) Supported Standards: ANSI INCITS 378, BioAPI, FIPS 201, ISO/IEC 19794-2, ISO/IEC 19794-4, SP 800-76 Compliance: FCC, CE, RoHS, FBI PIV Single Finger, STQC for UID, GSA FIPS 201 APL



FEATURES HIGHLIGHT	PRO 20	PRO DUO/CL	PLUS	IV
Auto-On™	•	•	•	•
Smart Capture™	•	•	•	•
Accurate and Patented Optical Usb Fingerprint Sensor	•	•	•	•
Compact And Ergonomic Design Works With Any Finger Or Thumb	•	•	•	•
Integrated Finger Guide And Removable Weighted Stand			•	•
Scratch, Impact, Corrosion and Electrostatic Shock Resistant Glass Platen	•	•	•	•
CCID compliant smart card reader with built-in antenna for NFC tag access, USB firmware upgradability, and SAM (Secure Access Module) slot for high level of security in contactless applications		•		





## SecuGen iD Series



# iD-USB SC/PIV™

A combination fingerprint reader and smart card reader housed in a ready-to-use USB device suitable for FIPS 201-compliant / PIV / dual-factor authentication applications. The iD-USB SC incorporates SecuGen's ruggedized, high image quality SDU04P™ fingerprint optic module together with a PC/SC smart card reader.



### iD-USB SC™

A combination fingerprint reader and smart card reader housed in a ready-to-use USB device suitable for dual-factor authentication applications. The iD-USB SC incorporates SecuGen's ruggedized, high image quality SDU03P ™ fingerprint optic module together with a PC/SC smart card reader.



#### iD-SERIAL™

The iD-SERIAL has an RS-232 interface and uses an RI-22 modular jack for flexibility maximum configurations. The serial interface supports communication speeds up to 460800 BPS. Integration of the SecuGen iD-SERIAL into any application is facilitated by the iD-SERIAL Developer's Kit, which is sold separately.

# **OEM Modules**

SecuGen fingerprint sensor modules are used around the world by Original Equipment Manufacturers (OEM) and developers for integration with a variety of security, access control, time & attendance, ATM, kiosk, PC peripherals and many other products. They all feature SecuGen's patented SEIR™ optic module that produces high-contrast, low-distortion, high-quality fingerprint images for biometric authentication.



**FBI Certified** 





#### **KUALA LUMPUR (HQ)**

SecureMetric Technology Sdn. Bhd. Level 5-E-6, Enterprise 4, Technology Park Malaysia, Lebuhraya Sg Besi-Puchong, Bukit Jalil, 57000 Kuala Lumpur, Malaysia T+603 8996 8225 F+603 8996 7225

SecureMetric Technology Pte. Ltd. 105, Cecil Street, #06-01, The Octagon, Singapore 069534 T +65 6827 4451 F +65 6827 9601

PT SecureMetric Technology Komp. Ruko ITC Roxy Mas, Block C2, No. 42, Jl. KH. Hasyim Ashari, 10150 Jakarta, Indonesia T +62 21 6386 1282 F +62 21 6386 1283

#### MANILA

SecureMetric Technology, Inc. Unit 7D, Athenaeum Building, 160 L.P Leviste St. Salcedo Village, Makati City 1227, Philippines T +63 2 776 6003 +63 2 267 6797 M +63 923 873 9046

SecureMetric Technology Co., Ltd 203B, TDL Office Building, No. 22, Lang Ha Street, Dong Da District, Hanoi, Vietnam T +84 4 3776 5410 F +84 4 3776 5416

#### HO CHI MINH CITY

SecureMetric Technology Co., Ltd L14-08B, 14th floor, Vincom Tower, 72 Le Thanh Ton, Ben Thanh Ward, District 1, Ho Chi Minh City, Vietnam T +84 8 6287 8544 F +84 8 6268 8188

#### YANGON

(Sales Representative Office) 3rd Floor, Building (8), Junction Square, Pyay Road, Kamaryut Township, Yangon, Myanmar T +951 2304155 F +951 2304155













sales@securemetric.com www.securemetric.com