



User Manual

XU20ASCL Datasheet

Hamster Pro Trio

Thank you for your interest in SecuGen fingerprint technology. We focus all our efforts on creating the highest possible quality in fingerprint sensor technology at an affordable price. We hope that this product meets your requirements, and we welcome your feedback.

Table of Contents

1. General Description	2
2. Technical Specifications.....	3
3. Dimensions.....	5
4. Ordering Information	6

Copyright © SecuGen Corporation. All rights reserved. SecuGen and Smart Capture are trademarks or registered trademarks of SecuGen Corporation in the United States and other countries. All other marks may be the property of their respective owners. Information in the document is subject to change at any time without prior notice.

XU20ASCL Datasheet

1. General Description

Hamster Pro Trio is a combination fingerprint reader and smart card reader that supports the USB (Universal Serial Bus) 2.0 interface, utilizes the Plug & Play architecture, and is hot swappable. The Hamster Pro Trio is RoHS compliant and is compatible with the Hamster Pro 20™ fingerprint reader (model HU20-A) with regard to fingerprint functionality. The smart card reader in the device is 100% compatible with the Identiv CLOUD 2100R smart card reader.

Key Features

- Auto-On™ Automatic Finger Detection
- Smart Capture™
- USB 2.0 compliant
- FBI FIPS 201, PIV and FAP 20 Mobile compliant fingerprint sensor
- USB bus-powered device
- Device drivers and fingerprint SDKs available for most popular operating systems (Windows, Linux, Android)
- ISO 7816 & EMV Level 1 compliant smart card reader
- ISO/IEC 18092 NFC, ISO 14443 Type A & B, MIFARE, FeliCa compliant contactless card reader
- PC/SC and CCID compliant card reader

Possible Applications

- PIV (Personal Identity Verification) and CAC (Common Access Card) Applications
- Physical and Logical Access Control
- Time and Attendance



XU20ASCL Datasheet

2. Technical Specifications

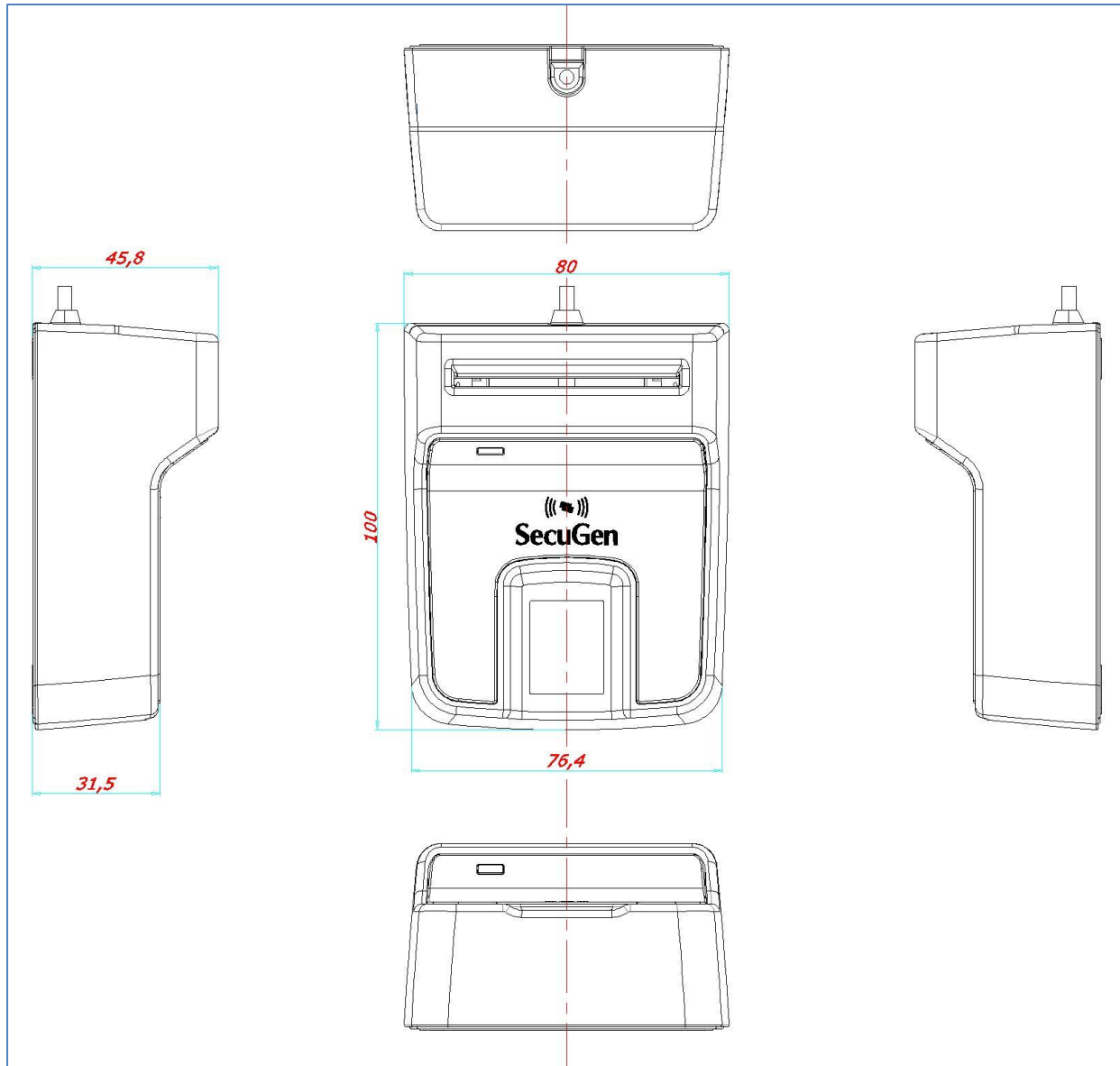
General	
Dimensions	80 mm (W) x 100 mm (L) x 45.5 (H) mm
Operating Temp. / Humidity	0°C ~ 55°C / 90% RH (max., non-condensing)
Weight	185 g
Supply Voltage	5.0V DC $\pm$ 5% via USB connection
Current Consumption	300mA (max.)
USB Interface	12.0 Full-Speed, 2.0 Hi-Speed (fingerprint reader only)
Certifications/Environmental	FCC, CE, RoHS, Microsoft WHQL, FIPS 201
Operating Systems Supported	Windows 11 / 10 / 8.1 / 8 / 7, Windows Server 2016 / 2012 / 2008 R2, Android 3.1+, Linux
Fingerprint Reader	
Model	SecuGen® U20-A™ Optical Fingerprint Reader
Image Resolution	500 PPI
Image Size	300 x 400 pixels
Effective Sensing Area	15.24 mm x 20.32 mm
Image Grayscale	256 levels (8-bit)
Light Source / Typical Lifetime	LED / 60,000 hours
Fingerprint Capture Time	0.2 ~ 0.5 second with Smart Capture™
Contactless Smart Card Reader	
Model	Compact Contactless Smart Card Reader
Standards	ISO/IEC 18092, ISO/IEC 14443 Type A & B, ISO/IEC 15693
Protocols	T=CL (translated to T=1 for PC/SC compliance)
Operating Frequency	13.56 MHz
Reading Distance	Up to 50 mm (depending on tag type)
Smart Card Read/Write Speed	Up to 848 kbps
Supported Card Types	ISO/IEC 14443-4 Type A & B Cards, ISO/IEC 15693-3 Cards, MIFARE series, FeliCa, Calypso, NFC Tags
SAM Card Interface	ISO/IEC 7816, T=0, T=1 protocols
Supported APIs	PC/SC
Compliance	ISO/IEC 18092, ISO/IEC 14443, ISO/IEC 15693, ISO/IEC 7816, USB 2.0 Full Speed, CCID

XU20ASCL Datasheet

Contact Smart Card Reader	
Model	Contact Smart Card Reader
General	Self-clocking internal oscillator, no external oscillator required 5.0 V supply input with built-in voltage regulator Internal voltage supervisor for 4.8V Low power consumption Small size QFN-16 package Status LED
Processor	9X 80C51 processor @ 16MHz. OTP (One time programmable) ROM
USB	12 Mbps USB Operation Compliant to the USB 2.0 Specification Integrated USB 1.5K pull-up resistor USB TID number: TID 40001362 Number of pipes used: 4 (control, Bulk-in, Bulk-out and Interrupt) CCID compliant firmware Supports Remote Wake-up Capability for card insertion/removal
Smart Card	Fully Compliant with ISO/IEC 7816, EMV, and PC/SC Standards Full Support of both T=0 and T=1 protocols Supports Class A, Class B, Class C Short circuit protection on smart card section Maximum smart card clock frequency: 4.8Mhz Maximum baud rate: 600Kbps @FI/DI-97
Certifications	EMV 2008 Level 1, UL 60950, USB IF, UL92, GSA, ANZ, ICES-003 Issue 4, VCCI

XU20ASCL Datasheet

3. Dimensions



Dimensions (mm)

XU20ASCL Datasheet

4. Ordering Information

Product	Part Number	Description
Hamster Pro Trio (XU20ASCL)	EA4-0522ASCL	Integral USB fingerprint reader and smart card device assembly, including U20-A optical fingerprint module and USB cable
Cable options	Suffix:	
	NC	Unit without USB cable
	S	Unit with short USB cable
	M	Unit with micro USB cable
	MS	Unit with short micro USB cable
	C	Unit with type C USB cable
	SC	Unit with short type C USB cable

SecuGen Corporation

2065 Martin Avenue, Suite 102, Santa Clara, CA 95050, USA

Tel: +1 (408) 727-7787

SecuGen Korea (manufacturing company)

#506 Jungwoo venture town 1cha, 8, Haebong-ro 330beon-gil, Danwon-gu, Ansan-city,

Gyeonggi-do, South Korea, 15425.

Tel: +82) 70-7762-5309

XU20ASCL Datasheet

FCC Compliance Statement

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: This equipment complies its antenna must not be co-located or operation in conjunction with any other antenna or transmitter.

NOTE: The SecuGen Corporation is NOT responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

This equipment complies with FCC RF exposure requirements set forth in an uncontrolled environment and can be used without any restriction.