

Simprints Vero

Single digit optical scanner

Technical Data Sheet

Version 1.0

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This document is subject to change without notice.

General inquiries

info@simprints.com 

Simprints 

The Chesterton Tower

Chapel Street

Cambridge, UK

CB4 1DZ

www.simprints.com



Product Description

Vero is a compact, rugged, and mobile biometric fingerprint reader that captures and processes single fingerprint images.

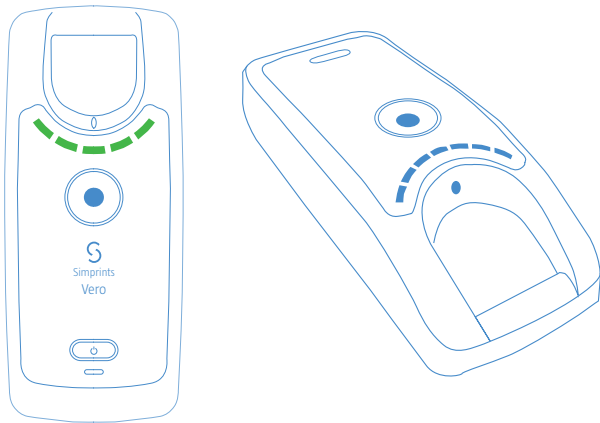
The Simprints Vero biometric fingerprint reader was developed for use in the world's toughest environments. It is FBI certified, IP65 compliant, shock resistant, and exceptionally easy to use.

Vero uses advanced patented optical methods to provide clear, distortion-free fingerprint images. Excellent image quality translates to higher quality templates and better biometric identification.

Smart Capture ensures high quality imaging in very bright conditions and even captures fingerprints from moist, worn, or scarred fingers that are traditionally difficult to scan.

Vero connects to a controlling device, typically an Android phone, via wireless Bluetooth connection. It securely transfers fingerprint templates, quality scores, and status information to the device after each scan.

Its ergonomic design has undergone thousands of hours of field testing, optimised to ensure ease of use in even the toughest environments.

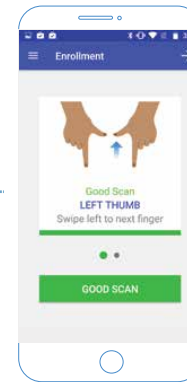


Typical Implementation

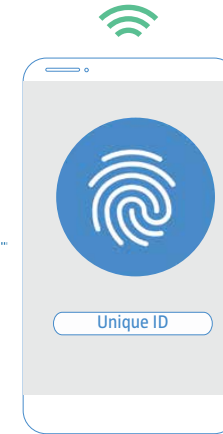
A typical system implementation
will deploy an Android mobile
device App that:



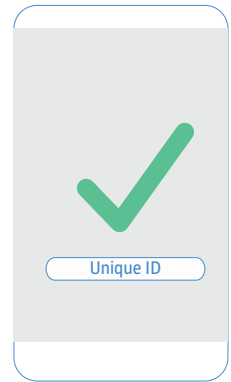
Connects to Vero
over Bluetooth



Communicates with the
Vero Firmware API to
control the fingerprint
scanner



Reads back extracted
fingerprint templates for
identification or verification





Features & Specifications

Operating Conditions

| | |
|-------------------------|--|
| Drop / shock resistance | 1.2 meter drop test onto concrete five times |
| Operating temperature | 0°C ~ 45°C |
| Charging temperature | -5°C ~60°C |
| Storage temperature | -20°C ~60°C |
| IP Rating | 65 |
| Dustproof | No ingress of dust; complete protection against contact (dust tight) |
| Water resistance | No harmful effects from water projected by nozzle (6.3 mm) at 12.5 litres per minute and 30kPa at a distance of 3m |
| Operating Humidity | 90% or less RH non-condensing |

Power

| | |
|------------------------------|---|
| Battery Type | Lithium ION; Protected |
| Battery Capacity | 3.7 Volts, 1050mAH |
| Battery Recharge time | 4 hours |
| Battery Certification | UN38.8 approval for transportation by air |
| Battery life; Idle | 24 hours |
| Battery life; with 200 scans | 14 hours |
| Battery life 4000 scans | 4.5 hours / 500mAH max |
| Charging Socket | Micro USB |

Image Capture

| | |
|------------------------|---------------------|
| Image resolution | 500 DPI |
| Image size | 300 x 400 pixels |
| Effective sensing area | 15.24 mm x 20.32 mm |

Biometric Conformance/ Certification

| | |
|--|--|
| Biometric data interchange formats | IEC 19794-2 / INCITS 378-2004 / NIST SP 800-76 |
| FBI Certified | PIV Single Finger / Mobile ID FAP 20 |
| Personal Verification (PIV single finger) | NIST FIPS 201 |
| Fingerprint Acquisition Profile | FAP 20 / PIV-071006 / 0.6 x 0.8 |

Vero Specification

| | |
|---------------------------|---------------------------------|
| Bluetooth | Version 2.1 |
| Bluetooth frequency | 2.4GHz |
| Weight | 105 grams |
| Dimensions (L x W x D) mm | 108 x 46 x 41 |
| Case | Plastic ABS UN94: VOfire rating |
| Keymat | Silicon Rubber |
| Finger Strap | Silicon Rubber |

Controls

| | |
|---------|-------------|
| ON/ OFF | Push button |
| Select | Push button |

Features & Specifications





Features & Specifications

Indicators

| | |
|-------------------------|---|
| Progress LEDs 5 Off | Bi-Colour RED/GREEN LEDs GREEN Success / RED Fail |
| Bluetooth LED | BLUE (Flashing not connected / Solid connected) |
| Power LED Charging | Flashing GREEN |
| Power LED Charged | Solid GREEN |
| Power LED Low Battery | RED |

Hardware Approvals

| | |
|--------------------------------------|----------------|
| CE Safety approval | EN62368-1 |
| CE EMC approval | EN61326-1:2013 |
| FCC US EMC approval | CFR 47 Pt 15 B |
| Vero On Chip maximum clock frequency | 480MHz |

Firmware API

| | |
|---------------------------------|--|
| Environment | RTOS with Watchdog functionality |
| Fingerprint Template Generation | ISO19794-2 |
| Boot-up speed | 5 seconds |
| Image capture speed | 1.2 seconds |
| Image extraction speed | 0.8 seconds |
| Bluetooth speed | 1Mbit per second |
| Provides | Quality score in addition to template and status information |