simprints
every person counts

Simprints Vero

Single digit optical scanner
Technical Data Sheet

Version 2.0
Date: 5th Oct 2020

General inquiries

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Product Description

Vero is a compact, rugged, and mobile biometric fingerprint reader that captures and processes single fingerprint images.
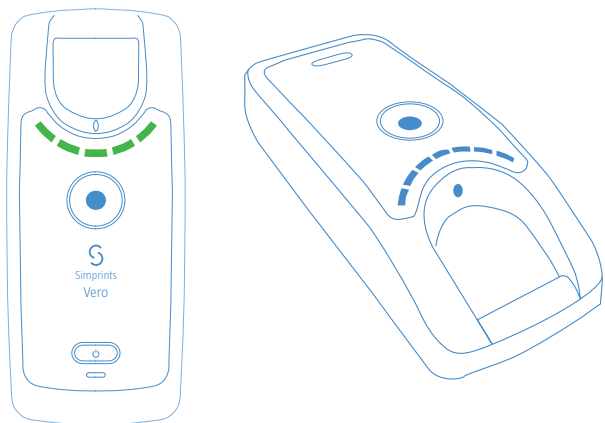
The Simprints Vero biometric fingerprint reader is developed for use in the world's toughest environments. It is FBI certified, IP65 compliant, shock resistant, and exceptionally easy to use.

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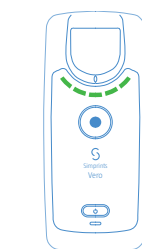
Vero connects to a controlling device, typically an Android phone, via wireless Bluetooth connection. It securely transfers fingerprint templates and images (if needed), quality scores, and status information to the device after each scan.

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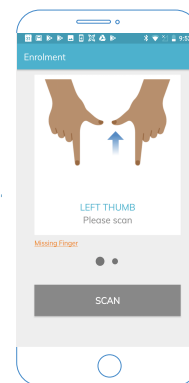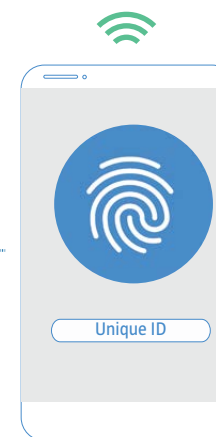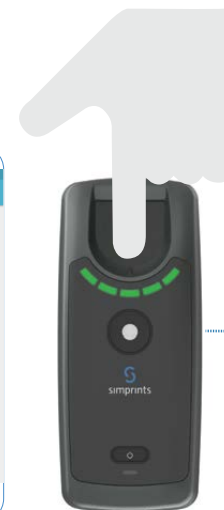
Typical Implementation

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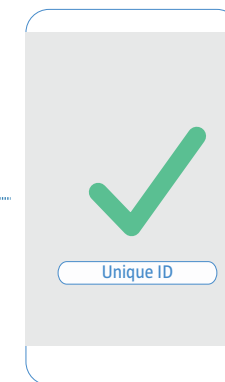
hjbn

Connects to Vero over Bluetooth

Communicates with the Vero Firmware API to control the fingerprint scanner

Unique ID

Reads back extracted fingerprint templates for identification or verification

Unique ID

Features & Specifications

Operating Conditions

Drop / shock resistance	1.2 Meter drop test onto Concrete five times
Operating temperature	0°C ~ 45°C
Charging temerature	-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

Features & Specifications

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 Verification (PIV single finger)	NIST FIPS 201
Finngerprint Acquisition Profile	

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

Indicators

Progress LEDs | 5 Off	Bi-Colour RED/GREEN LEDs | GREEN Sucess / 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 additiona to template and status information