Unity™ 20 MOSIP

SecuGen

Unity 20 MOSIP is an L1 fingerprint authentication device built for the MOSIP (Modular Open Source Identity Platform) ecosystem. It captures, encrypts, and digitally signs fingerprint data in one secure device, so national ID and other large-scale identity programs can trust every biometric record from the moment of capture.

Features

- Captures, processes, encrypts, and digitally signs fingerprint data, all within the device
- Accurate, patented optical USB fingerprint sensor with 500 PPI resolution
- Smart Capture™ for high-quality imaging of difficult-to-scan fingers
- Rugged, IP54-rated platen that resists scratches, impact, corrosion, and electrostatic shock, in a water- and dust-resistant, ultra-compact housing
- Automatic device registration and key rotation via SecuGen management software
- Supports Windows, Android and Linux



FBI Certified

Compliance

- MOSIP L1 Certified and Compliant Authentication Device
- FIPS 140-3 Level 3 Compliant Foundational Trust Module (FTM)
- FBI-Certified image quality: captures clear, standards-grade fingerprints (FIPS 201/PIV, Mobile ID FAP 20)

A Trusted Biometric Device Built for the MOSIP Ecosystem

Smart Biometric Device

The Unity 20 MOSIP is engineered to meet MOSIP's open standards, so every fingerprint scan is authentic, verifiable, and encrypted the instant it is taken. A dedicated security chip inside the device anchors those protections in hardware rather than in software.

Why MOSIP Compliance Matters

MOSIP sets the rules for how identity data is handled, protected, and exchanged. Because this device is certified to meet those rules, every fingerprint record it sends works with any MOSIP system. That means no custom integration, no proprietary lock-in, and no dependence on a single vendor.

Built for Real-World Conditions

Identity authentication happens wherever transactions take place—at a bank, a government counter, or a busy retail checkout. The Unity 20 MOSIP's rugged, IP54-rated design delivers consistent, accurate scans in heat, dust, humidity, and heavy use.

What the Device Delivers

- Standards-aligned fingerprint imaging
- Encryption and signing performed inside the device
- Digitally signed records that MOSIP services verify end-to-end
- Direct interoperability with MOSIP authentication clients, device services, and management servers.

How It Fits in the MOSIP Ecosystem

The Unity 20 MOSIP is the secure entry point to MOSIP's modular identity platform. It reads the fingerprint, packages it as a signed, encrypted record, and passes that record to the MOSIP authentication services that confirm the person's identity—the same way, every time, across government and private services.

Typical Applications

- National ID & e-Government systems
- Large-scale digital identity programs
- Elections (voter identity verification)
- Social benefits & financial inclusion
- Secure authentication infrastructure

Specifications

Product Name	Unity 20 MOSIP
Model	HU20-ASF-USM
Fingerprint Sensor	U20-A
Image Resolution	500 PPI
Image Size	300 x 400 pixels
Platen Size	18.2 mm x 23.1 mm
Effective Sensing Area	15.24 mm x 20.32 mm
Image Gray Scale	256 levels (8-bit)
Light Source	LED
Typical Lifetime	60,000 hours
Smart Capture Speed	~0.5 seconds
Fingerprint Format	ISO/IEC 19794-4:2011
Security	FIPS 140-3 Level 3 FTM chip, MOSIP SBI 2.0
Features	Smart Capture, 360 Degree Fingerprint Rotation
Biometric Standards/Specs	FIPS 201, FBI PIV & Mobile ID FAP 20, NIST MINEX, WSQ
Dimensions	53.9 x 58.5 x 31.9 mm
Weight	97 g
Cable Length	1500 mm
Operating Temperature	-20° ~ 65°C
Operating Humidity	90% noncondensing, max
External Interface	USB 2.0 compatible
Supply Voltage	5 V DC (via USB)
Max Current	180 mA
Water/Dust Resistance	IP54 rated
Compliance/Certification	FCC, CE, KC, RoHS3, CB, WEEE, USB 2.0 compatible
Warranty	One year limited
Supported OS	Windows, Android, Linux

Inside the Unity 20 MOSIP: Trusted Security

At the core of the Unity 20 MOSIP is a Foundational Trust Module (FTM), a secure chip that keeps biometric data and cryptographic keys safe from both physical and digital tampering, so citizen identities stay protected from end to end.

FIPS 140-3 Level 3 secure chip for high-assurance protection.

Secure key storage held in a protected hardware boundary resistant to cloning and physical access.

Trusted execution environment keeps biometric processing isolated and verifiably authentic.

Secure boot cryptographically verifies code before it runs.

Tamper resistance against power-analysis, timing, and physical-probing attacks.

Forward-only updates prevent firmware downgrade attacks.

Secure provisioning of device keys by HSM in SecuGen's protected manufacturing facility.

SecuGen

Open the World with Your Fingertip!®

MOSIP COMPLIANT

Founded in 1998, SecuGen is a leading provider of advanced optical fingerprint recognition technology for physical and information security. Our high quality biometric sensors have been used all around the world in diverse areas such as finance, health care, law enforcement, education, retail, manufacturing, and government at all levels.

www.secugen.com

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