S-KEY™

Simple. Safe. Secure.

Product Overview & Datasheet

Last Revision: Jan 2023

Overview: S-Key Biometric Access Control Cards

Recent studies have shown that **biometric access is five times more secure than 4-digit pins**, the most common form of two-factor authentication for access control systems. S-Key aids organisations by significantly increasing their physical security levels, without the substantial investment typically required for changing existing infrastructure.
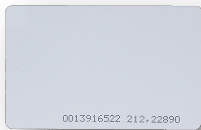
Business & Employee Benefits:

- MIFARE-based solution which works with NFC systems (e.g. HID, Salto, Paxton)
- Seamless integration with existing infrastructure: ISO14443 (NFC) compliant
- Removes risk of biometric data loss from centralised databases
- Elimination of security risk from lost or stolen cards
- Convenient and user-friendly solution

> *"The average total cost of a physical security breach was $3.96 million in 2022."*
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> **IBM Security**   **2022 Report**

Typical Access Control Transaction:

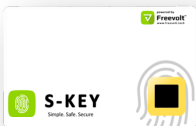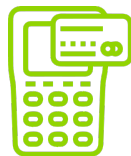| Current Access Control Solutions	Tap your card on the reader at your office, secure area, etc.	If your system requires a pin (not all do), enter 4-digit pin	Access system allows access depending on your permissions
	Tap your card…	**Enter 4-digit pin…**	**Access Granted!**

S-KEY Simple. Safe. Secure **Access Solution**	**Place your finger on the sensor of the card** and tap the reader	Your fingerprint is **verified on the card**	**If the fingerprint matches,** depending on your permissions **access will be granted**
	Tap your card…	**Hold your finger…**	**Access Granted!**

S-Key is easy to use, low cost and [Available to Buy Now]

- **Tighter Control:** maintain 2-Factor Authentication, with additional security layer possible (3FA)

- **Removes Threat from Card Loss:** only named individual can use the card to gain access

- **Scalable & Easy to Adopt:** works with existing access control systems, no changes required

- **No Recharging or Changing Batteries:** it works whenever in the vicinity of an access reader

- **Better Privacy & GDPR Compliance:** fingerprint hashed & stored on the card (never leaves the card)

- **Improved Hygiene:** secure, contactless entry now possible post COVID-19 pandemic

Technical Information

MECHANICAL DATA

Card Material	PVC Plastic
Card Dimensions	85.7 x 54.0 x 0.95 mm
Inlay Substrate Material	Thin film polyimide
Lamination Process	Proprietary cold lamination

ELECTRICAL DATA

Antenna Type	Modified ISO1443 Class 1A
Passive/Active Components	Passive, no on-board power source
Operating Frequency	13.56 MHz
Supported Protocols	NFC ISO 14443A
Power Source	Freevolt Gen3 RFEH
Battery	No, powered by NFC field

FREEVOLT ENERGY HARVESTING

Optimum Output Voltage	2.0 V
Peak Current	64 mA
Communications Range	0 – 75 mm

TESTED CONDITIONS

Environment	Factory/Lab
NFC Reader	HID OmniKey 5427, HID iClass R10
Testing Range	0 – 80 mm
Bend Test	Derived from EMVCo standard
Torsion Test	Derived from EMVCo standard
Water Resistant	Yes

ARTWORK/CUSTOMIZATION

Custom Artwork	Available as part of lamination process, RGB colours supported. MOQs apply
Card Printers Supported	DTC and Retransfer, contact for model information

PRODUCT DIMENSIONS

85.7 mm

54.0 mm

0.95 mm
(Thickness)
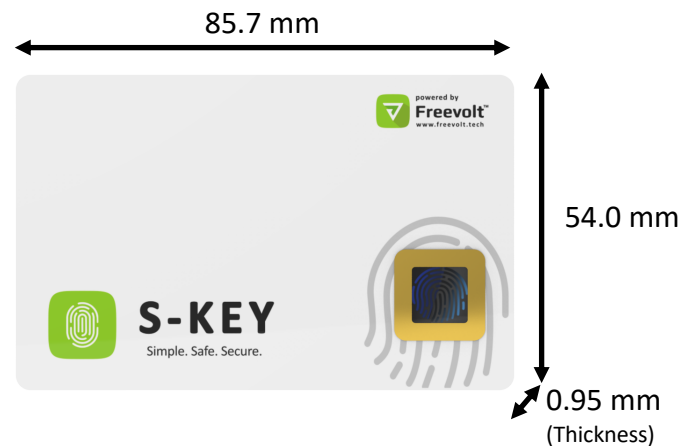
BIOMETRICS STORAGE

Sensor	Fingerprint Cards FPC1321 / 1323
Applications processor	Nordic nRF52
External access to biometric data	None
Enrolment	On-card using NFC source for power
Rewritable	No, single enrolment only *(Re-enrolment coming H2 2023)*

COMMUNICATIONS SUPPORTED

MIFARE Classic	EV1 all sizes
MIFARE DESFire	EV1/2/3 all sizes
LEGIC	ADVANT ATC4096-MP311 V2
HID iClass	Arriving 2023
Other	Secure Elements and other NFC chips on request

CARD HOLDERS

Badge Holders	Works with existing ID card holders