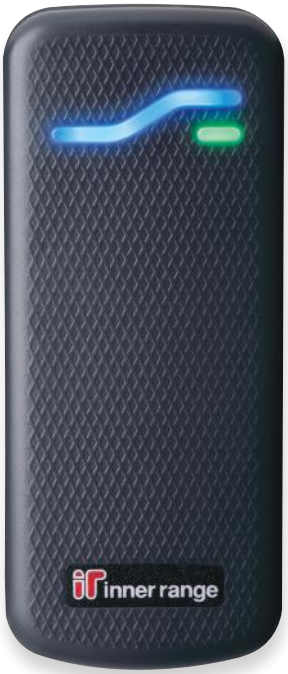
DATA SHEET

SIFER Smart Card Reader

SIFER READER



The SIFER card reader is a Smart Card reader designed and manufactured by Inner Range. It is a multi-drop RS-485 based reader that employs 128 bit AES encryption from the card through to the door module, providing a far superior level of security than that of traditional Wiegand based card readers. SIFER readers utilise the Mifare DESFire© EV1/EV2 card format.

As SIFER readers utilise a superset of the OSDP protocol, the readers may also be deployed on any system capable of using OSDP. SIFER readers are connected to the RS-485 reader port for full Reader-In and Reader-Out operation of various Inner Range products as below.

- Integriti Access Controller (IAC) - Up to 16 Readers
- Integriti Intelligent LAN Access Module (ILAM) - Up to 16 Readers
- Integriti Standard LAN Access Module (SLAM) - Up to 4 Readers

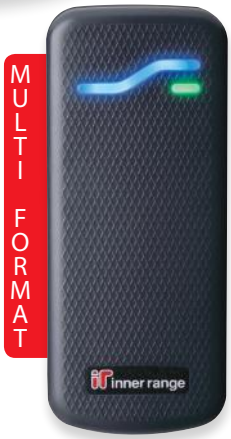
SIFER readers are IP67 rated and available with site-specific encryption keys.

Three card ordering options are available:

1. **SIFER-P:** Pre-programmed 'stock' cards with card number printed. The most cost-effective option but card customisation is not supported. With more than four billion card numbers available each SIFER-P card is guaranteed to be unique.
2. **SIFER-U:** User Programmable cards that allow an installer to customise the card number, site code and use their own encryption key. Printed with factory card number.
3. **SIFER-C:** Custom batch orders configured by the factory according to the specified card number range, site code, encryption key and printing options. Cards cannot be re-programmed at a later stage by the installer or the factory.

Multi-Format Version

The SIFER Multi Format Card reader offers an identical set of features to the Standard SIFER Reader with additional support for reading the CSN of third party 13.56Mhz credentials.



Features

- Secure 128bit AES Encryption
- Encrypted from Card Through to Access Module
- ·Mifare DESFire© EV1/EV2 Card Format
- Water & Dust Resistant to IP67
- Vandal Resistant (fully potted)
- Flexible LED Colour & Function Assignment
- Audible Buzzer (can use as DOTL)
- Multi-drop RS-485 Reader LAN
- Individual Reader Heartbeat Monitoring
- Integriti Auto Reader Discovery
- OSDP Compatible
- Read Card Serial Number (CSN) From 3rd Party Cards (Multi-Format Version Only)
- Support for Custom Site Codes and Site Specific Encryption
- User Programmable Cards Offer Great Flexibility For Installers
- Global Configuration From Integriti Systems (including firmware updates)
- Small Footprint (Dimensions: 39 (W) x 93 (H) x 15 (D) mm)

SIFER Connectivity Guide	SIFER Host Module		
	IAC	SLAM	ILAM
SIFER Reader Qty	16	4	16

A plug-on SIFER Reader board is available for EliteX & PrismaX Keypads. When fitted. SIFER access cards can be presented at the Keypads for card & PIN login or for access control on a local door.

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SIFER Smart Card Reader

Hardware

Specifications

Physical

Reader Size:	93(L) x 39(W) x 15(D) (mm)
Mounting Plate:	91.5(L) x 38(W) (mm)
Mounting Method:	2 x fixing screws for mounting plate
Mounting Holes:	65.5mm hole spacing
Mounting Surface:	Optimised for flat non-metallic surfaces
Cavity Cable Entry Hole:	Up to 20mm
Installation Environment:	-35ºC to 65ºC @15% - 90% relative humidity (non-condensing)
Ingress Protection:	IP67

Reader Protocols

Device Communications:	Open Supervised Device Protocol (OSDP)
Operating Frequency:	13.56 Mhz
Credentials:	Mifare DESFire© EV1/EV2 with AES encryption
Credentials:	Read Card Serial Number (CSN) from 3rd party cards (MF Model Only)

Connections

Pigtail Cable Length:	500mm
Pigtail Extension Cable Type:	2-pair 7/0.20 twisted pair data cable as minimum. 2-pair 14/0.20 multi-strand shielded twisted pair data cable is preferred (e.g. Belden 8723). See installation manual for more info.
Connection Methods:	RS-485 multi-drop star or daisy chain configurations
Total Overall Cable Length:	1000 meters total on one RS-485 reader port guaranteed
Max Readers:	Up to 16 with IAC & ILAM, Up to 4 with SLAM
Compatible Integriti Host Modules:	Standard LAN Access Module (SLAM), Intelligent LAN Access Module (ILAM), Integriti Access Controller (IAC)

Reader Security

Physical Tamper:	Optical beam to mounting surface
Card to Reader:	128bit AES encryption
Reader to Access Module:	128bit AES encryption
Vandal Resistance:	Fully encapsulated vandal resistant electronics

Reader Configuration

LAN Addressing:	Fully automatic when used with Integriti systems Manual addressing with 3rd party OSDP compatible systems
Firmware Updates:	Over-the-wire firmware updates when used with Inner Range systems
Reader Purpose Options:	Control a Door, Control a Lift, Log on, Area status toggle

LED & Beeper Indicators

LED Configuration:	Brightness, Colours & Feedback modes - configurable via Integriti Software
LED 1 & 2 Colour Options:	RGB Indicator 23 colour selectable
Feedback Modes for LED's:	Area Status, Area Alarm/Isolated, Entry/Exit Delay, Door open/locked status, Valid/Invalid card badge, No LED's
Beeper Volume:	Variable - configurable via Integriti software
Beeper Feedback Options:	Valid/Invalid card badge, Door Open tool long (DOTL), Area Alarm, Entry/Exit Delay

Power Requirements

Input:	11-14V DC <500mV ripple
Current Consumption:	75-100mA typical, 150mA MAX with all LED's driven at full brightness

Compliance

Electrical:	CE
Environmental:	RoHS

***SIFER-C cards are programmed with a custom encryption key and will require at least one SIFER Reader Configuration card with the initial batch. The SIFER Reader Configuration Card is available under Part Number 994614CNF*

Ordering Options

994720
SIFER Smart Card Reader

994720MF
SIFER Smart Card Reader - Multi Format Version

Credentials

ISO Cards

994610
SIFER-P DESFire© EV2 4K ISO (Pre-programmed- Printed)

994612
SIFER-U DESFire© EV2 4K ISO (User Programmable - Printed)

994614**
SIFER-C DESFire© EV2 4K ISO (Custom Programmed - Printed)

Key FOB's

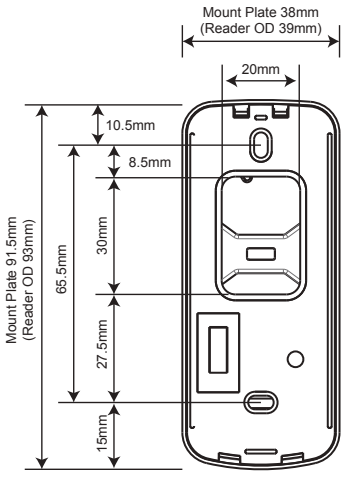
994616
SIFER-P DESFire© EV2 4K FOB (Pre programmed - Printed)

994618
SIFER-U DESFire© EV2 4K FOB (User Programmable - Printed)

994620**
SIFER-C DESFire© EV2 4K FOB (Custom Programmed - Printed)

Management Tools

994750AU SIFER Card Programming Station
994751 SIFER Card Enrollment Station



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