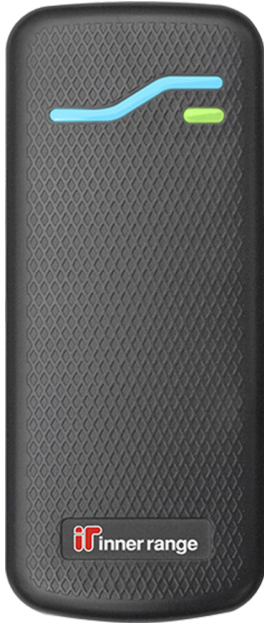


# SIFER Smart Card Reader

An IP based master controller for the Integriti modular hardware system



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 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. Up to 16 SIFER readers may be connected in series to the dedicated RS-485 reader port on the Integriti Intelligent LAN Access Module (ILAM) or the new Integriti Access Controller (IAC) for full Reader-In and Reader-Out operation. Up to 4 SIFER readers may be connected to the Integriti Standard LAN Access Module (SLAM). SIFER readers are IP 67 rated and available with site specific encryption keys.

Three card ordering options are available:

1. SIFER-P: Pre-programmed 'stock' cards. The most cost-effective option but card customisation is not allowed. Card number is printed.
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.

## Key Features

- Secure 128bit AES Encryption
- Encrypted from Card to Access Module
- Mifare DESfire EV1 Card Format
- Water & Dust Resistant to IP67
- Vandal Resistant (fully potted)
- Flexible LED Assignment
- Audible Buzzer (can use as DOTL)
- Multi-drop RS-485 Reader LAN
- Individual Reader Heartbeat Monitoring
- Integriti Auto Reader Discovery
- OSDP Compatible
- Compatible With Inner Range Encrypted SIFER Cards
- Support For Custom Site Codes and Site Specific Encryption
- User Programmable Cards Offer Great Flexibility For Installers
- Global Configuration from Integriti Software (including firmware updates)
- Read-Write Functionality
- Small Footprint (dimensions: 39 (W) x 93 (H) x 15 (D) mm)

## Ordering Options



ISO Cards	
21040	IR Integriti SIFER-P 4K ISO Card Pre-programmed, Printed
21041	IR Integriti SIFER-U 4K ISO Card User Programmable, Printed
21042	IR Integriti SIFER-C 4K ISO Card Custom-Programmed, Printed




FOB's	
21043	IR Integriti SIFER-P 4K FOB Pre-programmed, Printed
21044	IR Integriti SIFER-U 4K FOB User Programmable, Printed
21045	IR Integriti SIFER-C 4K FOB Custom-Programmed, Printed



Management Tools	
21035	IR Integriti SIFER Card Programming Station
21036	IR Integriti SIFER Card Enrolment Station
21037	IR Integriti SIFER-C Reader Config Card

## 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:	-35°C to 65°C @15% - 90% relative humidity (non-condensing)
Ingress Protection:	IP67
Reader Protocols	
Device Communications:	Open Supervised Device Protocol (OSDP)
Operating Frequency:	13.56Mhz
Credentials:	Inner Range SIFER - Mifare DESFire EV1 with AES encryption
Connections	
Pigtail Cable Length:	500mm
Pigtail Cable Extension:	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:	150meters total on one RS-485 reader port guaranteed
Max Readers:	Up to 16 on one RS-485 reader port (4 with Integriti 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 Access Modules Manual addressing with 3rd party OSDP compatible systems
Firmware Updates:	Over-the-wire firmware updates when used with Integriti Access Modules
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:	
Environmental:	