integriti
INTEGRATED SOLUTIONS

Use of OSDP readers on Inner Range access controllers.

Introduction

Initial support for OSDP readers was introduced in Integriti Controller firmware version 4.0.1 and Integriti software version 4.0.3.

For new installations we recommend using Integriti Controller firmware and Integriti software version 18.2 or later.

- IAC minimum firmware requirement v18.1.7
- ILAM minimum firmware requirement v3.1.0
- SLAM minimum firmware requirement v3.1.3

Reader connectivity

It is expected that OSDP readers are configured prior to attaching to the Integriti access modules.

The baud rate of all OSDP readers should be set to 115200.

Decide what level of security to use:

The OSDP Crypt Mode determines the Secure Channel Base Key (SCBK) for each individual module. This option can be set to one of four values:

- Default (OSDP Standard)
  - Most OSDP readers ship pre-configured with this key.
  - The default key value is `303132333435363738393A3B3C3D3E3F`.
- Custom (Inner Range Enhanced)
  - Reserved for use with Inner Range OSDP readers (SIFER).
- None
  - No security. Not recommended.
- User Programmed Key
  - A security key provided by the customer.

OSDP reader wiring should be treated the way an Integriti LAN would as it is a differential bus protocol. Two pair twisted individually shielded cable is recommend (but not required) for installations. Performance may not be optimal when using other cable types. However, existing multicore cables used for legacy wiegand readers may also be suitable for short runs.

OSDP Address Restrictions

OSDP readers should be configured for an address between 0 and the maximum number of OSDP readers supported by the Integriti access modules minus one.

An Integriti Standard LAN Access Module (SLAM) accommodates 2x doors and 4x OSDP readers. Permitted address range is between 0 and 3.

An Integriti Intelligent LAN Access Module (ILAM) accommodates up to 8x doors and 16x OSDP readers. Permitted address range is between 0 and 15.

An Integriti Access Controller (IAC) accommodates up to 8x doors and 16x OSDP readers. Permitted address range is between 0 and 15.

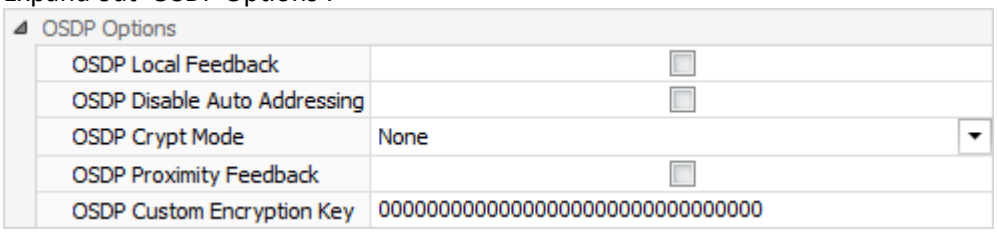
Adding an OSDP reader to a door

When OSDP readers are attached to an Integriti module, the readers that are detected show in review. If the OSDP reader address has been configured in a reader module, the OSDP reader will also come online if the following conditions are met:

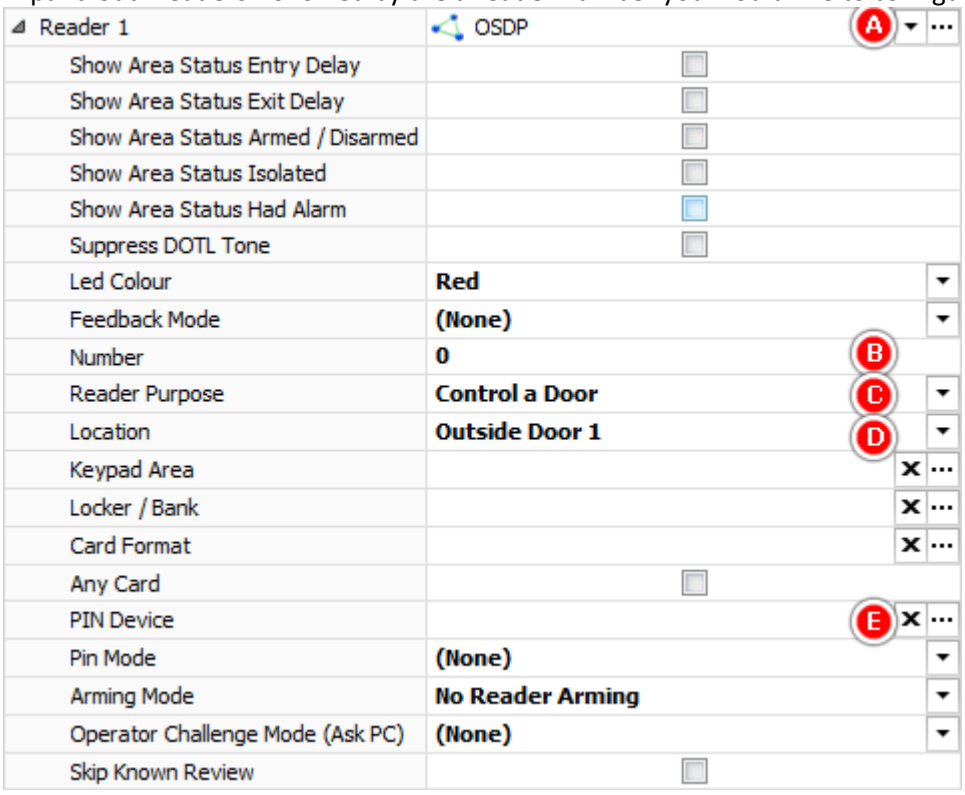
- The total number of OSDP readers supported by the reader has not been exceeded.
- The OSDP address is within the range supported by the access module.
    - SLAM: 0 - 3.
    - ILAM: 0 - 15.
    - IAC: 0 - 15.
- All devices on the same bus have unique addresses.
- None of the reader slots on the same reader module are configured as non-OSDP serial readers (e.g. Salto or Aperio).

Procedure for adding OSDP readers

1. Begin by editing the module that the reader is to attach to. (SLAM, ILAM, IAC).
2. Expand out 'OSDP Options':



3. Change (if required) the OSDP Crypt Mode to suit your requirements. Details on the available options has been described in the section titled 'Reader connectivity'.
    a. If 'User Programmed Key' was selected, enter the Secure Channel Base Key in the OSDP Custom Encryption Key field.
4. Expand out 'Readers' followed by the a reader number you would like to configure:



    a. Change the reader to OSDP.
    b. Enter the readers OSDP address.
    c. Specify the reader purpose (Door or Lift access).
    d. If the reader purpose was set to 'Control a Door', specify the location of the door.
    e. If the reader is a PIN device, select the option 'SIFER / OSDP / Motorola'.
5. Repeat step 4 for the remaining readers.

HID OSDP reader specific configuration requirements.

Regardless of what model you go for, the firmware version must be 8.6.0.4 or above.

If you attach HID OSDP readers to Integriti controllers, the version number reported should appear as 1.139.0 or above. See the example review message below.

```
OSDP device discovered on: Integriti Controller, type: OSDP Reader,
Serial No: 0825767732, Version: 1.139.0, at bus address: 05
```

The following reader models tested for compatibility by Inner Range:

HID iClass SE R10, R15, R30, RA30, R40, RK40, RP10, RP15, RP40 & RPK40.

Many OSDP readers from other manufacturers have been known to work. However, Inner Range has not conducted a comprehensive test of these readers at the time of writing.

Ordering / Part number specifics

When ordering HID OSDP readers, the following configuration options should be set:

- 115200 BAUD
- OSDP V2
- OSDP TAMP ENBLD
- A/V OFF
- 485HDX
- IPM OFF
- UART OFF
- WIEG OFF
- “LED Response on Card Read” should be set to “Off, Host Controlled”
- Disabling CSN reading is advised but not required.

If the readers supplied do not have these options set, configuration cards may be used instead. Configuration cards should be available from your supplier.

Configuring Reader Address

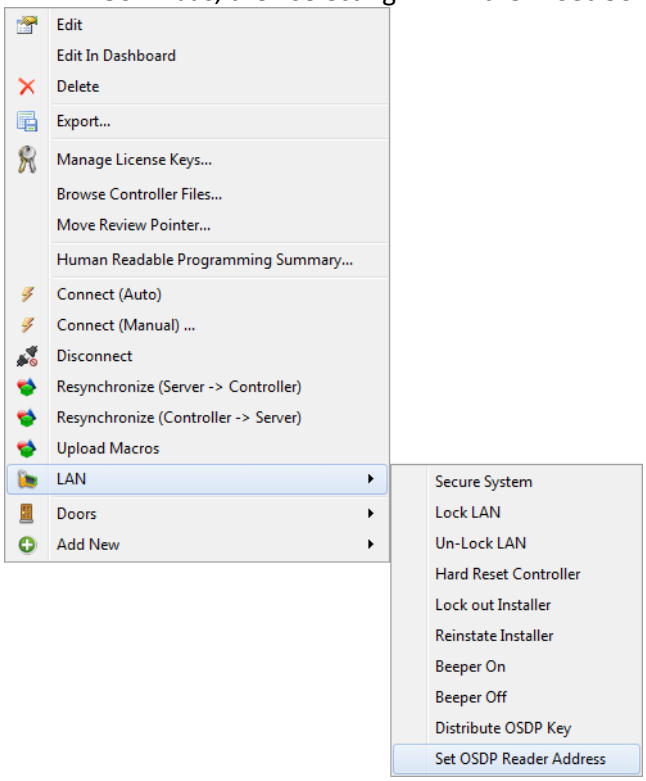
To set the OSDP address for 3rd party readers from the Integriti system requires at least;

- Software V18.2.0
- Controller firmware V18.2.0
- ILAM firmware V3.2.0
- SLAM firmware V3.2.0

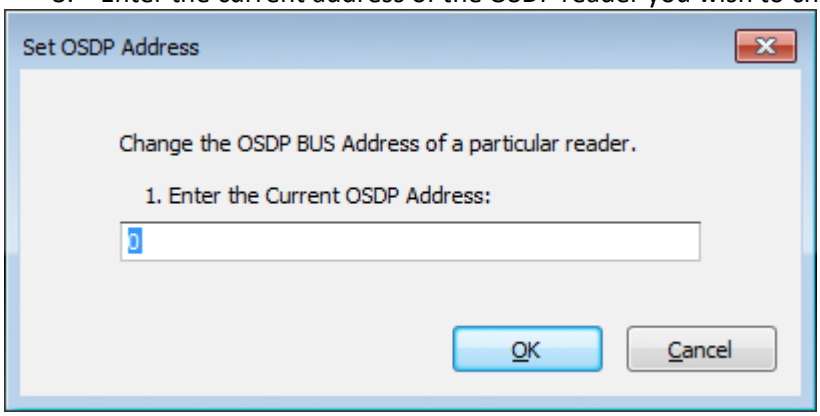
If these requirements are not met then the readers must be manually configured by the installer prior to connecting them to the Integriti system!

If the above requirements are met you can then, configure the readers by

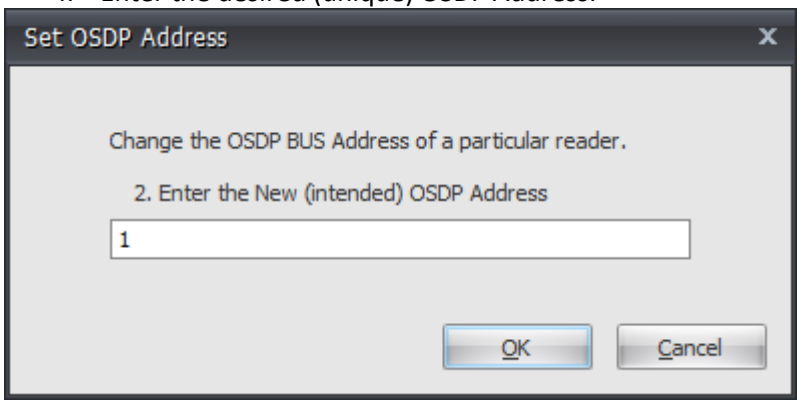
1. Attach one reader to the OSDP (RDR RS485) bus.
2. Configure the reader to the desired address by right clicking on the module that hosts the OSDP bus, then selecting “LAN” then “Set OSDP Reader Address”.



3. Enter the current address of the OSDP reader you wish to change.



4. Enter the desired (unique) OSDP Address.



5. Check review for success. You should expect something like this:

```
Change address command sent to Controller Name, OSDP reader address 0 to 1

OSDP device lost from: Controller Name, type: OSDP Reader, Serial: 0000000000, at addr: 00

OSDP device found on: Controller Name, type: OSDP Reader, Serial: 0000000000, Ver: 1.139.0, at addr: 01
```

In the event this does not succeed you can try again, removing and re-applying power from the reader between attempts may be helpful.

If successful you can repeat the procedure for the next reader.

NOTE: Although not normally required, this procedure can be performed with a SIFER reader. However SIFER firmware before V1.16.0 has a known issue where this command appears to work correctly until the device is reset, after which it may be operating at a random address. Therefore make sure the SIFER firmware is up to date before doing this.

Common problems

Begin by reviewing the hardware installation manual.

- Ensure the readers have been installed correctly according to the hardware manual.
- Make sure the readers have been connected to the correct port on the reader module.
- OSDP readers use the RDR RS485 port.
- Confirm that the configuration of the OSDP reader is suitable for use with Integriti access modules.
- Make sure power at the reader meets the manufacturer's specifications.

Make sure the Integriti software, module firmware and OSDP firmware (where applicable) are up to date.

Check to see if the OSDP reader has been discovered by the controller by searching review for "`OSDP Reader`" or "`OSDP device`".

Problem	Resolution
OSDP reader is not detected.	• Check OSDP reader configuration. • Check LAN wiring voltages etc… • Check reader module programming.
OSDP reader not responding to cards.	• Check module is configured for OSDP. • Check module has correct reader address. • Check reader encryption keys.
OSDP reader is not getting an address. **OSDP reader has not played 'online' tone.**	• Ensure the Door record you are configuring belongs to the controller that the reader is attached to. • Check the reader is attached to a reader "RDR RS-485" port. • Make sure you have not exceeded the total number of readers the module supports. • Change the 'OSDP_DisableAutoAddressing' option and try again. • Ensure the firmware on the controller and readers are up to date. • Cycle power to the OSDP reader. • Check LAN wiring voltages etc…
Reader is not responding to OSDP cards.	• Ensure the cards and readers are configured to use the same security key.

For detailed information on OSDP protocol, please refer to the SIA standard.