

Secure Multi-Domain Smart Card Reader

Models:

- RS20N-4 – Secure 2-Port Multi-Domain Smart Card Reader
- RS40N-4 – Secure 4-Port Multi-Domain Smart Card Reader



Intended Audience

This document is targeted at the following professionals:

- System Administrators.
- IT Managers with adequate knowledge of PKI architecture.

Objectives

This document describes the fundamental configuration procedures that are required to install the HSL Multi-Domain Smart Card Reader.

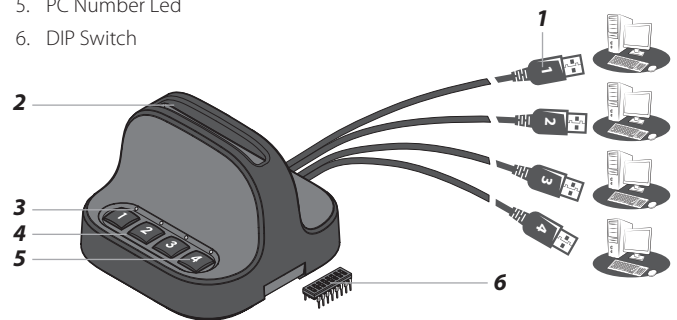
Prerequisites

- Obtain and install the applications, drivers and files of the cryptographic software (CSP) which corresponds to your selected smart card vendor.
- Obtain a smartcard from your selected smart card vendor.
- Verify that your smart card setup works correctly on each PC using a standard smart card reader prior to connecting the MDR.

Hardware Terms

The following terms are used to describe hardware elements in this document:

1. Numbered USB Cables: USB Cables with numbered connectors.
2. Card Reader Slot
3. PC Association Led
4. PC Number Button
5. PC Number Led
6. DIP Switch



Initial MDR Configuration Steps

Table 01 describes the initial MDR configuration steps

#	Action	Action Description	Expected Behavior
1	Install Smart Card Applications	Verify that the applications, drivers and files of the cryptographic software (CSP) that corresponds to your selected smart card vendor are installed on all the computers that you plan to connect to the MDR. Note: Perform a computer restart in case needed to complete the smart card application installation.	
2	Turn PC ON	Make sure that all the PCs are turned ON.	
3	Test Smart Card using a Standard Reader	Verify that your smart card setup works correctly on each PC using a standard smart card reader prior to connecting the MDR.	
4	Connect MDR to Power	Connect the MDR to Power	1 second beep sound. All LED lights blink once.
5	Connect USB Cables to PCs	Connect the MDR USB cables to the computers. Cable numbers correspond to the numbered MDR buttons.	All PC Number LED lights blink constantly.
6	Insert Smart Card into the MDR	Insert your smart card into the MDR reader socket. Note: Make sure the smart card chip is facing towards you.	1 second beep sound. All lights are OFF.
7	Initial Association with PC#1	Press PC Number Button#1 to initialize the MDR on PC#1.	PC Number Button#1 light blinks for 5 seconds and when the association is made, the light is ON constantly. The MDR appears as a smart card reader under PC#1 device manager.
8	Initial Association with PC#2	Press PC Number Button#2 to initialize the MDR on PC#2. Notes: Repeat the process on the remaining PCs.	PC Number Button#1 light turns OFF. PC Number Button#2 blinking 5 seconds and then light turns ON constantly. The MDR appears as a smart card reader under PC#2 device manager.

Working with the MDR

One completing the initial MDR configuration steps the MDR is ready for use allowing simultaneous usage of a single smartcard with multiple PCs.

Smartcard Removal Behavior

Removing the smartcard from the MDR immediately de-associates the MDR from all coupled PCs. As a result, smartcard-aware applications will notice the smartcard absence and respond accordingly.

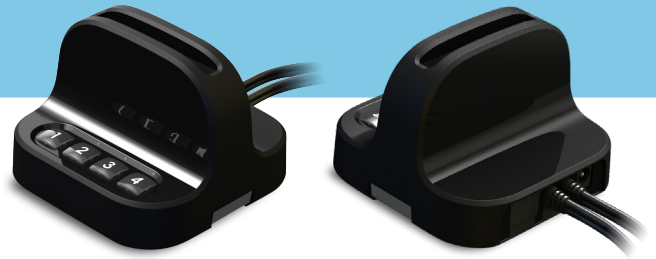
For example, a Windows PC that is configured to require smartcards for user logon may be set to lock the user's desktop once the smartcard is removed.

Re-associating the MDR after Smartcard Removal

In order to continue using the smartcard (after it's been removed from the MDR), the user has to insert the smartcard into the MDR and complete steps 6-8 in order to re-associate the MDR with all the corresponding PCs.

De-associating the MDR from a Specific PC

Long pressing a PC Number Button is the equivalent of removing the smartcard only from the PC which corresponds to that button without



affecting other associated PCs. To re-associate that PC with the MDR, press the PC Number Button to initialize the MDR (as described in step 7).

The de-association option is useful in any case a user wants to deassociate the MDR from a specific PC, without interfering with other PCs which are associated with the MDR.

For example, when a user has to lock PC#1 by removing the smartcard yet remain logged-on to PC#2, or when a certain PC is not successfully associated with the MDR and the user wants to re-associate it.

Reset

Hold one of the connected channel buttons for 7 seconds to reset the device and its association with the PCs.

MDR Operational Modes

Operational Mode settings determines how Active/Passive PC Modes are set. For example, when the MDR Operational Mode is set to Manual, the user has to manually press the PC Number Button corresponding to the PC that requires access to the smartcard.

When the MDR Operational Mode is set to dynamic, autoassociation methods are used to determine which PC will be set as Active.

For example, when the MDR operational mode is set to Activity- Detection Auto Association, the MDR will automatically actively associate itself to the computer which requires smart card access based on an activity detection algorithm.

To preset which MDR Operational Mode is in use (Manual / Auto...etc), there is a hardware dual in-line package (DIP) switch situated in the underside of the base. See the switch configuration settings in Table 02, column DIP Switch.

DIP Switch Configuration

1. To change the DIP switch settings, hold the MDR with the underside facing you. In this position, the DIP switch should be at the upper right corner.
2. Gently remove the DIP switch cover.
3. The switch includes 8 slides numbered from 1 to 8, ordered from left to right.
4. When pulled down, slide status is OFF. When pulled up, slide status is ON.
5. To activate an operation mode, pull down its corresponding slide.
6. Multiple slides can be turned OFF (pulled down) at the same time.
7. Refer to Table 02 to adjust DIP switch settings with your work scenario.



Table 02 Operational Modes:

#	Mode	Description	DIP Switch
1	Manually open all channels one by one	The user has to manually activate association with the PCs for the first time, by pressing channel buttons on the MDR. Once it is connected, it remains active and the user can keep working with all the PCs.	1
7	Single channel active	The User will press the channel button each time for the MDR will associate itself with the PC. Once the user presses another channel, the previous disconnects.	1 + 7
8	Auto channel association	The User will press channel 1 only once and the MDR will associate itself to all the connected PCs one by one automatically.	1 + 8

Power Requirements: External, wall-mounted power supply 12VDC, 5W maximum

Safety and Regulatory Statements

Safety Symbols

This one or more of the following symbols may be included in your product documentation and/or on the product.



Instructions: This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the product user manual.



Dangerous Voltage: This symbol is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



Power On: This symbol indicates the principal on/off switch is in the ON position.



Power Off: This symbol indicates the principal on/off switch is in the OFF position.



Protective Grounding Terminal: This symbol indicates a terminal which must be connected to earth ground prior to making any other connections to the equipment.

Safety Precautions

WARNING: To avoid a potentially fatal shock hazard and possible damage to equipment, please observe the following precautions.

- Instructions: Do not disable the power grounding plug. The grounding plug is an important safety feature.
- Plug the power cord into a grounded (earthed) outlet that is easily accessible at all times.
- Disconnect the power from the product by unplugging the power cord from either the electrical outlet or the product. The AC inlet is the main disconnect for removing power to this product. For products that have more than one AC inlet, to remove power completely, all AC line cords must be disconnected.
- This product has no serviceable parts inside the product enclosure. Do not open or remove product cover.

CAUTION: Some HSL products contain a lithium battery. This battery is not a field replaceable item, and replacement should not be attempted by a user. If errors occur when using the product and the battery is suspected, contact HSL Technical Support.

WARNING: For Service Personnel Only - There is a risk of explosion if the battery is replaced with an incorrect type. Dispose of used batteries according to the manufacturer's instructions.

This product is for use with other products that are Listed or Certified by a Nationally Recognized Testing Laboratory (NRTL).

Installation Precautions

Do not connect this product to computing devices that:

- are TEMPEST computers
- include telecommunication equipment
- include frame grabber video cards
- include special audio processing cards.

WARNING: Peripherals' Warning - For security reasons, this product does not support wireless keyboards. It is recommended not to connect a microphone or headset to the audio output port.

Security Vulnerability

If you are aware of a potential security vulnerability while installing this product, contact Technical Support immediately by:

- Web form: www.highseclabs.com/support/case/
- Email: security@highseclabs.com
- Tel: +972-4-9591191/2

WARNING: Unit Enclosure Warning - If the unit's enclosure appears disrupted or if all LEDs flash continuously, remove the product from service immediately and contact Technical Support.

Change Management

For change management tracking, perform a quarterly log check to verify that the RFD was not improperly used to override the current device policy by an unauthorized person.