HighSecLabs
Highest Security Solutions Ltd.

# SECURE MULTI-DOMAIN SMART CARD READER

## HSL enables the use of one smart card to login to multiple computers simultaneously with its innovative Multi-Domain Smart Card Reader.

User authentication devices are essential security function in many organizations. Unauthorized access to the organization information system is a serious threat. As many organizations are forced to isolate their classified and non-classified networks to prevent data leakages, users are forced to authenticate in front of more than one computer. In many high security organizations the user may need to access four different computers simultaneously at his / her desktop to handle daily tasks.

HSL developed the Secure Multi-Domain Smart-Card Reader (MDR) technology to provide a simple and yet secure solution to this common problem.

HSL MDR available in 2 port or 4 port interfaces with 2 / 4 computers thorough USB cables and enables a single user smart-card to securely and simultaneously authenticate in front of 2 / 4 isolated computers.

The user just uses the reader and card to authenticate as needed and leave the card in the reader. Once the card is pulled out all authentication sessions are immediately disconnected.

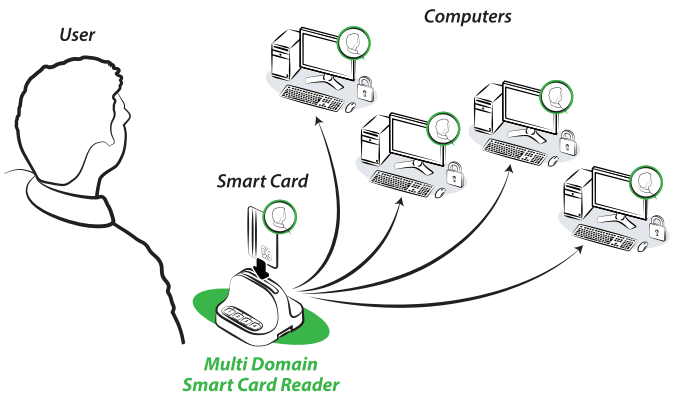
The MDR is fully isolated internally to prevent any potential data leakages between the coupled computers through the reader. It is also equipped with active anti-tampering system to prevent physical tampering.

## MDR HIGHLIGHTS

- **First and only**
  The only smart-card reader available today that can interface with multiple isolated computers. Based on unique technology and patents.
- **Compatibility**
  The MDR design relies on Identive (formally SCM) readers. It is by far the industry's most popular and compatible smart-card reader. Product supported by most OS in use today.
- **All firmware is in ROM (Read Only Memory).**
- **Cost effective**
  This product was designed to provide an affordable solution for agencies and organizations. Product cost can be easily justifiable once compared with issuing and maintaining multiple cards for each user.
- **Ease of use**
  The MDR automatically switches between channels. The user needs minimal training in the device operation.
- **Active anti tampering**
  Always-on active anti-tampering with 10 years battery life cycle. Special holographic tampering evident labels.
- **Tamper Evident Label**
  Providing clear visual indication of product was tampered or opened in any way.
- **Highest security by design**
  The only smart-card reader that designed from early stages to support high security isolation applications.

## STANDARD COMPLLIIANCE

- **EMV 4.0 Level 1 specification certified**
- **PBOC2.0 Level 1 certified**
- **Supports USB 2.0 full speed, USB-IF certified**
- **Based on ISO7816 implementation**
- **Support PC Smart Card industry standard – PC/SC 2.0**
- **Support Microsoft Smart Card for Windows**
- **Meet Microsoft WHQL USB Smart Card Reader requirements**
- **Meet US Federal Information Processing Standards (FIPS) Publication 201 requirements on smart card reader interoperability**




*HSL Secure MDR System Diagram*

## FEATURES

- Support single slot
- Support T0, T1 protocol
- Support I2C memory card, SLE4418, SLE4428, SLE4432, SLE4442, SLE4436, SLE5536, SLE6636, AT88SC1608, AT45D041 card and AT45DB041 card via external EEPROM
- Support ISO7816 Class A, B and C (5V/3V/1.8V) card
- Implemented as an USB full speed device with bulk transfer endpoint, Mass Storage endpoint
- Built-in PLL for USB and Smart Card clocks requirement
- Support EEPROM for USB descriptors customization (PID/ VID/ iManufacturer/iProduct/Serial Number), Direct Web Page Link, and accessing memory card module.
- EEPROM programmable via USB interface
- Support software update for memory card module
- Support Direct Web Page Link via configuration in external EEPROM
- Support short APDU and extended APDU
- Compatible with Microsoft USB-CCID driver
- Support remote wake up through inserting card/ removing card
- Support USB selective suspend
- Support Power Saving Mode (Using one pin to select between Normal/PWR Saving Mode)
- Support card power over current protection mechanism
- Built in resonator.
- Support USB LPM (Link Power Management) features

## SECURITY FEATURES

- **No shared circuitry across channels other than the user card. Each channel uses its own card reader circuitry**
- **Power sub-system is divided and fully protected from power signaling attacks**
- **Secure card removal massaging function with backup circuitry**
- **Audible warning if card is inserted and no active session available for more than 60 seconds**
- **Audible warning if card is partially inserted for more than 15 seconds**
- **Audible and visible indications if device was tampered**
- **Advanced active anti-tampering system with back-up battery to detect physical intrusion attempts**
- **Permanently disables the device if tampering detected, erases keys and log events in crypto memory**
- **Holographic Tampering-Evident Labels to detect enclosure tampering**
- **Sealed plastic design to prevent physical tampering**

## SPECIFICATION

| PART NUMBER | RS20N-3 (MDR102) | RS40N-3 (MDR104) |
|---|---|---|
| **No. of Computers** | 2 | 4 |
| **MDR FEATURES** | | |
| **MDR Ports** | 2 x USB Type-A to connect to computers,<br>1m long cable for each<br>1 x DC Power supply jack | 4 x USB Type-A to connect to computers,<br>1m long cable for each<br>1 x DC Power supply jack |
| **Controls and indications** | 2 x Blue LEDs to indicate active channel<br>2 x Red LEDs to indicate tampering attempt or failure to read card<br>Sound transducer to provide user warnings (65dB maximum) | 4 x Blue LEDs to indicate active channel<br>4 x Red LEDs to indicate tampering attempt or failure to read card<br>Sound transducer to provide user warnings (65dB maximum) |
| **Smart-Card Reader Characteristics** | • Supports ISO7816 Class A and AB Smartcards<br>• T=1, T=0 protocol support<br>• Communication speed up to 344,105 bps (PPS, FI parameter)<br>• Frequency up to 12 MHz (PPS, DI parameter)<br>• Connector with sliding 8-contacts designed for 150,000 insertions | |
| **Driver and OS Compatibility** | • CCID compliant & PC/SC Compatible Reader<br>• Supports All Operating Systems: Windows® OS, XP version and above, Linux, Mac OS | |
| **Computer Ports** | USB Type B ports | |
| **PHYSICAL** | | |
| **Dimensions** | 80 (W) x 80 (D) x 60 (H) mm / 3.1 (W) x 3.1 (D) x 2.4 (H) inch | |
| **Weight** | 0.3 Kg (1.1 lbs.) | |
| **POWER REQUIREMENTS** | | |
| **Power** | Wall-mounted power supply 12VDC, 5W maximum | |
| **Power Type** | External | |
| **ENVIRONMENTAL** | | |
| **Operating Temperature** | - 0ºC to 40ºC (32ºF to 104ºF) | |
| **Storage Temperature** | -20ºC to 60ºC (-4ºF to 140ºF) | |
| **Humidity** | Operating - 20 to 80% non-condensing;<br>Storage – 10 to 90% non-condensing | |
| **Altitude** | 0 to 10,000 ft | |
| **CERTIFICATION** | | |
| **Security Accreditation** | CE, UL and cUL, Safety BSEN60950 / EN60950 | |
| **GENERAL INFO** | | |
| **Made In** | ISRAEL | |
| **Product life-cycle** | 10 years | |
| **Warranty** | 2 Years | |