ADMIN GUIDE

HSL ADMINISTRATOR GUIDE

HighSecLabs
Highest Security Solutions

HDC19968 Rev F

TABLE OF CONTACTS

1. INTRODUCTION

1.1 OVERVIEW

This guide provides instructions to access the administrative terminal, as well as receive the log and audit data, of High Sec Labs' Secure and Commercial products.

1.2 SUPPORTED DEVICES

The HSL admin terminal and its functions are used in a wide range of HSL products, including the Secure and Commercial versions of the KVM Switch, KVM Mini-Matrix, KVM Combiner, and more. Because this guide is not specific to a particular device, the HSL product whose admin terminal is being used will be referred to in generic terms as "the product." For features and instructions regarding a specific HSL product, consult the product's user manual.

2. ACCESSING TERMINAL MODE

1. Connect the product to a host computer, mouse, keyboard, and video display, according to the instructions in its user manual.
2. Power the product ON, according to the instructions in its user manual.
3. Select Channel 1 on the product.
4. On the host computer connected to Channel 1, open Notepad or an equivalent text editor to act as the admin terminal's text interface.
5. Open Notepad settings and disable spell check and autocorrect.
6. Enter the key combination **LCtrl | RCtrl | t** to enter Terminal Mode on the product
7. Text will appear in Notepad asking for a username and password.
   - Default username: admin1234
   - Default password: 1234ABCDefg!@#
8. Upon logging in for the first time, a new administrator password must be created.
   - The new password must be 8 to 16 characters long and must contain uppercase letters, lowercase letters, numbers, and any of the special characters "!@#$%^&*()-_".
   - The password must be entered twice to confirm.
   - Passwords can be changed at any time from the Account Management menu (see Terminal Mode Functions for details).

Notes:

- After three failed login attempts, the product's admin terminal will lock until a power cycle is performed on the product.
- If the product is in Forward Mode (see the section **Forward Mode**), the product cannot enter Terminal Mode. To be able to enter Terminal Mode, first disable Forward Mode with the key combination **LCtrl | RCtrl | End**.
- Resetting the product to factory defaults does not reset the Admin username or password.
- If the Admin username or password is lost, please contact HSL support. If the credentials still cannot be retrieved, the product must be returned to the manufacturer to be reset. Therefore, retaining the username and password is crucial.

3. TERMINAL MODE FUNCTIONS

Upon entering Terminal Mode, the admin terminal will display a list of the following functions, which are selected by pressing the respective number on the keyboard. As long as the product is in Terminal Mode, all keystrokes are sent to the product rather than the host computer.

Note: Do not use the numeric pad for number keys.

3.1 MAIN MENU

1. **Asset Management:** Configure how the product identifies itself to the connected computer.
2. **Firmware Versions:** Display the firmware version on the product's controllers.
3. **Configure DPP (Dedicated Peripheral Port):** Configure what USB peripherals are allowed on the product.
4. **Configure SC (System Controller):** Configure the System Controller's settings.
5. **Account Management:** Manage, add, and remove administrator accounts.
6. **Reset to Factory Defaults:** Restore the product to its default settings.
7. **Logs and Events:** View information stored on the product.
8. (n/a)
9. **Back**
10. **Exit Terminal Mode**

3.2 MENU 0: ASSET MANAGEMENT

This menu provides options to change the USB parameters that the product uses to identify itself to the connected computer. This is useful for networks where each asset needs a unique identifier beyond the manufacturer's serial number.

1. **Use a Standard Descriptor as the Asset Container:** Use the generated descriptor for the product.
2. **Use a Custom Descriptor as the Asset Container:** Create a custom descriptor for the product.
3. **Enter a New Asset Tag:** Create a new asset tag to assign to the product.
4. **Show the Current Asset Tag**
5. **Apply the Asset Tag to the DE (Device Emulator):** Make the asset tag visible on the device manager's HID interface
6. (n/a)
7. (n/a)
8. **Back:** Return to the main menu.
9. **Exit Terminal**

3.3 MENU 1: FIRMWARE VERSIONS

This menu displays what versions of firmware are loaded on the product's controllers.

1. **DE Version:** Display the firmware version for the Device Emulator.
2. **SC Version:** Display the firmware version for the System Controller.
3. **VC Version:** Display the firmware version for the Video Controller.
4. **DPP Version:** Display the firmware version of the Dedicated Peripheral Port
5. (n/a)
6. (n/a)
7. (n/a)
8. (n/a)
9. **Back:** Return to the main menu.
10. **Exit Terminal Mode**

3.4 MENU 2: CONFIGURE DPP (DEDICATED PERIPHERAL PORT)

HSL's secure products feature a filtered USB port that allows or blocks connected USB peripheral devices. This dedicated peripheral port (also known as the fUSB port) is configured from this menu.

1. **Allow the Currently Connected Device on All Channels:** Allow the USB peripheral to connect to the host computers on every channel.

> **Note:** USB HUB devices are not allowed regardless of admin settings, unless connected to specific HSL products specially designed to allow them.

3. **Block the Currently Connected Device on All Channels:** Do not allow the USB peripheral to connect to the host computers on any channel.
4. **Show the Currently Connected Device:** Display information about the connected USB peripheral.
5. **Show All Currently Approved Devices:** List all USB peripherals that the product allows to connect.
6. **Show All Currently Blocked Devices:** List all USB peripherals that the product does not allow to connect.
7. **Reset DPP Settings:** Restore the product's DPP settings to their defaults.
8. **Upload DPP Settings from the Host:** Upload a custom set of DPP whitelist and blacklist settings made with HSL's DPP Configuration Tool, which can be found here: https://highseclabs.com/downloads/dpp-configuration-tool/
9. **Back:** Return to the main menu.
10. **Exit Terminal Mode**

3.5 MENU 3: CONFIGURE SC (SYSTEM CONTROLLER)

This menu provides options to customize the product's controls.

1. **Enter Desktop Configuration:** (n/a).
2. **Enter Mouse Speed [0-32] [default=5]:** Set how quickly the mouse cursor moves.
3. **Upload a Configuration from the Host:** (n/a).
4. **Use the Ctrl Key as the Shortcut Prefix:** Use the **Ctrl** key when entering keyboard shortcuts to operate the product.
5. **Use the Alt Key as the Shortcut Prefix:** Use the **Alt** key when entering keyboard shortcuts to operate the product.
6. **Switch Hosts Only with Ctrl Key Pressed:** When Absolute Mouse Mode is enabled on the product, press and hold the **Ctrl** key to switch hosts by moving the mouse cursor between windows.
7. **Switch Hosts with Ordinary Mouse Movements:** When Absolute Mouse Mode is enabled on the product, switch hosts by moving the mouse cursor between windows.
8. **Back:** Return to the main menu.
9. **Exit Terminal Mode**

3.6 MENU 4: ACCOUNT MANAGEMENT

This menu includes options to manage, add, and remove administrator accounts.

1. **Change Password:** Set a new password for the current account. The new password must be 8 to 16 characters long and must contain uppercase letters, lowercase letters, numbers, and any of the special characters "!@#$%^&*()-_".
2. **Create Admin Account:** Create up to 9 additional administrator accounts. The Terminal will ask for a new admin name for this account, followed by a new password. The new account's username must be 8 to 12 characters long and must contain uppercase letters, lowercase letters, numbers, and any of the special characters "!@#$%^&*()-_". These additional accounts can be renamed or removed by the primary admin account. A reset to factory defaults will delete all admin accounts except for the primary.
3. **Delete All Accounts:** Remove all admin accounts except for the primary.
4. (n/a)
5. (n/a)
6. (n/a)
7. (n/a)
8. **Back:** Return to the main menu.
9. **Exit Terminal Mode**

3.7 MENU 5: RESET TO FACTORY DEFAULTS

Performing a reset to factory defaults clears all settings, configurations, and additional admin usernames and passwords, and restores the product to its original state.

> **Note:** A reset to factory defaults does not delete the primary administrator account. In addition, it does not clear the data stored in the OTP Log.

3.8 MENU 6: LOGS AND EVENTS

The product records and saves critical information and events.

1. **Show OTP Log:** This log keeps date, time, and username of all the events that are defined as critical, such as self-test failures, peripheral device rejection, tampering events, DPP configuration changes, resets to factory defaults, and admin password changes. This log is permanent; even performing a reset to factory defaults does not delete the saved information.
2. **Show RAM Log:** This log tracks less critical events such as power cycles, accepting peripheral devices, simple configuration changes, admin logins, adding or removing additional admin accounts, or changing passwords. The RAM log stores the 100 latest events, deleting older events when it is full. Performing a reset to factory defaults deletes the information in this log.

3.9 MENU 7: CONFIGURE PERIPHERAL DEVICES

This menu provides options to toggle control settings such as touchscreen and absolute mouse control.

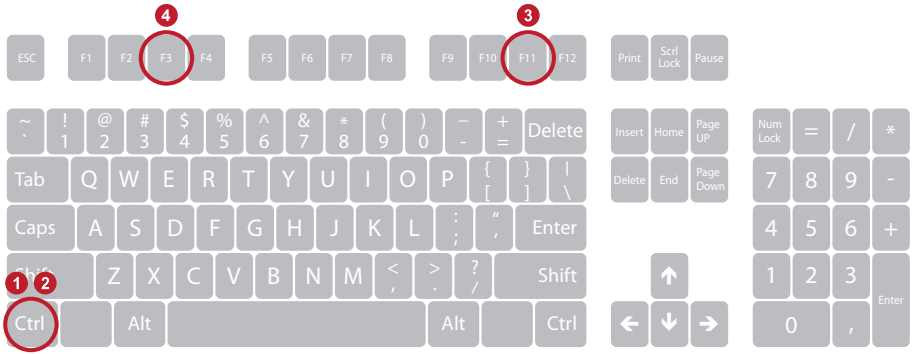
Note: This menu is not included in HSL secure products.

1. **Toggle Touch Interface:** Enable/Disable touchscreen controls.
2. **Toggle Consumer Interface:** Enable/Disable the media keys (play/pause, volume control, etc) on a consumer-grade keyboard.
3. **Configure Absolute Mouse Support:** Enable/Disable Absolute Mouse navigation, which allows the user to switch hosts using ordinary mouse movement.
   1. On
   2. Off
   8. Exit
4. **Toggle Copy/Paste Support:** Enable/Disable support for the HSL Copy & Paste Tool, which allows files to be copied between connected hosts.
5. **Toggle Video Follow Mouse Support:** Enable/Disable whether the product switches hosts when the mouse cursor switches hosts in ABS navigation.
8. **Back:** Return to the main menu.
9. **Exit Terminal Mode**

4. ADDITIONAL FUNCTIONS

While in Terminal Mode, HSL products have additional functions that can be accessed at any time by entering keyboard hotkeys.

The interface to operate HSL products' administrative functions uses keyboard hotkeys that can be entered at any time. These hotkeys are based on a QWERTY keyboard layout. For example, to enter the key combination **Ctrl | Ctrl | F11 | F3**, press the keys in the locations below, regardless of the keyboard layout used:



Note: Any changes made via keyboard hotkeys while in Terminal Mode may take up to 10 seconds to apply to the product.

4.1 KEYBOARD HOTKEY TERMS

- **|** Separates keys pressed in sequential order. For example, to enter Terminal Mode, the key combination is one press of the **Left Ctrl** button, one press of the **Right Ctrl** button, and one press of the t button, so the combination is shown as **LCtrl | RCtrl | t**.

Note: All hotkey combinations are configured using a QWERTY keyboard. When using a non-QWERTY keyboard, use the key location corresponding to the QWERTY layout. For example, on an AZERTY keyboard where the **a** key is in the location of the **q** key on a QWERTY keyboard, the hotkey **Ctrl | Ctrl | q** would be entered as **Ctrl | Ctrl | a**.

4.2 FORWARD MODE

Forward Mode allows commands to be sent to a connected HSL product cascaded through another device. A product in Forward Mode will receive keyboard commands, but rather than applying them to itself, will forward those commands to the connected device.

To enter Forward Mode, enter the key combination **LCtrl | RCtrl | f**. To exit Forward Mode, enter **LCtrl | RCtrl | End**.

EXAMPLE:

A user wants to enter Terminal Mode on a KVM Mini-Matrix, but the user's keyboard is connected to a KVM Switch, which then connects to the Mini-Matrix. Entering **LCtrl | RCtrl | t** will cause the KVM Switch to enter Terminal Mode, but the Mini-Matrix will not receive the command. To send the command to the Mini-Matrix, first enter **LCtrl | RCtrl | f** to put the KVM Switch into Forward Mode, then enter **LCtrl | RCtrl | t**; the KVM Switch will forward the command to the Mini-Matrix, which will in turn enter Terminal Mode.

4.3 COPY AND PASTE

HSL's Commercial products can use the Copy and Paste Tool, which enables seamless, high-speed copying of files and text from one PC to another.

To enable Copy and Paste, enter **LCtrl | RCtrl | q**. This must be performed on every connected computer on which Copy and Paste is to be enabled.

The latest version of the Copy and Paste Tool can be found here: https://highseclabs.com/solutions/copypaste/

The quick installation guide for the Copy and Paste Tool can be found here:

HLT36832_HSL_QIG_Copy-Paste-Tool_Rev-1.0.pdf

4.4 ADDITIONAL CONTROLLER SUPPORT

4.4.1 TOUCHSCREEN SUPPORT

To enable or disable support for touchscreen controls, enter **LCtrl | RCtrl | s**.

4.4.2 COMMERCIAL KEYBOARD SUPPORT

Some keyboards include additional functions such as volume controls. To enable or disable support for these functions, enter **LCtrl | RCtrl | k**.

4.5 EXIT TERMINAL MODE AND POWER CYCLE

To exit Terminal Mode and perform a power cycle on the product, enter **LCtrl | RCtrl | x**.

4.6 ACCESS TERMINAL MODE VIA RS-232 SERIAL TERMINAL

In addition to using keyboard hotkeys, Terminal Mode can be accessed through a serial terminal program such as PuTTY. Instructions for controlling HSL products via RS-232 are in the RS-232 Control Administrator Guide, which can be found here:

https://highseclabs.com/dow_type/admin-guidance/

To simulate Terminal Mode through PuTTY or a similar program, enter the RS-232 command #TERM-START. The terminal will ask for an admin name and password. Once these are entered, the terminal will show a list of selectable admin options.

While in Terminal Mode, all RS-232 commands must be entered using the following structure:

Begin with #

Enter the desired command

Press) to perform a carriage return or (for Escape

End with #

Press **ENTER** to send the command

Examples:

User name: **#admin1234)#**

Password: **#1234ABCDefg!@#)#**

Number 1: **#1#**

Escape: **#(#**

5. EXTERNAL TOOLS

HSL products also have external tools that allow configuration of presets, DPP settings, and other functions. These tools are available for free download on HSL's website.

- **Audio Diode Configuration Tool:** Customize the settings for HSL's media diodes
  https://highseclabs.com/downloads/audio-diode-configuration-tool/
- **DPP Configuration Tool:** Customize a product's DPP settings
  https://highseclabs.com/downloads/dpp-configuration-tool/
- **DPP Filter Tool:** Allow specific devices to pass through the eLock USB Lockdown
  https://highseclabs.com/downloads/dpp-filter-tool/
- **KM Admin Tool:** Create custom presets for the HSL Keyboard-Mouse Switch
  https://highseclabs.com/downloads/km-admin-tool/
- **Mini-Matrix Loader:** Install a custom preset on the HSL KVM Mini-Matrix
  https://highseclabs.com/downloads/matrix-loader/
- **RS-232 Configuration Tool:** Set the whitelist/blacklist rules for HSL's secure RS-232 Cross-Domain Isolators
  https://highseclabs.com/downloads/hslmf-config-tool/

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High Sec Labs (HSL) develops high-quality cyber-defense solutions in the field of network and peripheral isolation for protecting national assets and infrastructure.

The company, headquartered in Or Akiva, Israel, was founded in 2008 and has a second manufacturing site in the United States.

High Sec Lab's roots are deeply embedded in the defense and commercial industries developing cyber protection solutions. Among its customers are some of the world's leading governments and defense organizations as well as commercial companies such as banks, healthcare providers, and national infrastructure companies.

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