LSIS VFD Firmware Flash Procedure
H100

Purpose

This document provides the step by step procedure for flashing firmware on an LSIS H100 VFD using the Smart Copier. This procedure should be followed whenever an application demands custom application specific firmware or an update to the latest factory firmware.

For questions or assistance with this procedure please contact LSIS Technical Support.
Phone: 800-891-2941   Email: tech_support.us@lsis.com

1. **Necessary Items**
   - Smart Copier (the below items are included with purchase) **LSIS Order Code: 64090112**
     - 4 qty AA Batteries
     - SD Card
   - Smart Copier Gender (order both this and the Smart Copier!) **LSIS Order Code: 64090124**
     - 10-pin cable
     - Gender Connectors for S100, H100, and iS7
   - Computer with SD card slot
   - Flash File
   - LSIS H100 VFD

2. **Preparing the Firmware File**
   a. Request the needed firmware file from LSIS Technical Support.
   b. The Smart Copier uses a .scf file type though the .scf is not listed in Windows explorer. Verify the correct file type by right-clicking the file and selecting "properties." The file type .scf is listed. See Figure 1.
   c. Insert the SD card which came with the smart copier into the PC.
   d. Create a new folder on the SD card titled "firmwares".
   e. Drag and Drop or Copy/Paste the firmware file into the "firmwares" folder on the SD Card.
   f. Remove the SD Card from the PC and insert into the SD card slot on the right side of the Smart Copier. See Figure 2.
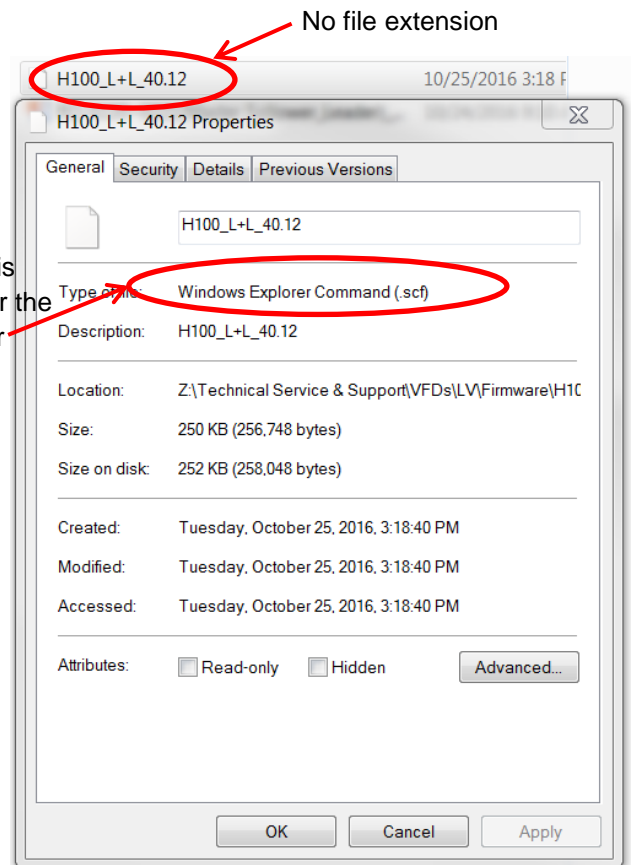
No file extension

.scf file type is necessary for the Smart Copier

Figure 1

Figure 2

3. **Connecting to the VFD**
    a. Install the provided AA batteries into the battery compartment on the back of the Smart Copier.
    b. Connect the 10-pin ribbon cable to the top of the Smart Copier
    c. Connect the other end of the ribbon cable to the correct **"H100 Main"** Gender for the VFD which is being flashed.
    d. The connection setup should look like Figure 3.

Figure 3

    e. **Power down the VFD.** The VFD **must** be powered down when flashing the firmware.
    f. Slide the Gender housing back to expose the pins which will be connected to the drives flash port. See Figure 4.
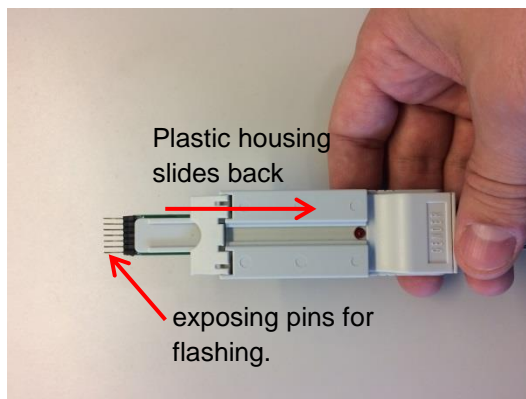

Figure 4

2

g. Gain access to the flash port by removing the keypad and the front cover. See Figure 5 below.

Figure 5

h. Connect the **"H100 Main"** Gender to the VFD flash port. Take note that the Gender connection direction changes depending on the drive capacity. This is printed on the Gender board and also explained in Figures 6 and 7 below.
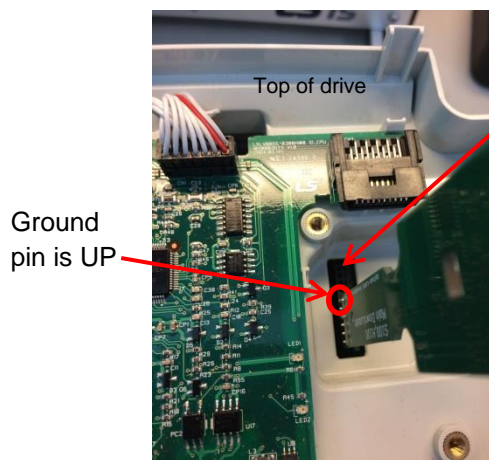
H100 (4 kW and below)   **H100 (5.5 kW and above)**

Top portion of connector is not used
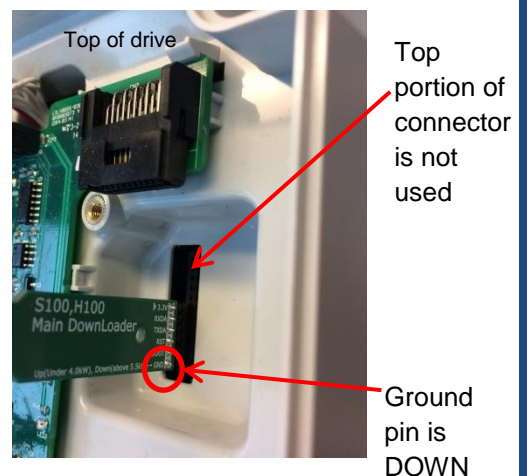
Ground pin is UP

Figure 7

Top portion of connector is not used

Ground pin is DOWN

Figure 8

3

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4. Flashing the VFD

    a. Power on the Smart Copier with the ON/OFF switch located on the left side of the Smart Copier.

    b. At power up the screen will display "MAIN Board Firmware Download" (flashing).

    c. Press the ENTER key to view the available firmware files.

    d. Use the UP and DOWN arrows to highlight the firmware file which was copied to the SD Card in Section 2.

    e. Press the ENTER key once to select the file and then ENTER again to start the flashing process.

    f. The flashing process will take about 1 minute to complete. Upon completion the Smart Copier will flash "100% Success."
   Note: If the status % bar freezes up and then fails, check the direction of the Gender and confirm it matches the direction discussed earlier.

    g. Power off the Smart Copier, disconnect the Gender, and reassemble the drive.

    h. Complete. CNF11 can be used to verify the proper Firmware version.