



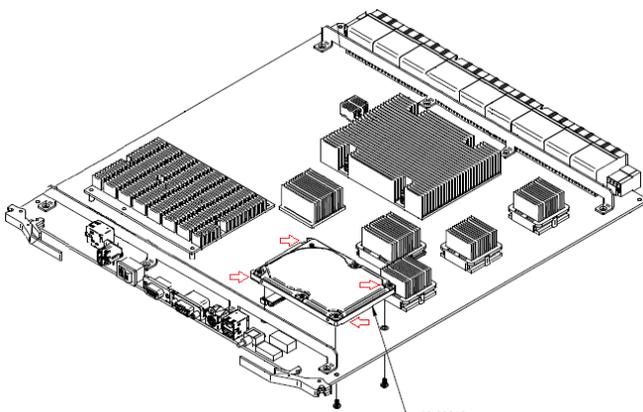
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# K-FRM-X-UPG-LX-KIT

## K-Frame X Linux Upgrade

### Quick Start Guide

**Steps to replace the Frame Controller SSD and Image Store HDD with new OS drive**



Frame Controller

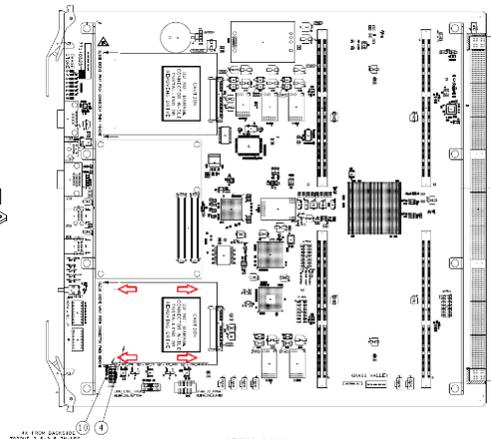


Image Store

- Step 1) Frame Controller** - Save off any Eng Setup and Show files that are needed for the future from the existing Controller SSD to be replaced. Copy them to the menu or other remote storage location.
- Step 2) Image Store** - Save off any images, clips, etc that you will need for the future from the Image Store HDD. Copy them to the menu or other remote storage location.
- Step 3)** After all of the files needed for the future are saved off, the next steps are to remove the existing SSD/HDD from these boards. Read the cautions defined below before proceeding to remove drives.

#### **Frame Controller SSD replacement**

**Step 4)** Frame Controller - While supporting the weight of the drive on the top of the board, remove the 4 screws holding the SSD from the back side of the controller board.

**CAUTION: If the weight of the drive is not supported when the screws attaching it to the boards are removed it may irreparably damage the surface-mount connector on the board.**

**Step 5)** Slide the SSD toward the right edge of the board to disengage the connector being careful to support the drive to avoid damage.

**Step 6)** Install new SSD drive programmed with new OS by positioning the SSD in place, sliding it toward the left edge of the controller board onto the connector. **NOTE: Be careful to support the weight of the drive so as not to tear the surface-mount connector off of the board. While still supporting the SSD continue to the next step.**

**Step 7)** Reinstall the 4 screws from the back side of the controller board to secure the SSD while supporting the weight of the SSD on the front side of the board.

#### **Image Store SSD replacement**

**Step 8)** While supporting the weight of the drive on the top of the board, remove the 4 screws holding the HDD from the back side of the Image Store board.

**CAUTION: If the weight of the drive is not supported when the screws attaching it to the boards are removed it may irreparably damage the surface-mount connector on the board.**

**Step 9)** Slide the Image Store HDD toward the front edge of board to disengage the connector being careful to support the drive and not tear the surface-mount connector off the board.

**Step 10)** Install new SSD drive programmed with new OS onto the Image Store board by positioning the SSD in place, sliding it toward the back edge of the Image Store board onto the connector. **NOTE: Be careful to support the weight of the drive the entire time so as not to tear the surface-mount connector off of the board. While still supporting the SSD continue to the next step.**

**Step 11)** Reinstall the 4 screws from the back side of the controller board to secure the SSD while supporting the weight of the SSD on the front side of the board so as not to tear the surface-mount connector off the board.

**Step 12)** Reinsert the boards into the frame.

#### **BIOS Setting Changes**

The next step after installing the SSD's from the kit onto the boards is to perform BIOS setting changes. The settings are the same for both board types and are required to be set separately for each board's bios. Perform these steps on each board.

**Step 13)** Attach USB keyboard and VGA monitor to the board being update Frame Controller or Image Store.

**Step 14)** Reboot, press F2 or DEL when the Congatec logo is displayed.

**Step 15)** Change settings as shown below:

- a. Advanced - CPU Configuration - Active Processor Cores = All
- b. Advanced - CPU Configuration - Hyperthreading = Disabled

**Step 16)** Press F10 to save and exit.

**Step 17)** Remove keyboard and monitor. Repeat the above steps for both Frame Controller and Image Store boards.

## Install Software V16.2.0

**Step 18)** Run the V16.2.0 installer (K-FrameSetup.exe) included on the provided thumb drive in the upgrade kit to install the V16.2 K-Frame Installer onto the menu PC, frame, and panel. For Korona this is on the same PC using the Menu and Korona Panel buttons in the Installer.

**Note:** Wait for the IP and PTP boards to update themselves. This might take 15-20 minutes.

**Step 19)** Open a Web Browser window and enter the IP Address of the Frame to display the K-Frame Web pages.

**Step 20)** Select **Frame Message Log**, then Current (it can take 15-20 minutes for the ARM updates, continue to select the **Frame Message Log** button and scroll down to see the latest messages, until all boards report the new version).

Results will be similar to the following example in the Message Log, reporting the new versions for all boards:

```
Set request for configuration data for 16x8 IO IP 4
16x8 IO IP 4: Set to RUN from WAIT_FOR_RUN_AFTER_RESET
16x8 IO IOP 4 reports SD Image version: V16.2.0
```

NOTE: Approximately 5 minutes after start up the system will automatically check the FPGA HAD files to verify none are out of date. If a HAD is out of date, it sends a message to the menu and prints it on the console. If HAD(s) are out of date proceed to **Step 21**, if all HADs are current then proceed to the **Final Step 28**.

## HAD FPGA Updates using an SSH Session

**Step 21)** V16.2.0 has added Secure Shell Protocol (SSH) improving network security by requiring passwords for logging into the frame console. The default username "user" and password "gvuser" will be needed to login. Please be aware that your local engineering management may have changed this password.

Open an SSH Session to the Frame using PuTTY that is installed with the K-Frame Installer.

**CAUTION:** Do not power down or reset the Frame during the HAD update process, HAD programming takes several minutes to complete.

**Step 22)** Enter the console menu by typing consoleMenu at the prompt:

->consoleMenu.

```
-> consoleMenu
[1] Status           [2] Controller       [3] ME
[4] Input            [5] Output          [6] ModIO
[7] Image Store     [8] Spare           [9] Debug
[10] Software Options [11] Fan Controller [P] Power Supply
[H] Boot Sw Help   [Z] Test Diagnostics [D] DisableAllUpdates
[M] DisableAllMonitoring [x] Exit to shell
> -
```

Result:

**Step 23)** Enter the number nine [9] for the Debug menu, at the prompt:

->9

```
9
[1] GPI              [2] Tally            [3] MessageControl
[4] TimeThreads     [5] Router Control  [6] RDP/CPL Tests
[7] Show image info [8] Show DMA info  [9] Feature Tests
[10] Transition      [11] Switch Image DMA [12] Temp Show All
[13] Temp Adjust Parm [14] Dump HAD Info [15] Flash HADs
[16] NP Aux Control [17] Field Timing  [18] CPL Msg Timing
[19] Display Re-entries [20] DebugNetwork [21] DebugImageStore
[22] Debug Event Control [x] Exit
Debug>
```

Result:

**Step 24)** Enter the number fifteen [15] for the Flash HADs menu, at the prompt:

->15

```
Select FLASH Type
[G] Golden Configuration Image
[M] Multi Boot Configuration Image
[x] Exit (At any time, 'x' will exit)
```

Result:

**Step 25)** Enter the letter m [M] for the Multi Boot Configuration menu, at the prompt:

->M

```
> #
Confirm flashing all off HAD's?
Summary:
Flash Type:      MultiBoot
Is this correct? (Y or N)>
```

Result:

**Step 26)** Enter the letter Y to begin the reprogramming of the HADs, at the prompt:

->Y

Result: HADs are being erased and programmed which cannot be seen in the SSH session, however results of successful HAD updates can be seen on the console as well as viewed in the K-Frame, Frame Message Logs.

**CAUTION:** Do not power down or reset the Frame during the update process, HAD programming takes several minutes to complete.

**Step 27)** Once the programming is completely finished, power cycle the Frame to complete the HAD update process. Again, approximately 5 minutes after power cycling the Menu will indicate if all HAD files are up to date or not.

**Final Step 28)** Load the desired Eng Setup and Show Files (see step 1 saving of existing files).