# **Fixed Format IO Box – Firmware Update Features**

**CUSTOMER SUPPORT NOTES**

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This document details the new firmware update features that have been added to the Fixed Format IO boxes (Ohio and Madi), which allow the FPGA firmware in said boxes to be flashed through Program Updater and Atomic Updater.

These new features are introduced in 1.6f Alpha 9.

Two significant changes have been made:

1. The HYDRA-BOX box type has now been split into HYDRA-OHIO (for all Non-Madi boxes), and HYDRA-MADI. This is the text that appears in the “Hardware” (first) column in Program Updater.
2. The firmware of all Fixed Format IO boxes can now be added as a new ‘application’ in Program Updater. Once added, the firmware version will be displayed in Program Updater as if it were one of the applications running in the box. This ‘application’ will be either FirmwareOHIO (on analogue and AES3 boxes), or FirmwareMADI (on MADI boxes). This new feature is being released together with a firmware update that will allow the Fixed Format IO boxes to be connected to a Hydra2 network through a Hydra Hub, however this feature will also enable future firmware updates to take place.

## Update Procedure – Stage 1

This stage is required for Fixed Format IO boxes that have not yet been updated to a version of OhioSioux that enables firmware upgrades.

1. Update the DeskUpdates folder to the latest version.
2. Connect the Fixed Format IO box directly to the Hydra2 Router, not through a Hydra Hub.
3. Run Program Updater and click on the “Update Hydra Network” tab.
4. The Fixed Format IO box will appear on the list, identified as HYDRA‑BOX in the “Hardware” column.
5. Click on “Select Latest From Version”. The OhioSioux application will be marked for update.
6. Click “Download” and wait for the download and subsequent reboot to complete. Click on “Refresh” to check if the reboot has completed.
7. The Fixed Format IO box will now be identified on the list as either HYDRA‑OHIO or HYDRA‑MADI. The box is now ready for upgrading the firmware.

## Update Procedure – Stage 2

Start from this stage if the Fixed Format IO box is already running a version of OhioSioux that enables firmware upgrades.

1. Update the DeskUpdates folder to the latest version (if not already done).
2. Connect the Fixed Format IO box directly to the Hydra2 Router, not through a Hydra Hub (see Additional Note 3 below).
3. Run Program Updater and click on the “Update Hydra Network” tab.
4. The Fixed Format IO box will appear on the list, identified as HYDRA‑OHIO or HYDRA‑MADI in the “Hardware” column.
5. Click on “Select Latest From Version”. A new application, either FirmwareOHIO or FirmwareMADI, will be marked for installation. There may be other upgrades marked as well.
6. Click “Download” and wait for the download and subsequent reboot to complete. Click on “Refresh” to check if the reboot has completed.
7. The box must now be physically rebooted.
   * On the Non-Madi boxes this can be done by either cycling the power, or holding in the “RESET” button for 7 seconds.
   * On the Madi boxes this must be done by cycling the power, the “RESET” button is insufficient.
8. Once this physical reboot has taken place, the Fixed Format IO box will be running the new version of firmware.

## Additional Notes

1. The version number displayed against the FirmwareOHIO or FirmwareMADI application indicates the version number of the firmware that was last programmed into the box using the procedure above. This firmware version will not be actively running in the box unless the physical reboot has taken place.
2. If the customer has recently updated the firmware but is failing to achieve the intended benefits of the new firmware, the most basic thing to check is that the customer has performed the physical reboot.
3. Step 2 in Stage 2 above assumes that the box is not currently running firmware compatible with the Hydra Hub. If however, the box is running firmware compatible with the Hydra Hub, then a future firmware upgrade can take place through the Hydra Hub without restriction. There is no specific requirement for the box to be connected directly to the router in order to upgrade the firmware.