Summary Release Notes and Firmware Upgrade
(Contact RGB Technical Support for more details)
Product: LINX™ 800, 1600, 3200 DVI Switcher
LINX 900, 1700, 3300 CrossXFormat™ Switcher
VERSION: 2.2
COMPATIBILITY: V 2.0, 2.1

The following release notes apply to Linx 800, 900, 1600, 1700, 3200, and 3300 switchers. A Linx 1600 or 1700 will not respond to commands intended exclusively for a Linx 3200 or 3300, respectively. A Linx 800 or 900 will not respond to commands intended exclusively for a Linx 1600, 3200, 1700 or 3300.

DVI only models 800, 1600, 3200 will not respond to commands intended solely for CrossXFormat Switchers 900, 1700, 3300.

UPDATE NOTES:

This release includes updated firmware upgrade procedure in these notes. Please read through the complete procedure before attempting a firmware upgrade.

If upgrading a unit with version 1.x firmware, an upgrade to 2.0 is required before upgrading to 2.2. Version 2.0 is available at www.rgb.com in the Support section. Use the same upgrade procedure as described below.

This release adds WCP support for many of the new features released in 2.1 including:

- Force Hot Plug.
- Extended Authentication for HDCP.
- HDCP encrypted inputs show BLUE instead of GREEN in the input status indicator at the bottom of the matrix screen.
- Input and output Color Space Conversion.
- Pixel Data Range Expansion.
- Upsample.
- Downsample.
- Terminal window for ASCII commands.

This release adds the following features and enhancements:

- Corrects condition where adjustment buttons in Input Timing Window can get stuck.
- Corrects **SYSINFO** I/O card version reporting error.
- **RFD** does no longer resets IP address and gateway.
- The **GETEDID** command has been altered to force a new read of the output EDID, rather than fetch the cached EDID.
- Command prompt from does not appear until the boot stream has finished.
- The **UPDATEEDID** command has been removed.
- Warns the user if input analog signal is not matched to any timing table entry. Image will not be displayed.

- Tri-level signals need the following commands for display on DVI monitors:

  INSRC n YPBPR
  COLORSPACE INPUT n YUV2RG

User note 1: Release 2.2 contains changes to the parameter database. Please save existing settings before upgrading the firmware.

User note 2: Release 2.2 contains changes in the FPGA firmware from release 2.1. An additional step in the upgrade process is required. After the **UFW** *and* **UIOCFW** *steps have been completed, upgrade the FPGA firmware with the* **UIOCFPGA** *command. See below.*

Firmware Update Note: unlike other RGB equipment, a firmware update cannot be performed by simply removing the Compact Flash and overwriting the files. The process must follow documented procedures. Briefly, ftp the update file to the Linx; perform a **UFW**, *then a* **UIOCFW**, *then* **UIOCFPGA.** *If the FTP file transfer is interrupted, restart the transfer sequence. If any subsequent stage of the upgrade process is interrupted, repeat the command.*

Performing the firmware upgrade via the serial port is preferable to using the Ethernet port, because the Linx will continue to communicate its status even through system reset. Ethernet connections are lost when the Linx resets, requiring a new log-in after each occurrence and therefore cannot provide the continual status, including when a reset cycle has completed.

The following abbreviated instructions assume a certain level of user knowledge with FTP and serial commands. Alternate instructions may also be found in the Linx User Guide 2.2. If you require assistance, contact the factory.

FTP must be set to BINARY mode.

1. Open a serial port terminal session to the Linx at 9600 baud.
2. Open a capture or log file of the serial port session.
3. Use FTP to transfer the firmware upgrade .tgz file to the Linx.
4. In the serial terminal, send the **UFW** command.
   Respond to the are-you-ready query.
   Wait for the Linx to reboot and return a prompt. If prompt does not return after approximately one minute, press ENTER.
5. Send the **SYSINFO** command.
   Confirm that the Linx is now at the updated firmware version level.
6. Send the **UIOCFW** command.
   Respond to the “are you ready” query.
   Wait for the Linx to reboot and return a prompt. If prompt does not return after approximately one minute, press ENTER.
7. Send the **SYSINFO** command.
   Verify that the IO card firmware is at the level listed in the release notes (below).
   It is normal to require a system reset for the upgraded firmware versions to display (see step 8)
8. Send the **SYSRST** command, which will cause a reboot, and wait for the prompt.
9. Send the **SYSINFO** command.
   Verify that the IO card firmware is now at the level listed in the release notes.

10. If any IO cards have not upgraded their firmware send another **SYSRST** command and wait for the prompt.
    Repeat
    SYSINFO
    SYSRST
    until all IO card firmware has upgraded.

    Typically only one **SYSRST** is required, but depending on system configuration an additional pass may be needed.

11. Send the **UIOCFPGA** command.
    Respond to the are-you-ready query.
    Wait for the prompt.

12. Send the **SYSINFO** command.
    Verify that the IO card FPGA version is at the level listed in the release notes.
    If any IO cards have not upgraded their FPGA version, send another **SYSRST** command and wait for the prompt.
    Repeat
    SYSINFO
    SYSRST
    until all IO cards' FPGA version has upgraded.

    Typically only one **SYSRST** is required, but depending on system configuration an additional pass may be needed.

In more abbreviated form
UFW
UIOCFW
SYSINFO, SYSRST repeat if needed, until all IO card firmware is updated.
UIOCFPGA
SYSINFO, SYSRST repeat if needed, until all IO card FPGAs are updated.

*Morton release **2.2** requires the following:*

- Backplane FPGA version 1.14 for the 3200 and 1600.
- Backplane FPGA version 1.15 for the 800.
- Dual single-link input card firmware version 0.73.
- Dual single-link input card FPGA version 0.2.20.
- Dual single-link output card firmware version 0.73.
- Dual single-link output card FPGA version 0.2.20.
- Single dual-link input card firmware version 0.73.
- Single dual-link input card FPGA version 2.1.2.
- Single dual-link output card firmware version 0.73.
- Single dual-link output card FPGA version 3.1.2.

- DVI-only single link input card version 0.73.
- DVI-only single link input card FPGA version 1.1.1.
- Version 0.4 of the boot loader PROM.
- CPLD firmware version 1.17.