PRODUCT: HYDRA™ MULTI-CHANNEL SCALER AND FORMAT CONVERTER

TITLE: VERSION 4.4.1.0 RELEASE NOTES

DATE: 7 AUGUST 2014

NEW FEATURES

The Version 4.4.1.0 feature set is unchanged from Version 4.4.0.0.

NEW COMMANDS

The Version 4.4.1.0 command set is unchanged from Version 4.4.0.0.

GENERAL ENHANCEMENTS

This release provides numerous enhancements that significantly improve dual-link performance.

It also updates the input card boot loader/updater as follows:

1. Modifies the DVI Input card BOOT code to improve the accuracy with which the card detects the power source (+5V pin power from an external input source device, or local-power from the system motherboard).

   Note: After the firmware update completes, you must update the boot code with the `ubt all all` command, and when that step is complete, re-enter the `ufw` command. This will update all I/O card types as follows:

   - DVI Input cards will update to boot loader version 1.13.
   - Scaler Output cards will update to boot loader version 3.13 (version number change only, for consistency; no code changes).
   - HD-SDI Input cards will update to boot loader version 4.13.

2. Minor changes to the system controller:

   - Add `sysinfo` output dump at end of system startup.
   - Add a `Reset completed` message at the end of system startup to more clearly indicate the system is ready for expected switcher services.
   - Upon system startup, card task init pauses for an additional 20 seconds before starting any interaction with the I/O cards, to allow settling time for the cards.

RESOLVED ISSUES

- Video output is no longer interrupted when routing with the same source or changing the preset with the same preset number.
- Preset recall using the front panel controls now works as expected.
- Improved handling of certain Scaler Output card error conditions.
- Improved operation during routing transitions involving HDCP-protected sources.
- Improved detection and reporting of input timings in dual-link mode.

KNOWN ISSUES

- Before performing a system reset, it may be necessary to disconnect interlaced sources from the system (or power them down) in order for the reset to complete successfully.
- Scaler Output card may not output correctly when performing dual-link to single-link scaling. To correct this, use the `sysrst` command.

FIRMWARE UPDATE

Please refer to the *Hydra Multi-Channel Scaler and Format Converter Firmware Update Instructions* for Version 4.4.1.0 to update from any previous version.

Board Name	Board Part Number	Firmware Version	FPGA Version	Boot Code Version
Dual Single Link DVI/RGB Input	625-0551-01	10.006	0.2.20	1.13
Single Dual Link DVI/RGB Input	625-0563-02	10.006	2.1.16	1.13
Scaler Output	625-0565-01	10.021	7.2.42	3.13
Scaler NIOS	625-0565-01		2.6.156	
Scaler HDMI Output	625-0565-02	10.021	7.2.42	3.13
HD-SDI Input	625-0588-01	10.006	6.1.7	4.13

Board Name	Board Part Number	CPLD Version	FPGA Version	Boot PROM
Hydra Motherboard	625-0580-01	1.17	1.27	0.4