ST2110 – HDR CONVERTER APP

High dynamic range (HDR) elevates image quality to the next level. Viewers of HDR video appreciate improvements in highlights, better contrast, and deeper, more realistic colors or, simply put – a much better and lifelike experience.

In production, your equipment might not be entirely HDR ready, which is why signals need to be up/down or cross converted at many places throughout the system. And even if all your hardware is HDR ready, there's still a need to produce SDR copies, since most viewers don't have an HDR TV set just yet.

The Riedel HDR App provides compatibility between the multiple SDR or HDR signal formats inside a live production environment. The conversion happens in real time using 3D LUT (Look-up-table)

color transformation using variable file resolutions including 17x17x17, 33x33x33 and up to 65x65x65. Users can simply select the 3D LUT cube file defined for the color transform they need. The solution comes with a set of commonly used cube files provided by the BBC and NBC, but users can also download their own cube files.
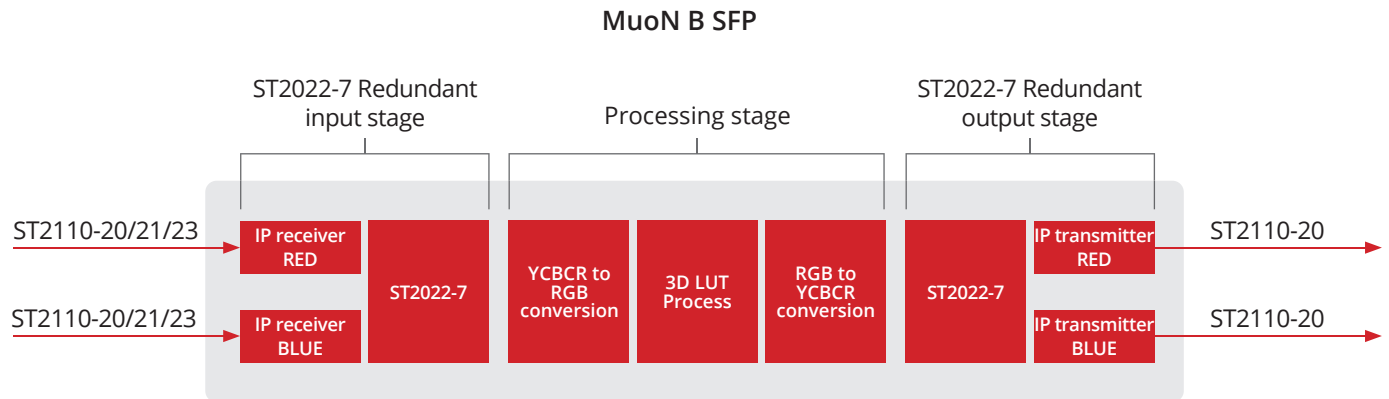
Cube files cover the conversion between SDR and HDR or HDR to SDR and even HDR to HDR with different standards such as PQ, HLG or Slog3.

The App can run on the IP-to-IP MuoN B converter housed in a VirtU-32 and can provide up to 32 HDR conversion channels within a single rack unit.

Features:

- ST2110-20 IP to IP MuoN B solution
- High quality tetrahedral 3D LUT conversion
- Color space conversion BT-709, BT.2020, BT2100
- Support of SDR and HDR with HLG, PQ and Slog3 standards
- Can process 17, 33 and 65 cube file definition
- Includes 20+ pre-defined 3D LUT files provided by BBC and NBC
- Users can download and use their own cube files
- Native support of HD/3G and can support UHD with Add-on license
- Support of ST2022-7 Class A and D
- Clean switching
- 25GE host rate SFP
- Controlled and configured via MN SET software
- Third party interface through a RESTful, NMOS or Ember+ APIs

Benefits:

- Highest density
- Fully robust and redundant solution

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High level block diagram:

MuoN B SFP

Included 3D LUTs:

Consistent HDR conversion using 3DLUT process

BBC

FROM	TO
BT.2100 PQ 1000	BT.2100 HLG
BT.2100 PQ 4000	BT.2100 HLG
BT.709	BT.2100 HLG (mapping)
BT.709	BT.2100 HLG (up - conversion)
BT.709	BT.2100 HLG (scene light mapping for cameras)
BT.709	BT.2100 HLG (scene light up conversion for cameras)
BT.2100 HLG	BT.2100 PQ
BT.2100 HLG	BT.709 (display-light- hue preserving color volume management)
BT.2100 HLG	BT.709 (scene-light- for matching cameras)
S-Log3	BT.2100 HLG
BT.2100 HLG	BT.709 (scene-light- for matching cameras)
PQ 1000 (P3D65)	BT.2100 HLG
BT.2100 HLG	PQ (P3065)
BT.2100 HLG	PQ (110 cd/m2) X?Y?Z?

NBC

FROM	TO
SDR	HLG-DL V1.1
SDR	HLG-SL V1
HLG	SDR-DL V1.1
SDR	PQ-DL V1
PQ	SDR-DL V1
HLG	PQ 1000nits V1

Ordering Info:

These Apps can be installed on MuoN B25.