



Perform real-time HDR conversions without compromise on the artistic intent



b<com \*Sublima\* offers all the benefits of real-time frame-by-frame adaptive conversion techniques, without any need for manual adjustment. Based on an intelligent algorithm, this technology guarantees an optimal conversion regardless of the video content. Despite the adaptive conversion, it does not require the use of metadata, and yet is still able to guarantee a visually lossless round trip. \*Sublima\* unique feature offers variable peak luminance profiles in a single product to cover HDR conversion suitable to any workflow or type of video content while still guaranteeing a perfect roundtrip.

{overview}:

SDR-HDR conversion	HDR-SDR conversion	HDR-HDR conversion
A simple yet powerful way to convert SDR content into an HDR format.	A smart way to produce a backward compatible SDR signal from HDR content produced in BT.2100-PQ or BT.2100-HLG.	Allows the conversion between different HDR formats.
 NAB Show Innovation Award winner	 NAB Show Best Product Award winner	

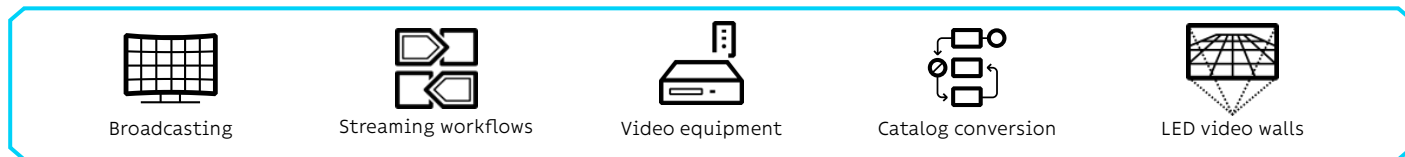
{benefits}:

- ♦ Cost effective HDR content production and distribution
- ♦ Simpler workflow combining conversions back and forth
- ♦ Best in class for Live production: No metadata required and style aware conversion
- ♦ Versatile: Easy integration at any stage of the production workflow
- ♦ Excellent subjective quality: Frame by frame adaptive conversion

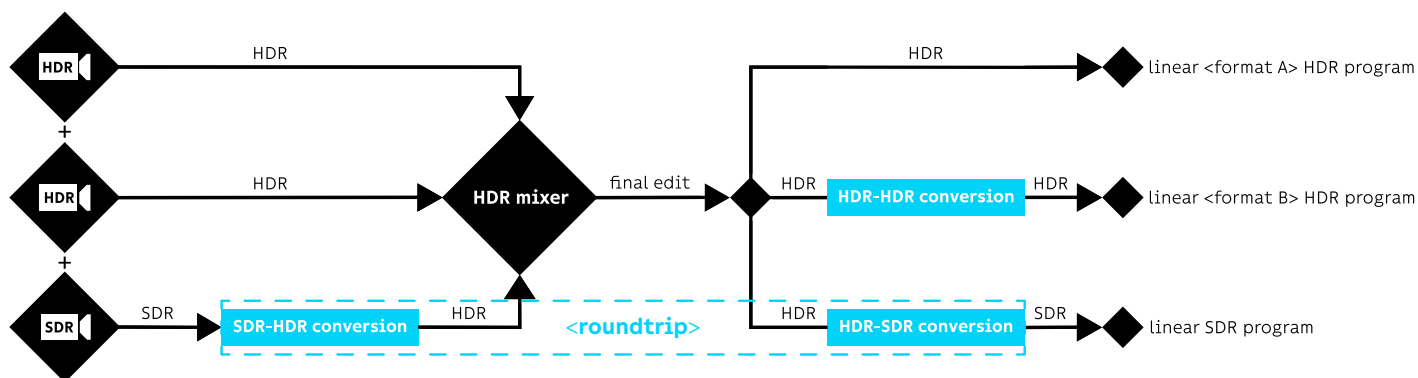
{key features}:

- ♦ Real-time adaptive up/down conversion
- ♦ Perfect roundtrip
- ♦ Ultra-low latency
- ♦ Variable peak luminance profiles: From 203 to 1000 nits
- ♦ Supports HD and UHD standards
- ♦ Works with any HDR format: PQ/ HLG
- ♦ Small footprint IP core on FPGA

## {applications}:



## {production workflow}:

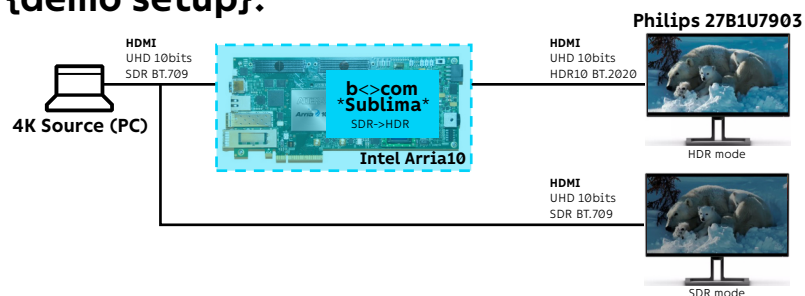


## {specifications}:

SDR-HDR conversion			HDR-SDR conversion		HDR-HDR conversion	
Resolution	Full HD (1 instance), UHD 4K (4 instances), UHD 8K (16 instances - 8 for 8K30)					
Input EOTF	BT.1886 (Gamma 2.4)		BT.2100 PQ and HLG (1000 nits)			
Input color space	BT.709 in 10 bits Y'CbCr 4:2:2		BT.2020 in 10 bits Y'CbCr 4:2:2			
Output EOTF	BT.2100 PQ and HLG (1000 nits)		BT.1886 (Gamma 2.4)		BT.2100 PQ and HLG (1000 nits)	
Output color space	BT.2020 in 10 bits Y'CbCr 4:2:2		BT.709 in 10 bits Y'CbCr 4:2:2		BT.2020 in 10 bits Y'CbCr 4:2:2	
Implementation	SW (Intel CPU)	HW (FPGA IP core)	SW (Intel CPU)	HW (FPGA IP core)	SW (Intel CPU)	HW (FPGA IP core)
Interfaces I/O	YUV file 422p10le 10 bits	RGB 4:4:4 10 bits Avalon and AXI-4 streaming	YUV file 422p10le 10 bits	RGB 4:4:4 10 bits Avalon and AXI-4 streaming	YUV file 422p10le 10 bits	RGB 4:4:4 10 bits Avalon and AXI-4 streaming
Deliverable	Static library (64-bit Linux <sup>1</sup> or Windows)	Encrypted code to target FPGA	Static library (64-bit Linux <sup>1</sup> or Windows)	Encrypted code to target FPGA	Static library (64-bit Linux <sup>1</sup> or Windows)	Encrypted code to target FPGA

<sup>1</sup>Ubuntu from 18.04 and CentOS 8.

## {demo setup}:



## {compatible with}:

- ♦ Intel Arria V
- ♦ Intel Arria 10
- ♦ Intel Cyclone 10
- ♦ Intel Agilex 7
- ♦ Intel Agilex 5 (coming soon)

### {about b-com}:

b-com is a private French innovation center that pioneers, designs and delivers technologies to companies that want to digitally boost their competitiveness.

Its technologies are developed to address digital infrastructure, the cultural and creative industries, health, defense, and industry 4.0.

Its experts come up with solutions in areas like 5G networks and beyond, image and audio processing, artificial intelligence, cybersecurity, cognitive science and mixed realities.

Thanks to its world-class engineering team and its unique mix of scientific and industrial know-how, b-com offers its clients technology innovations that make the difference.

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