BarnPalette – Flow-XS

BarnPalette-Flow-XS is empowered with the visual lossless JPEG-XS codec and enables visually-loss-less conversion of 4K and HD/3G video signal into ST-2110-22 JPEG-XS stream, with optional ST-2022-7 redundancy for protection against data loss.

The conversion is achieved with ultra-low delay. Encoding and decoding modes can be configured individually per channel.
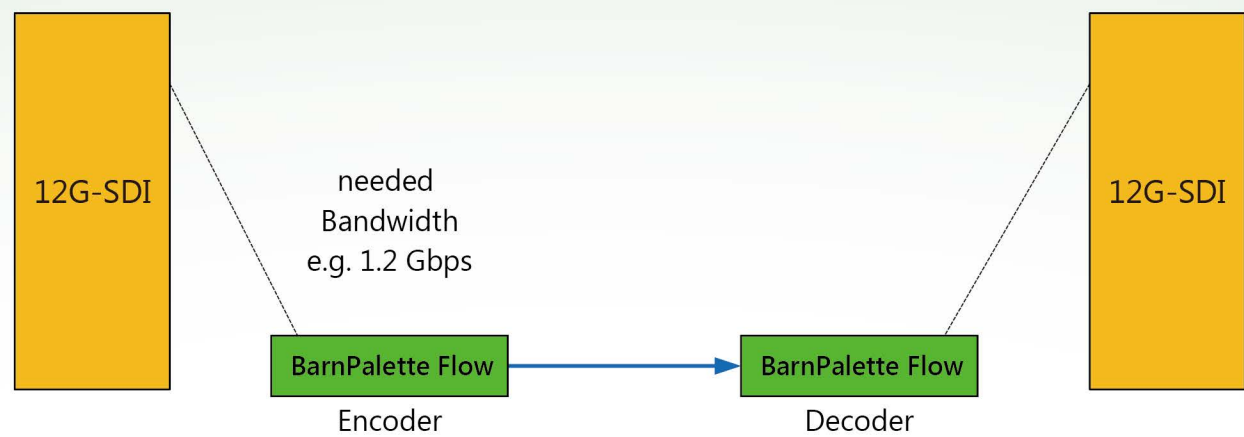
KEY PRODUCT FEATURES

- **4K JPEG-XS -** A hardware converter that performs the essential yet straightforward conversion between SDI and ST-2110-20/-30/-40.

- **NMOS COMPATIBLE -** Supporting NMOS IS-04/05 enables smooth integration into systems.

- **FULL CONTROL WEBGUI -** Mode changes and settings for ENC/DEC, as well as PTP synchronization status checks, can be easily managed through an intuitive GUI.

Features

- JPEG-XS codec with 1/8~1/60 compression
- ST-2110-22/-30/-40 IP streaming support
- Encoder/decoder mode can be changed by settings
- Settings can be changed with the front OLED or WebGUI
- Supports 4K/UHD with 1x12G-SDI or 4x3G-SDI video input
- Single channel encoder/decoder
- NMOS IS-04/05 support
- ST-2022-7 support

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JPEG-XS Compression

12G-SDI	needed Bandwidth e.g. 1.2 Gbps		12G-SDI
	BarnPalette Flow Encoder	BarnPalette Flow Decoder	

Visually Lossless Quality

JPEG-XS is designed to be "visually lossless". This means that even after compression and decompression, the output image is virtually indistinguishable from the original uncompressed signal to the human eye.

Ultra-Low Latency

JPEG-XS boasts extremely low latency, typically in the range of a few lines of video (often 1 to 32 lines).

Significant Bandwidth Reduction

While maintaining high quality, JPEG-XS offers impressive compression ratios, typically ranging from 2:1 to 10:1

Interoperability and Standardization

JPEG-XS ensures interoperability between different manufacturers' equipment. It integrates seamlessly with IP-based broad-cast standards like ST-2110-22, facilitating the transition to all-IP workflows while leveraging existing SDI investments.

Flexibility and Scalability

JPEG-XS is resolution and frame-rate agnostic, supporting everything from HD to 4K, 8K, and beyond.

SDI input (BNC75Ω)	3G-SDI Level-A/B, 12G-SDI
Chroma	4:2:2
Bit depth	10bit
Framerate	50p, 59.94p, 60p
Encoder Input Format	4K (4 x 3G-SDI, 1 x 12G-SDI)
Decoder Output Format	4K (4 x 3G-SDI, 1 x 12G-SDI)
Form Factor	223mm x 277mm x 44mm (8.8" x 10.9" x 1.7")
Weight	1.4 kg
Power Supply	AC100V～240V
Power Consumption	30W.
Temp. Oper.	0～35C.
Humid. Oper.	20%RH～80%RH