

Development Kit For 4K Streaming

JPEG 2000 4K Encoding – Streaming - Decoding Development Kit

The intoPIX JPEG 2000 4K Streaming Development Kit provides a full JPEG 2000 encoding and decoding chain capable to stream real-time JPEG 2000 material at any resolution up to 4K:

- 4K (4096 x 2160)
- Quad HD (3840 x 2160)
- 2K (2048 x 1080)
- HD (1920 x 1080)



Superior Image Quality

JPEG 2000 compression is the format for applications where image quality is the prime asset. Being able to compress 4:4:4 color sampling and up to 12 bit color depth provides unprecedented image quality for high resolution applications.

Last but not least, JPEG 2000 being an intra-frame coding format makes the whole transmission chain latency 10 times lower than using traditional long GOP formats (MPEG2, H.264) as well as more robust against transmission errors.

Technical Specifications

	SyX-JP4K-Streaming-Enc	SyX-JP4K-Streaming-Dec
Format	JPEG 2000	
Color bit depth (precision)	8, 10 or 12 bits per component	
Compression type	9/7 – Irreversible –	
Rate control	CBR, VBR or Capped-VBR	
Latency	2 frames	1 frame
Video Input	HDSDI / SDI / PCI-Express (Network Transmission)	HDSDI / SDI / PCI-Express x 8
Video Output	3G/HDSDI / SDI / PCI-Express x 8	3G/HDSDI / SDI / PCI-Express (Network Transmission)
Video Format	1080/59.94i, 1080/60i, 1080/50i, 1080/23.98sF, 1080/24sF, 2K 24fps, 2K 48fps, 4K 24fps, Quad HD 23.98/24/29.97/30 fps	
Audio input	Embedded (Max 8 channels)	
Audio output		Embedded (Max. 8 channels)
Audio Compression	Uncompressed	
Voltage	110 – 220 V	

- 4K Encoding & Decoding
- 4K RTP Streaming
- CBR & VBR Capable
- High Quality Encoding
- Support of all major HD Broadcast formats



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JPEG 2000 4K Encoding – Streaming - Decoding Development KIT (RTP)

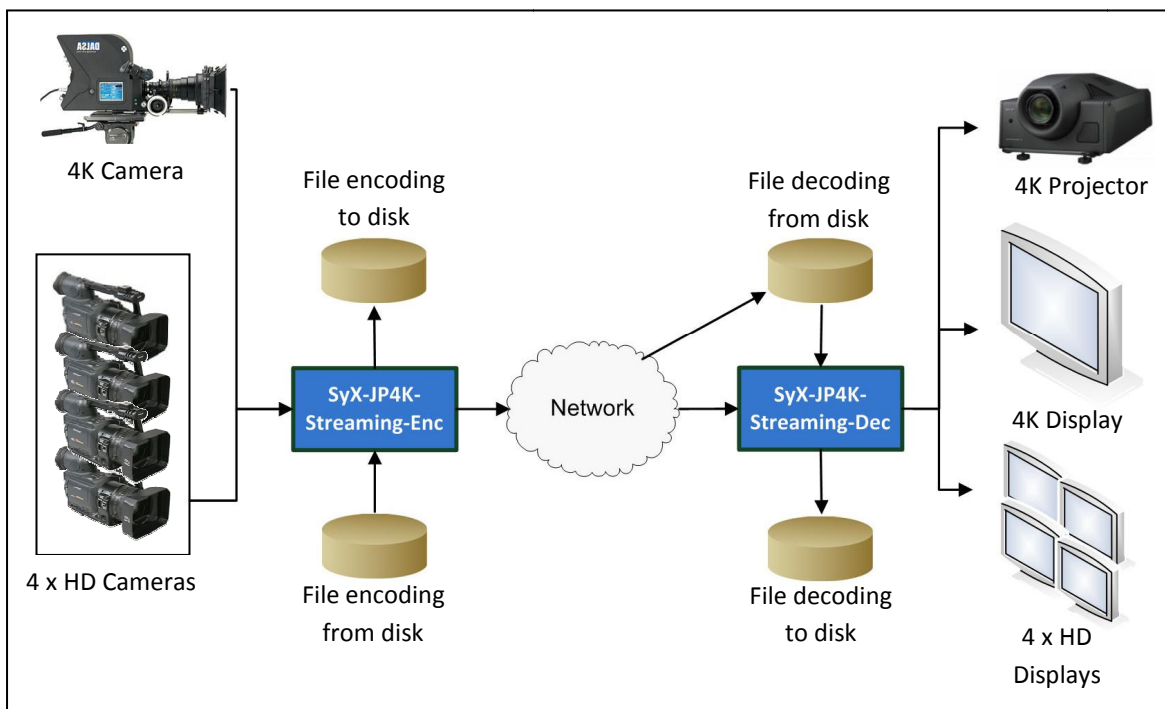
Key Features

- 4K Encoding
- 4K Decoding
- 4K streaming
- Single tile and multiple tile capable
- Rate Allocation modes:
 - o Constant Bit Rate (CBR)
 - o Variable Bit Rate (VBR) with constant quality
 - o Capped-VBR
- Best-in-Class, single tile encoding quality (max 0.5 dB PSNR difference with software reference)
- Up and downscaling : 4K(QHD) to 2K (HD) or 2K(HD) to 4K(QHD)

Future Upgrades

- 8K encoding / decoding / streaming
- 4K - 3D
- Videoconferencing system

Applications and Use Cases



Complete 4K camera-to-projection streaming chain

- 4K camera
- 4 x genlocked HD cameras (for Quad HD display)
- 4 x non genlocked HD cameras (4 simultaneous and independent streams)

Store and forward encoding - decoding chain

On-the-fly encoding

Real-time decoding and projection

For more information, please contact us at:

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