

JPEG XL is

A new still image coding standard established in “ISO/IEC 18181” in 2022/1.

- Compared to existing JPEG, it has higher compression and quality of still images.
- Wide color gamut, HDR compatible.
- Equipped with lossless JPEG transcoding (existing JPEG ⇔ JPEG XL) function.
- Optimized for responsive web design.

Our Products “KJN-XL1_ENC”

Three Key Advantages of “KJN-XL1_ENC”

1. High compression ⇒ Up to 47.6% Data Size Reduction

Quality	JPEG Compression ratio	JPEG XL Compression ratio	Compared to JPEG
85	10.1%	6.7%	▲33.7%
97	26.3%	15.8%	▲39.9%
100	48.1%	25.2%	▲47.6%

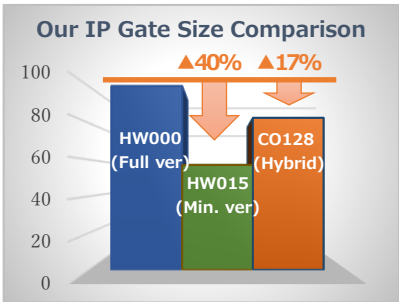
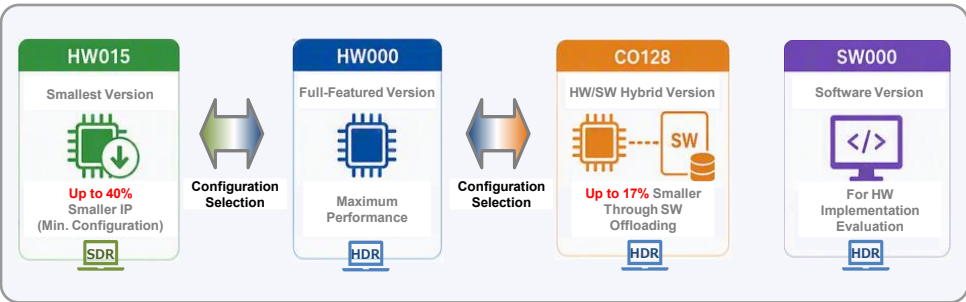
Average value of JIS standard images (16 types of natural images) Target Image : 2560x2048 sRGB 8bit

2. HDR support ⇒ Supports compression and decompression without sacrificing reality expression



JPEG logo(CC BY-ND 4.0)
<https://jpeg.org>

3. Flexible IP Configuration ⇒ Up to 40% Gate Size Smaller



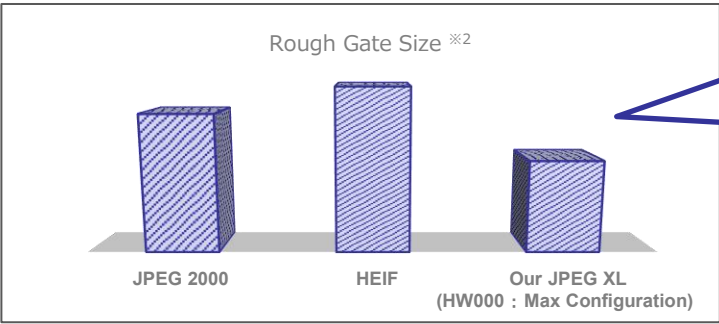
※Relative gate size (HW000=100)

KJN-XL1_ENC Specifications

Item	Specifications
Data Rate	1 Sample / CLK
Image Bit Depth	32bit (single-precision floating point) 16bit (half-precision floating point)
Color Format	LinearRGB※1
CPU Interface	AMBA3 APB
Image and Code Interface	AMBA4 AXI(Master)

※1 Linear RGB with no gamma correction applied.

Gate Size Comparison Across Major Standards



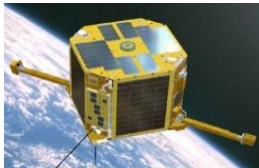
More Compact Encoder IP Than Competing Standards.

The Minimum Configuration Further Reduces Gate Size by Up to 40%. (See Front Page)

※2 Gate Size : Based on our research

Applications

- Smart phone, digital still camera
 - Broadcast equipment
 - Medical equipment
- Info input/output system
 - Monitoring system
 - Aerospace image system
- Image data transfer unit
 - Automotive image processing systems etc.



Customization

IP core customization according to customer needs.

- Processing capacity
 - Gate size reduction
- IP core peripheral circuit design
 - Code stream format



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