

2K/4K/3D DCP

Digital Cinema Package Creation

PRISTINE Application Note

As the most powerful JPEG 2000 encoding board available today, the PRISTINE ideally complements any digital cinema package creation software.

The PRISTINE accelerates JPEG 2000 encoding up to 113 2K frames per second. It also supports a wide range of resolutions up to 4K. Embedded intoPIX technology provides the ultimate in pristine picture quality and meets the DCI recommendations.

Its optional add-ons include encryption as well as MXF / DPX wrapping and unwrapping.

Each PRISTINE can easily be reconfigured as encoder or decoder. On top, it offers an unprecedented connectivity. Standard I/Os includes PCI-Express (8 Lanes) and an optional 3G-SDI panel that incorporates 4 inputs and 4 outputs, also supporting HD-SDI, Dual-SDI and SDI.



Figure 1 depicts how the PRISTINE drastically speeds up the DCP Creation process. The uncompressed files are extracted from the local disk or the SAN and provided to the Pristine for JPEG 2000 encoding. The PRISTINE code-stream output files are routed toward a DCP packager, like the *Easy DCP*™ proposed by Fraunhofer.

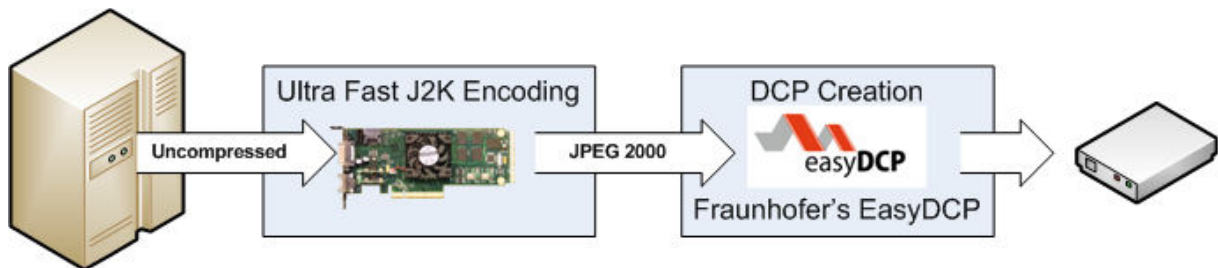


Figure 1. The PRISTINE offers a unique power in Digital cinema post production. It accelerates the JPEG 2000 encoding at up to 120 frames per second. It also handle 4K and Stereoscopic content.

Among the PRISTINE versions, the PRISTINE-1 versions allows encoding 2K and HD content at up to 28 frames per second. PRISTINE-2 supports stereoscopic 2K real-time (24 fps) encoding and decoding while the PRISTINE-4 achieves both 4K at 24 fps or 2K at 113 fps.

Key benefits of PRISTINE

- Ultra fast DCP creation
- Support of 2K and 4K
- Faster than real-time encoding:
 - 2K: up to 113fps
 - 4K: up to 24 fps
- Rescaling: from 2K to 4K and reversely
- Multiple Boards in parallel thanks to PCIe (8 lanes).



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Valuable Options of PRISTINE

- Support of meta-data file formats: MXF, DPX.
- On the fly Encryption / Decryption / Hashing.
- **Advanced rescaling**: currently under development.
- On-the-fly **Quality control**: using 2 PRISTINE boards enables you to control the quality of the compression in real-time.
- The unique **3G-SDI Panel**: 4 inputs and 4 outputs also supporting HD-SDI, Dual-SDI and SDI. It will be capable to handle 4K real time signal at 24 fps 4:4:4 12 bits.

Other specifications

I/O	PCI-E 8-Lane, Optional SDI Panel: <ul style="list-style-type: none">• 3G-SDI : 4 inputs and 4 outputs• supporting HD, Dual and SD
Dimensions	Half-Length, Half-Height PCIe form factor for space-constrained applications or normal size depending on the version ordered.
Video Format	4K DCI, 2K DCI
Video Encoding	JPEG 2000 (ISO 15444-1) DCI compliant 5/3 (Lossless reversible mode) or 9/7 wavelet transforms
Audio	Uncompressed, synchronized
OS	Windows Vista / 2K / XP, Linux and MAC OS X 32 and 64 bits
Software & Guide	SDK, API, drivers, usage examples and friendly user guide
User interface	Extensive command line for batch operations Graphical user interface for assessment
Optional Security	Encryption / Decryption: AES, RSA, SHA-1
Optional Additional Modules	Advanced rescaling, metadata wrapping and unwrapping: MXF, DPX etc etc.

Ordering Information

Product Name	Description
PRISTINE 4	Encoding (and decoding) 4K content at 24 fps and 2K at 113fps through PCIe data file access.
PRISTINE 2	Encoding / Decoding 3D Stereoscopic 2K @ 24 fps
PRISTINE 1	Encoding / Decoding 2K @ 24 fps
Optional 3G-SDI panel	4 inputs and 4 outputs, also supporting HD-SDI, Dual-SDI and SDI.
Optional Modules	Encryption, Quality assessment software

For more information, please contact us at:

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