

DCPB-2160

JPEG 2000 HD decoder board



Features

- PCIe board, 4 lanes
- Input: j2c codestream (adapted Digital Cinema Profile)
- Output: uncompressed images or video in YCbCr 4:2:2 format
- Custom image size up to 1080p in a single tile
- More than real-time decoding of 1080p60
- Multi-stream capability
- Lossless decompression support
- Windows and Linux SDK, including drivers and API

The DCPB-2160 is a PCI-Express acceleration board for performing JPEG 2000 decompression. It is compatible with the DCPB-2120 JPEG 2000 HD encoder board and can process 90 frames per second in 1080p (1920x1080) resolution. The DCPB-2160 combines performance, robustness and high quality to provide a solution for decoding high-definition content.

Its compactness makes the DCPB-2160 an excellent alternative to PC clusters, offering real-time decoding capability in a PCIe form factor. Moreover it is built on FPGA technology, which offers the advantages of flexibility and upgradeability.

The DCPB-2160 can be used for various broadcast or other applications, including monitoring, distribution, archiving, production, etc.

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Technical specifications

General Data

Power	+3.3V @ 4A maximum +12V @ 1A maximum
Interface	Revision 1.1 compliant x1, x2 or x4 PCIe endpoint compatible
Dimensions	241mm x 111mm "three-quarter length" max component height 15mm
Temperature	Operational: +5...+35°C, humidity <95% non-condensing Storage: -20...+50°C, humidity <95% non-condensing

Interfaces

Through a software API

Inputs:	Compressed j2c codestream
Outputs:	Uncompressed YCbCr image of any resolution up to 1920x1080, in 4:2:2 color format

Parameters

Decompression parameters are obtained from the JPEG 2000 codestream, requiring no user interaction

Performances

Single-channel
1080p up to 90 fps
Multi-channel
1080i60, 1080p30, 720p, 576i, 480i

Software support

PCIe drivers for Windows XP, Vista and for Linux
SDK with API for controlling the compression parameters and
handshaking the compressed input and image output
Example applications

Options

Additional 4:4:4 support
Up to 12 bits per component
Encoder + decoder functionality

Request more information

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