

Matrox M264

Multi-channel 4:2:2 10-bit H.264 encoding card

Matrox M264 features hardware-based multi-channel 8- and 10-bit H.264 encoding, decoding and transcoding capabilities. It gives a performance boost to standard PCs to enable H.264-based broadcast contribution, distribution and production workflows. The Matrox M264 hardware is supported by the Matrox DSX Software Development Kit. Please refer to the Matrox DSX Developer Products datasheet for information on file I/O, software codecs and CPU effects. Contact your Matrox Sales Engineer for more information.



Key Features

- Multi-channel 8- and 10-bit H.264 encoding
- Up to 4K resolutions supported
- High-throughput PCIe interface
- Dynamic codec control
- Encoding, decoding and transcoding
- Hardware based video processing engines
- Multiple card support

System Interface

- Single-slot PCIe x8 Gen2 interface
- Half-length card
- DMA engine for uncompressed data transfers at 3GB/sec

H.264 Codec Engine

- Supports Baseline, Main, High, High10, and High10 Intra, High 4:2:2 and High 4:2:2 Intra profiles up to Level 5.2
- Supports encoding, decoding and transcoding)
- Supports UHD, HD, SD, and custom broadcast resolutions (up to 60fps)
 - 4:2:2 YUV 8-bit
 - 4:2:2 YUV 10-bit
- Supports both interlaced and progressive video
- CABAC/CAVLC entropy coding
- Selectable bit rate encoding
 - VBR (Variable Bit Rate)
 - CBR (Constant Bit Rate)
- Scene detection
- Dynamic rate control
- Dynamic GOP control
- Deblocking filtering
- Low latency encoding targeting <20 ms (I or IP GOP)
- Total bitrates of 500 Mbps (CABAC) or 800 Mbps (CAVLC)
- Compliant with Panasonic AVC-Ultra
- Compliant with Sony XAVC

Video Processing Engine

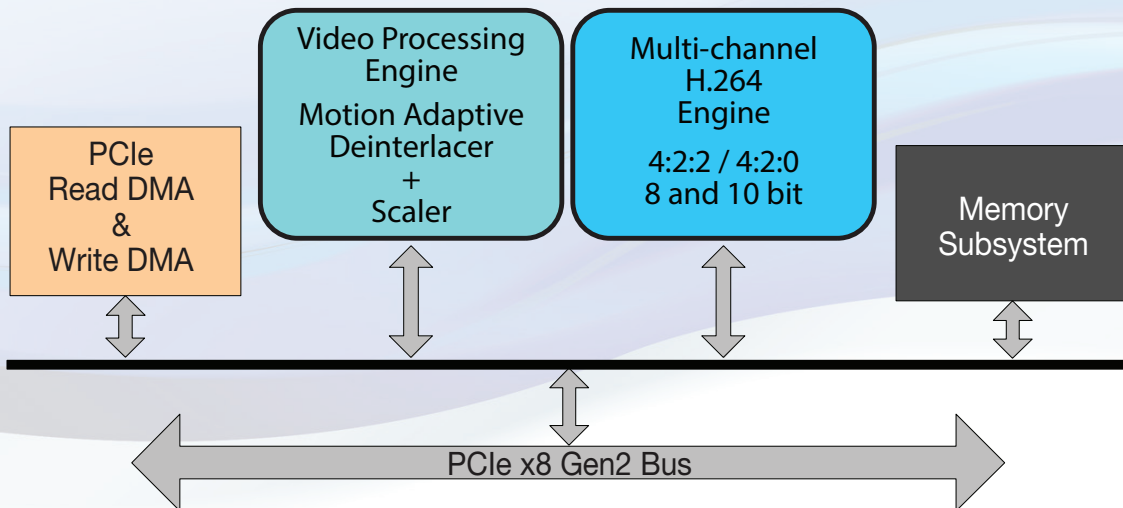
- Multi-channel Motion Adaptive Deinterlacer
 - Pixel based operation
 - Temporal and spacial-based motion estimation
 - Anti-Aliasing filtering
- Multi-channel scaler
 - Up, down and cross scaling
 - Supports custom resolutions and standard broadcast resolutions up to UHD

Performance Chart (Number of Streams)*

Resolutions	4:2:2 10-bit Intra frame	4:2:2 10-bit Long GOP	4:2:0 8-bit Long GOP
3840x2160p60	1	1	2
1920x1080p60	3	5	8
1920x1080p30	6	10	16
1920x1080i30	6	10	16
1280x720p60	6	10	16
Proxy	—	—	100 (@720X480p30)

* Performance numbers may vary according to encoding settings and workflows

Matrox M264 Block Diagram



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