

Matrox DSX SDK

Release Notes (Linux)

Version 1.2 (Official Release)

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Contents

- About these release notes 1
- Supported operating systems 1
- Development platform 1
- IMPORTANT - Before you upgrade 1
- What’s new in this release 1
 - New hardware features.....1
 - New software features 2
 - Improvements 3
 - New sample applications..... 3
- Resolved issues..... 3
- Known issues 4
- Downloading this release 5
- Where to find more information..... 5

Your notes

About these release notes

This document lists new features, known issues, and other important information applicable to the Matrox DSX SDK version 1.2 (build 21679) release for Linux.

Supported operating systems

This release supports the following operating systems:

- Ubuntu 12.04 LTS, 64-bit
- Ubuntu 14.04 LTS and 14.10, 64-bit
- CentOS 7, 64-bit
- OpenSUSE 13.1, 64-bit

Remarks

- For Ubuntu, use a generic kernel. Low latency kernel is not supported.
- Ubuntu 14.04.3 (kernel version 3.19) is not supported.

Development platform

This release supports the following development platform:

- GCC development platform version 4.6 or later.



Note A comparable Windows version of the SDK is also provided in this release. The Windows SDK supports Microsoft Visual Studio 2010 with Service Pack 1, Microsoft Visual Studio 2013 Update 3, and Microsoft Visual Studio 2015.

IMPORTANT - Before you upgrade

This release supports the libdispatch library version 0.1.3.1. For more information on libdispatch, see the specific installation guide for your Matrox product.

What's new in this release

This section lists the new features, improvements, and new sample applications for this release, including the ones that were introduced in the Beta releases.

New hardware features

The new hardware features are as follows:

- Support for the new Matrox M264 card, featuring hardware-based multi-channel 8- and 10-bit H.264 encoding, decoding, and transcoding capabilities. The M264 card supports:
 - Encoding of generic H.264 and Sony XAVC video streams (see the [Sony XAVC format](#) table).
 - Decoding H.264 streams.

For an overview of Matrox M264, see the M264 [overview](#) and [datasheet](#) on our website. For more information on how to use M264, see the *Matrox M264 Installation and User Guide*.

- Support for the new X.mio3 IP card, which offers multi-channel video I/O over 10 GbE plus onboard video processing. Currently, only the SMPTE 2022-6 standard is supported for inputs, outputs, audio, and VANC. For more information, see the X.mio3 IP [overview](#) and [datasheet](#) on our website.
- An updated FPGA now allows the X.mio3 and DSX LE4 cards to support ARGB capture (input stream).

New software features

The new software features are as follows:

- The following XAVC formats are supported by using the M264 hardware-based encoder:

Sony XAVC format	Resolution	Frame rate (fps)
Intra Class 100 (4:2:2, 10-bit) with CBG compression	720p	50 and 59.94
	1080i	25 and 29.97
	1080p	23.98, 25, 29.97, 50, and 59.94
Intra Class 300 and 480 (4:2:2, 10-bit) with CBG compression	2160p	23.98, 25, 29.97, 50, and 59.94
Intra Class 300 and 480 (4:2:2, 10-bit) with VBR compression	2160p	23.98, 25, 29.97, 50, and 59.94
Long GOP 25 (4:2:2, 10-bit)	1080i	25 and 29.97
	1080p	23.98, 25, and 29.97
Long GOP 35 (4:2:2, 10-bit)	1080i	25 and 29.97
	1080p	23.98, 25, 29.97, 50, and 59.94
Long GOP 50 (4:2:2, 10-bit)	720p	50 and 59.94
	1080i	25 and 29.97
	1080p	23.98, 25, 29.97, 50, and 59.94

- The **IMvALTCTConfiguration** interface has been added to the SDK to retrieve the input analog LTC without requiring an input stream. This is available for the Matrox X.mio3 FH and DSX LE4 FH cards.
- For user applications that do not require low latency, any audio sequence can be followed with the GetNodeContent() and SetNodeContent() methods in the DSX Topology API, as long as the maximum cumulative offset is not more than one video unit of audio samples.

Improvements

This release includes the following improvements:

- Asynchronous error handling has been added for the Matrox M264 encoder and decoder through a callback notification. This is demonstrated in the *mvsVideoDecoderTester* and *mvsVideoEncoderTester* sample application.
- Improved the MV_E_MODULE_BUSY error handling for Matrox M264 hardware encoder in the *mvsVideoEncoderTester* sample application.
- On the X.mio3 FH and X.mio3 LP cards, the following improvements have been made:
 - The Motion Adaptive De-Interlacer (MADI) quality has better motion detection and edge detection algorithms. Two new settings have been added in MADI that allow developers to adjust the sensitivity of motion detection and edge detection.
 - The upscaling quality has more horizontal and vertical filter taps. An alternate filtering setting is added to the scaler.

New sample applications

This release introduces the following new sample applications:

- *mvsVideoEncoderTester* Demonstrates how to instantiate and use the **IMvEncoderVideo** interface for encoding YUV frames into H.264 video streams using an M264 card. It also displays statistics, which can be used to indicate hardware performance.
- *mvsVideoDecoderTester* Demonstrates how to instantiate and use the **IMvDecoderVideo** interface for decoding H.264 video streams into YUV frames using an M264 card. It also displays statistics, which can be used to indicate hardware performance.
- *mvsSystemTopologyPlayback2022* Demonstrates how to play back a video file on a specified video output IP channel compliant with SMPTE 2022-6.
- *mvsSystemTopologyCapture2022* Demonstrates how to capture a video file from a specified video input IP channel compliant with SMPTE 2022-6. Passthrough is also an option.

Resolved issues

This release includes the following resolved issues:

- Audio periodically muted during the UHD Apple ProRes TDIR playback. (VPG-14770)
- Flex Reader returns 601 colorimetry on HD clips. (VPG-14945)
- Closed captioning corrupted after converting from 720p to 1080i. (VPG-15010)
- Potential crash with H264 software encoder. (VPG-14904)

- MOV playback of certain clips contain artifacts. (VPG-15026)
- Time stamp error issue when creating an IFF host node. (VPG-14598)
- System failure issue when saving a watchdog to a Matrox card's permanent memory. This issue applied to connectors J and L only, and not to connectors B, F, D, or H. (VPG-14671)
- The following M264-related issues have been resolved:
 - Issue with YUV padding to allow the output of *mvsVideoDecoderTester* to be compatible with the input of *mvsVideoEncoderTester*. You may need to regenerate your YUV source in the following resolutions/formats:
 - NTSC
 - PAL with YUV 8-bit
 - PAL with YUV 10-bit
 - 720p with V210
 - 1080i and 1080p with YUV 10-bit
 - COM leak issue in *mvsVideoEncoderTester* that could result in the application crashing when exiting.
 - Encoder error that occurred when trying to encode more than 13 streams in Sony XAVC Intra 100 CBG.
 - Random encoder corruption that would occur when encoding multiple streams at the same time. (VPG-14694)
 - M264 encoder compliance errors in the Sony Format Verifier tool for Sony XAVC Long GOP 25, 35, and 50 formats. (VPG-14343)
 - Corrupted video issues that occurred when encoding to certain proxy resolutions. (VPG-14642)

Known issues

This release includes the following known issues:

- When a reader stream is used to play back files with an unsupported codec, the application may crash. (VPG-14877)
- Known issues related to the M264 encoder and decoder:
 - M264 cannot playback Sony XAVC Intra Class 480 in real time at 60 fps.
 - You may encounter issues when using M264 encoding of interlaced video formats from the reader stream. (VPG-13602 and VPG-13381)
 - M264 capture of NTSC video results in field-inverted and choppy output. (VPG-13343)
 - You may experience corrupted video and other issues when decoding NTSC video. (VPG-14718, VPG-14582, and VPG-14580)

- You may experience issues if you try to use multiple M264 cards in the same process. (VPG-14674)

Downloading this release

You can download this release here:

ftp://video.matrox.com/DSX/12021679_DSX.Topology.sdk_1.2_Release

You can find a comparable Windows 64-bit version of the release in the **“Windows”** sub-folder at the same FTP link.

Where to find more information

For more information on how to use our hardware and software, refer to the documentation included with the SDK and the Knowledge Base available on our website: <http://www.matrox.com/video/en/support/developer/private/tools/>



Important The documentation installed with the Matrox SDK contains the most up-to-date information available at the time the installation program was compiled. It may not necessarily contain the *latest* information about our products. We recommend checking our website and forum for the latest information and any documentation updates.

Your notes



www.matrox.com/video