

H.264 Base/Main/High Profile Encoder

Version 02.20.00

Release Notes

February 2011

Build ID: 02.20.00.01

The release note is divided into the following sections:

- [New In This Release](#)
- [Validation Information](#)
- [Fixed In This Release](#)
- [Known Issues](#)

New In This Release

- Bugfix over build id 02.20.00.00
- CVBR and custom CBR1 rcalgo's parameters are configurable. For details, refer to user guide

Validation Information

Release Configuration	Description	Validation Platform
210_V_H264AVC_E_02_20	H.264 High Profile Encoder on DM365 EVM	DM365 EVM [Datasheet] [User Guide]

This release is validated on the following:

- DM365 EVM on LINUX
 - Framework components Version 2.25.02.06
 - XDAIS Version 6.25.02.11
 - LINUXUTILS Version 2.25.04.10
 - XDC tools Version 3.15.01.59
 - Codec Engine 2.24
 - BIOS Version 5.32.00.02
 - LSP Release Version 02.10.00.005
 - MVL tool chain Version 5.0



NOTE: This encoder is validated at a component level with the above version of tools. But the encoder can also works with other DM365 compatible versions of the tool.

Fixed In This Release

Defect ID	Description	Applicable Release Configuration
SDOCM00078140	Fixed slice size encoding not supported in encQuality = 3 encoder	210_V_H264AVC_E_02_20
SDOCM00078141	Temporal scalable video coding for interlace video is not supported in encQuality = 3	210_V_H264AVC_E_02_20
SDOCM00078816	CVBR behaves as normal VBR	210_V_H264AVC_E_02_20
SDOCM00078817	Decoder conformance fails for H241 and enableDDR configuration	210_V_H264AVC_E_02_20

Known Issues

Defect ID	Description	Applicable Release Configuration
SDOCM00055730	Warning related to HRD, minimum compression ratio, slice rate, MB number per sec are observed in syntax analyzer.	210_V_H264AVC_E_01_00
SDOCM00072763	Frametype in outargs is wrong only in all IDR frame case.	210_V_H264AVC_E_02_00

H.264 Base/Main/High Profile Encoder

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Release Notes

January 2011

Build ID: 02.20.00.00

The release note is divided into the following sections:

- [New In This Release](#)
- [Validation Information](#)
- [Fixed In This Release](#)
- [Known Issues](#)

New In This Release

- Supports new High speed platinum encoder (encQuality = 3) which can encode (1080p+ D1)@30 fps on DM368E .
- Changes in encodingPreset Values. For details, refer to user guide

Validation Information

Release Configuration	Description	Validation Platform
210_V_H264AVC_E_02_20	H.264 High Profile Encoder on DM365 EVM	DM365 EVM [Datasheet] [User Guide]

This release is validated on the following:

- DM365 EVM on LINUX
 - Framework components Version 2.25.02.06
 - XDAIS Version 6.25.02.11
 - LINUXUTILS Version 2.25.04.10
 - XDC tools Version 3.15.01.59
 - Codec Engine 2.24
 - BIOS Version 5.32.00.02
 - LSP Release Version 02.10.00.005
 - MVL tool chain Version 5.0

NOTE: This encoder is validated at a component level with the above version of tools. But the encoder can also works with other DM365 compatible versions of the tool.

Fixed In This Release

- None

Known Issues

Defect ID	Description	Applicable Release Configuration
SDOCM00055730	Warning related to HRD, minimum compression ratio, slice rate, MB number per sec are observed in syntax analyzer.	210_V_H264AVC_E_01_00
SDOCM00072763	Frametype in outargs is wrong only in all IDR frame case.	210_V_H264AVC_E_02_00
SDOCM00078140	Fixed slice size encoding not supported in encQuality = 3 encoder	210_V_H264AVC_E_02_20
SDOCM00078141	Temporal scalable video coding for interlace video is not supported in encQuality = 3	210_V_H264AVC_E_02_20

H.264 Base/Main/High Profile Encoder

Version 02.10.00

Release Notes

January 2011

Build ID: 02.10.00.07

The release note is divided into the following sections:

- [New In This Release](#)
- [Validation Information](#)
- [Fixed In This Release](#)
- [Known Issues](#)

New In This Release

- Bug fix over build ID 02.10.00.06.

Validation Information

Release Configuration	Description	Validation Platform
210_V_H264AVC_E_02_10	H.264 High Profile Encoder on DM365 EVM	DM365 EVM [Datasheet] [User Guide]

This release is validated on the following:

- DM365 EVM on LINUX
 - Framework components Version 2.25.02.06
 - XDAIS Version 6.25.02.11
 - LINUXUTILS Version 2.25.04.10
 - XDC tools Version 3.15.01.59
 - Codec Engine 2.24
 - BIOS Version 5.32.00.02
 - LSP Release Version 02.10.00.005
 - MVL tool chain Version 5.0

NOTE: This encoder is validated at a component level with the above version of tools. But the encoder can also works with other DM365 compatible versions of the tool.

Fixed In This Release

Defect ID	Description	Applicable Release Configuration
SDOCM00078042	Lowlatency mode is not working for 720x480 resolution	210_V_H264AVC_E_02_00
SDOCM00078043	Video corruption is observed when we encode interlace sequences in chain free P frame mode	210_V_H264AVC_E_02_10
SDOCM00078044	configured region of interest don't have good video quality	210_V_H264AVC_E_02_10
SDOCM00078045	bitstream generated from GDR, H241, CABAC does not match with GDR, CABAC.	210_V_H264AVC_E_02_10
SDOCM00077235	In multi channel encoder, if resetHDVICP flag is set to 0, IDR and I frame in all the instances should occur at same time.	210_V_H264AVC_E_02_00

Known Issues

Defect ID	Description	Applicable Release Configuration
SDOCM00055730	Warning related to HRD, minimum compression ratio, slice rate, MB number per sec are observed in syntax analyzer.	210_V_H264AVC_E_01_00
SDOCM00072763	Frametype in outargs is wrong only in all IDR frame case.	210_V_H264AVC_E_02_00

H.264 Base/Main/High Profile Encoder

Version 02.10.00

Release Notes

December 2010

Build ID: 02.10.00.06

The release note is divided into the following sections:

- [New In This Release](#)
- [Validation Information](#)
- [Fixed In This Release](#)
- [Known Issues](#)

New In This Release

- Bug fix over build ID 02.10.00.05.

Validation Information

Release Configuration	Description	Validation Platform
210_V_H264AVC_E_02_10	H.264 High Profile Encoder on DM365 EVM	DM365 EVM [Datasheet] [User Guide]

This release is validated on the following:

- DM365 EVM on LINUX
 - Framework components Version 2.25.02.06
 - XDAIS Version 6.25.02.11
 - LINUXUTILS Version 2.25.04.10
 - XDC tools Version 3.15.01.59
 - Codec Engine 2.24
 - BIOS Version 5.32.00.02
 - LSP Release Version 02.10.00.005

– MVL tool chain Version 5.0

NOTE: This encoder is validated at a component level with the above version of tools. But the encoder can also work with other DM365 compatible versions of the tool.

Fixed In This Release

Defect ID	Description	Applicable Release Configuration
SDOCM00077467	Encoder hangs if input YUV frame is completely white and NAL format is configured	210_V_H264AVC_E_02_00
SDOCM00077468	EDMA channel space gets corrupted during codec deletion	210_V_H264AVC_E_02_00

Known Issues

Defect ID	Description	Applicable Release Configuration
SDOCM00055730	Warning related to HRD, minimum compression ratio, slice rate, MB number per sec are observed in syntax analyzer.	210_V_H264AVC_E_01_00
SDOCM00072763	Frametype in outargs is wrong only in all IDR frame case.	210_V_H264AVC_E_02_00
SDOCM00077235	In multi channel encoder, if resetHDVICP flag is set to 0, IDR and I frame in all the instances should occur at same time.	210_V_H264AVC_E_02_00

H.264 Base/Main/High Profile Encoder

Version 02.10.00

Release Notes

December 2010

Build ID: 02.10.00.05

The release note is divided into the following sections:

- [New In This Release](#)
- [Validation Information](#)
- [Fixed In This Release](#)
- [Known Issues](#)

New In This Release

- Bugfix over build ID 02.10.00.04.

Validation Information

Release Configuration	Description	Validation Platform
210_V_H264AVC_E_02_10	H.264 High Profile Encoder on DM365 EVM	DM365 EVM [Datasheet] [User Guide]

This release is validated on the following:

- DM365 EVM on LINUX
 - Framework components Version 2.25.02.06
 - XDAIS Version 6.25.02.11
 - LINUXUTILS Version 2.25.04.10
 - XDC tools Version 3.15.01.59
 - Codec Engine 2.24
 - BIOS Version 5.32.00.02
 - LSP Release Version 02.10.00.005

– MVL tool chain Version 5.0

NOTE: This encoder is validated at a component level with the above version of tools. But the encoder can also work with other DM365 compatible versions of the tool.

Fixed In This Release

Defect ID	Description	Applicable Release Configuration
SDOCM00077234	1080p + D1 multichannel encoding fails when disable reset hdvicp for every frame	210_V_H264AVC_E_02_00

Known Issues

Defect ID	Description	Applicable Release Configuration
SDOCM00055730	Warning related to HRD, minimum compression ratio, slice rate, MB number per sec are observed in syntax analyzer.	210_V_H264AVC_E_01_00
SDOCM00072763	Frametype in outargs is wrong only in all IDR frame case.	210_V_H264AVC_E_02_00
SDOCM00077235	In multi channel encoder, if resetHDVICP flag is set to 0, IDR and I frame in all the instances should occur at same time.	210_V_H264AVC_E_02_00

H.264 Base/Main/High Profile Encoder

Version 02.10.00

Release Notes

December 2010

Build ID: 02.10.00.04

The release note is divided into the following sections:

- [New In This Release](#)
- [Validation Information](#)
- [Fixed In This Release](#)
- [Known Issues](#)

New In This Release

- Bugfix over build ID 02.10.00.03.

Validation Information

Release Configuration	Description	Validation Platform
210_V_H264AVC_E_02_10	H.264 High Profile Encoder on DM365 EVM	DM365 EVM [Datasheet] [User Guide]

This release is validated on the following:

- DM365 EVM on LINUX
 - Framework components Version 2.25.02.06
 - XDAIS Version 6.25.02.11
 - LINUXUTILS Version 2.25.04.10
 - XDC tools Version 3.15.01.59
 - Codec Engine 2.24
 - BIOS Version 5.32.00.02
 - LSP Release Version 02.10.00.005

— MVL tool chain Version 5.0

NOTE: This encoder is validated at a component level with the above version of tools. But the encoder can also work with other DM365 compatible versions of the tool.

Fixed In This Release

Defect ID	Description	Applicable Release Configuration
SDOCM00077064	In videos with high motion scene changes, huge motion vectors observed.	210_V_H264AVC_E_02_10
SDOCM00077066	Dynamic updation of constrained set flag and numUnitInTicks not happening properly.	210_V_H264AVC_E_02_10

Known Issues

Defect ID	Description	Applicable Release Configuration
SDOCM00055730	Warning related to HRD, minimum compression ratio, slice rate, MB number per sec are observed in syntax analyzer.	210_V_H264AVC_E_01_00
SDOCM00072763	Frametype in outargs is wrong only in all IDR frame case.	210_V_H264AVC_E_02_00

H.264 Base/Main/High Profile Encoder

Version 02.10.00

Release Notes

November 2010

Build ID: 02.10.00.03

The release note is divided into the following sections:

- [New In This Release](#)
- [Validation Information](#)
- [Fixed In This Release](#)
- [Known Issues](#)

New In This Release

- Support for Gradual Decoder Refresh(GDR)
- Support for Adaptive Long Term Reference Frame Insertion.
- Configurable Scaling Matrix and VUI parameters
- Improved Video quality at low bit rate
- Bugfix over build ID 02.10.00.02.

Validation Information

Release Configuration	Description	Validation Platform
210_V_H264AVC_E_02_10	H.264 High Profile Encoder on DM365 EVM	DM365 EVM [Datasheet] [User Guide]

This release is validated on the following:

- DM365 EVM on LINUX
 - Framework components Version 2.25.02.06
 - XDAIS Version 6.25.02.11
 - LINUXUTILS Version 2.25.04.10
 - XDC tools Version 3.15.01.59



- Codec Engine 2.24
- BIOS Version 5.32.00.02
- LSP Release Version 02.10.00.005
- MVL tool chain Version 5.0

NOTE: This encoder is validated at a component level with the above version of tools. But the encoder can also works with other DM365 compatible versions of the tool.

Fixed In This Release

Defect ID	Description	Applicable Release Configuration
SDOCM00076714	When we enable low latency mode and H241 mode, bits generated not matching with low latency disable.	210_V_H264AVC_E_02_10
SDOCM00076715	Currently codec asking required buffers depending upon max temporal layer supported, it should be depends what temporal layer user configured	210_V_H264AVC_E_02_10
SDOCM00076726	When H.264 encoder runs in the chain free P frame mode, number of buffers requested is more than required.	210_V_H264AVC_E_02_10
SDOCM00076729	When we create JPEG before creating H264 Encoder and running only H264 Encoder performance drop is observed	210_V_H264AVC_E_02_10
SDOCM00076730	When we configuring RC_PRESET to USER_DEFINED, coded returning warning saying invalid RC_PRESET. But USER_DEFINED is a valid option	210_V_H264AVC_E_02_10
SDOCM00075713	When the memory allocated for EDMA channels is freed, it is observed that the value is different from that allocated during creation	210_V_H264AVC_E_02_10
SDOCM00075384	CPU is loaded more than expected when H.264 encoder version 02.00.00.10 is integrated in system	210_V_H264AVC_E_02_10

Known Issues

Defect ID	Description	Applicable Release Configuration
SDOCM00055730	Warning related to HRD, minimum compression ratio, slice rate, MB number per sec are observed in syntax analyzer.	210_V_H264AVC_E_01_00
SDOCM00072763	Frametype in outargs is wrong only in all IDR frame case.	210_V_H264AVC_E_02_00
SDOCM00072707	Forcing of IDR is not happening when RC Params change at runtime at Bottom Field.	210_V_H264AVC_E_02_10

H.264 High Profile Encoder

Version 02.10.00

Release Notes

October 2010

Build ID: 02.10.00.02

The release note is divided into the following sections:

- [New In This Release](#)
- [Validation Information](#)
- [Fixed In This Release](#)
- [Known Issues](#)

New In This Release

- Improved I frame horizontal noise suppression
- Bugfix over build ID 02.10.00.01.

Validation Information

Release Configuration	Description	Validation Platform
210_V_H264AVC_E_02_10	H.264 High Profile Encoder on DM365 EVM	DM365 EVM [Datasheet] [User Guide]

This release is validated on the following:

- DM365 EVM on LINUX
 - Framework components Version 2.25.02.06
 - XDAIS Version 6.25.02.11
 - LINUXUTILS Version 2.25.04.10
 - XDC tools Version 3.15.01.59
 - Codec Engine 2.24
 - BIOS Version 5.32.00.02

- LSP Release Version 02.10.00.005
- MVL tool chain Version 5.0

NOTE: This encoder is validated at a component level with the above version of tools. But the encoder can also works with other DM365 compatible versions of the tool.

Fixed In This Release

Defect ID	Description	Applicable Release Configuration
SDOCM00075128	In H241 mode, if DDR buffers are used in place of IMCOP buffers, video corruption is observed.	210_V_H264AVC_E_02_10
SDOCM00075129	In H241 mode, AIR is not behaving properly	210_V_H264AVC_E_02_10
SDOCM00075131	In H241 mode, encoder hangs when AIR and inter8x8 transform are enabled.	210_V_H264AVC_E_02_10

Known Issues

Defect ID	Description	Applicable Release Configuration
SDOCM00055730	Warning related to HRD, minimum compression ratio, slice rate, MB number per sec are observed in syntax analyzer.	210_V_H264AVC_E_01_00
SDOCM00072763	Frametype in outargs is wrong only in all IDR frame case.	210_V_H264AVC_E_02_00
SDOCM00072707	Forcing of IDR is not happening when RC Params change at runtime at Bottom Field.	210_V_H264AVC_E_02_10

H.264 High Profile Encoder

Version 02.10.00

Release Notes

September 2010

Build ID: 02.10.00.01

The release note is divided into the following sections:

- [New In This Release](#)
- [Validation Information](#)
- [Fixed In This Release](#)
- [Known Issues](#)

New In This Release

- Mega Pixel supports input video width up to 4080 pixels.
- Bugfix over build ID 02.10.00.00.

Validation Information

Release Configuration

210_V_H264AVC_E_02_10

Description

H.264 High Profile Encoder on
DM365 EVM

Validation Platform

DM365 EVM
[Datasheet] [User Guide]

This release is validated on the following:

- DM365 EVM on LINUX
 - Framework components Version 2.25.02.06
 - XDAIS Version 6.25.02.11
 - LINUXUTILS Version 2.25.04.10
 - XDC tools Version 3.15.01.59
 - Codec Engine 2.24
 - BIOS Version 5.32.00.02
 - LSP Release Version 02.10.00.005
 - MVL tool chain Version 5.0

NOTE: This encoder is validated at a component level with the above version of tools. But the encoder can also work with other DM365 compatible versions of the tool.

Fixed In This Release

Defect ID	Description	Applicable Release Configuration
SDOCM00072705	In H264 Encoder with H241 enable, and slice size is configured as 2048 bytes or 2040 bytes video corruption observed.	210_V_H264AVC_E_02_10
SDOCM00072703	Encoder Hangs in H241 case for smaller slice size (When we configured slice size less than 200bytes, encoder hangs).	210_V_H264AVC_E_02_10
SDOCM00073523	Encoder output gets corrupted when IDR frames are set dynamically	210_V_H264AVC_E_02_10
SDOCM00074551	Target Frame rate change not taking any effect, unless there is change in target bitrate	210_V_H264AVC_E_02_10
SDOCM00074550	The encoder does not take any bitrate modification after targetBitrate is set to 0	210_V_H264AVC_E_02_10
SDOCM00074549	Level limit in not being set properly	210_V_H264AVC_E_02_10
SDOCM00072889	ARF/MRCF does not pass the decoder conformance in std mode	210_V_H264AVC_E_02_10

Known Issues

Defect ID	Description	Applicable Release Configuration
SDOCM00055730	Warning related to HRD, minimum compression ratio, slice rate, MB number per sec are observed in syntax analyzer.	210_V_H264AVC_E_01_00
SDOCM00072763	Frametype in outargs is wrong only in all IDR	210_V_H264AVC_E_02_00

Defect ID	Description	Applicable Release Configuration
	frame case.	
SDOCM00072707	Forcing of IDR is not happening when RC Params change at runtime at Bottom Field.	210_V_H264AVC_E_02_10

DRAFT

H.264 High Profile Encoder

Version 02.10.00

Release Notes

September 2010

Build ID: 02.10.00.00

The release note is divided into the following sections:

- [New In This Release](#)
- [Validation Information](#)
- [Fixed In This Release](#)
- [Known Issues](#)

New In This Release

- Supports platinum encoder which can do 1080p@30 frame/1080i@60 fields per sec on DM368
- Added support for SVC-T up to four layers.
- Added support for chain free P frames encoding.
- Supports fixed slice size encoding feature.
- Added support for ARF (Adaptive Reference field) and MRCRF (Most Recent Coded Reference Field) encoding.
- Added support for Constrained VBR Rate control (CVBR).
- Added support for fixed frame size rate control.
- Added support for customized VUI encoding.
- Added support for returning slice sizes in case of NAL encoding.

Validation Information

Release Configuration	Description	Validation Platform
210_V_H264AVC_E_02_10	H.264 High Profile Encoder on DM365 EVM	DM365 EVM [Datasheet] [User Guide]

This release is validated on the following:

- DM365 EVM on LINUX
 - Framework components Version 2.24.01
 - XDC tools Version 3.15.01.59
 - Codec Engine 2.24
 - BIOS Version 5.32.00.02
 - LSP Release Version 02.10.00.005
 - MVL tool chain Version 5.0

NOTE: This encoder is validated at a component level with the above version of tools. But the encoder can also work with other DM365 compatible versions of the tool.

Fixed In This Release

none

Known Issues

Defect ID	Description	Applicable Release Configuration
SDOCM00055730	Warning related to HRD, minimum compression ratio, slice rate, MB number per sec are observed in syntax analyzer.	210_V_H264AVC_E_01_00
SDOCM00072763	Frametype in outargs is wrong only in all IDR frame case.	210_V_H264AVC_E_02_00
SDOCM00072707	Forcing of IDR is not happening when RC Params change at runtime at Bottom Field.	210_V_H264AVC_E_02_10
SDOCM00072705	In H264 Encoder with H241 enable, and slice size is configured as 2048 bytes or 2040 bytes video corruption observed.	210_V_H264AVC_E_02_10
SDOCM00072703	Encoder Hangs in H241 case for smaller slice size (When we configured slice size less than 200bytes, encoder hangs).	210_V_H264AVC_E_02_10

H.264 High Profile Encoder

Version 02.00.00

Release Notes

June 2010

Build ID: 02.00.00.09

The release note is divided into the following sections:

- [New In This Release](#)
- [Validation Information](#)
- [Fixed In This Release](#)
- [Known Issues](#)

New In This Release

- Supports platinum encoder which can do 1080p@30 frame/1080i@60 fields per sec on DM368
- Added support for Region of Interest Coding and pseudo two pass encoding
- Added support for using DDR memory instead of VICP buffers through API control.
- Added number of MB and MB row based multi-slice support
- Added low latency interface for encoded bit-stream
- Support for dynamic change of resolution.
- Added option of not sending IDR frame in case of any change in rate control parameter.
- Quality tuning of DM365 encoder with reference DM365 simulator.
- Support for encQuality = 1 depreciated
- Changes in encoderPreset Values. For details, refer to user guide.

Validation Information

Release Configuration	Description	Validation Platform
210_V_H264AVC_E_02_00	H.264 High Profile Encoder on DM365 EVM	DM365 EVM [Datasheet] [User Guide]

This release is validated on the following:

- DM365 EVM on LINUX
 - Framework components Version 2.24.01
 - XDC tools Version 3.15.01.59
 - Codec Engine 2.24
 - BIOS Version 5.32.00.02
 - LSP Release Version 02.10.00.005
 - MVL tool chain Version 5.0

NOTE: This encoder is validated at a component level with the above version of tools. But the encoder can also work with other DM365 compatible versions of the tool.

Fixed In This Release

Defect ID	Description	Applicable Release Configuration
SDOCM00071982	(Child of SDOCM00055175) Bit rate deviation with Interlaced Encoding, RC tuning required	210_V_H264AVC_E_02_00
SDOCM00071980	(Child of: SDOCM00055632) Frame skips are observed with CBR and lower max delay values [viz. 300].	210_V_H264AVC_E_02_00
SDOCM00061709	Visual artifacts observed in encoded bitstreams for interlaced content.	210_V_H264AVC_E_02_00
SDOCM00063564	When continuous I/IDR frames are encoded, QP remains constant for all the I/IDR frames resulting in QP saturation	210_V_H264AVC_E_02_00
SDOCM00068586	Dynamic update of AIR does not work	210_V_H264AVC_E_02_00
SDOCM00069909	frame_cropping_flag does not get reset after XDM_RESET.	210_V_H264AVC_E_02_00

Known Issues

Defect ID	Description	Applicable Release Configuration
SDOCM00055730	Warning related to HRD, minimum compression ratio, slice rate, MB number per sec are observed in syntax analyzer.	210_V_H264AVC_E_01_00