TI81xx-HDVPSS-01.00.01.26 ReleaseNotes

HDVPSS Version 01.00.01.26

Release Notes
February 1st, 2011

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Introduction

This release notes provides important information that will assist you in using the HDVPSS software package. This document provides the product information and know issues that are specific to the HDVPSS software package.

What is Supported

Common

- Supports HDVPSS drivers for TI814x/TI816x EVMs
- Supports FVID2 interfaces for all the supported drivers
- Package includes HDVPSS DSP/BIOS driver sources, sample applications that demonstrate use of HDVPSS DSP/BIOS drivers, sample applications executables

Display Drivers

- Supports Display Controller driver
- Supports Bypass Path Display driver
- Supports Secondary Path SD Display driver
- Supports Graphics Display driver

Capture Drivers

- Supports VIP capture driver

Memory to Memory Drivers

- Supports Scalar driver through Secondary Path 0-SC5
- Supports Scalar driver through Bypass Path 0/1-SC5
- Supports SC3/4 Scalar driver through Secondary Path 0/1-SC3/4- VIP0/1
- Supports Noise filter driver
- Supports DEI driver

Driver Maturity

Driver Maturity

Driver	TI816x	TI814x
VIP 0/1 Capture	EA	EA
Display Controller	EA	EA
Bypass Path 0/1 Display	Beta	EA
Secondary Path 1 SD Display	EA	EA
GRPX Path 0/1/2 Display	Beta	EA
NSF M2M	Beta	EA
DEIH-WB0 M2M	Beta	NA
DEIH-VIP0 SC3 M2M	Beta	NA
DEIH-WB0-VIP0 SC3 M2M	Beta	NA
DEI-WB1 M2M	Beta	NA
DEI-VIP1 SC4 M2M	Beta	NA
DEI-WB1-VIP1 SC4 M2M	Beta	NA
DEI-WB0 M2M	NA	EA
DEI-WB0-VIP0 SC3 M2M	NA	EA
Secondary Path 0 - SC5 M2M	Beta	EA
Bypass Path 0/1 - SC5 M2M	EA	Not supported
Secondary Path 0/1 - VIP SC3/4 M2M	EA	Not supported
Proxy Server	Beta	EA

Supported/Validated Examples

Supported/Validated Examples

Examples	TI816x	TI814x
VIP Capture	YES	YES
Chains	YES	YES (All the options of chains are not supported)
Mosaic Display	YES	YES
SD Display	YES	YES
Tri Display	YES	YES
GRPX Display	YES	YES
Multi-Region GRPX Display	YES	YES
M2M NSF	YES	YES
M2M DEI	YES	YES
M2M DEI Mode 1	YES	NA

M2M SC Down Scale	YES	YES
M2M SC Up Scale	YES	YES
M2M SC Multi Channel	YES	YES

- Examples could be foubd at $HDVPSS_Install_Dir\packages\ti\psp\examples\common\vps\
- Platform specific examples could be found at $HDVPSS_Install_Dir\packages\ti\psp\examples\ti814x OR ti816x

What is Not Supported

TI816x

- Runtime parameters are not supported for all m2m drivers(except NF) while operating in Subframe mode.

TI814x

- Secondary Path 0/1 - VIP SC3/4 M2M
- Stenciling feature of GRPX Display Driver is not supported
- Option 5, 6, 7 and 8 of chains sample application in VC Daughter card is not supported

Fixed in this Release

Common

- SDOCM00077203: [DCTRL] IOCTL_VPS_DCTRL_GET_VENC_OUTPUT did not return correct vencNodeNum if IOCTL_VPS_DCTRL_SET_VENC_OUTPUT was not called
- SDOCM00078305: [SDDisplay]: Small frame size causes hang on sd display on second iteration
- SDOCM00076975: [Capture]:Capture driver is reporting lot of desc error for YUV420 and YUV422 output
- SDOCM00078084: [VIP Capture] Implement VIP reset IOCTL based on individual instance handles
- SDOCM00075785: [M2M NSF] Driver not working in TNF bypass only mode
- SDOCM00077828: [SC] Unwanted prints in the ScalarDriver
- SDOCM00078493: [M2m SC] SC5 all instances slice based processing is not working.
- SDOCM00076978: [Chains]:Display shows sometimes jerks for Single and multi channel options
- SDOCM00076981: [Chains]: Lot of frame drops observed in chains application for single and multi channel use cases
- SDOCM00078122: [GEL] HDVPSS Init fails with Invalid Memory Access error in CCSv5.0.1.00026
- SDOCM00077541: HDVPSS is not on latest makerules

TI816x

- SDOCM00076965: [SII9022] A small green bar is seen on the output from sii9022
- SDOCM00077539: 2TV simultaneous display not functional with driver version HDVPSS_01_00_01_25
- SDOCM00077599: The frame drop feature in capture driver is not functional for single channel 720p captu
- SDOCM00074057: make sure the capture drivers can handle dirty switches
- SDOCM00075203: [DEI M2M] Compressor enable is not supported in progressive TNR mode
- SDOCM00077553: Scalar coefficients loading shall be allowed once the call-back is done even if the FVID2_dequeue is not happened
- SDOCM00076436: Creation of SC4 Fails when VIP2 is active and already created
- SDOCM00078067: [TVP5158] HDVPSS driver down't follow what is recommended for resetting TVP5158

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- SDOCM00078332: [HDVPSS-HDMI] Display quality is not good with 1080P60 output
- SDOCM00077435: [TVP7002] TVP 7002 won't work on VC card
- SDOCM00078398: [PLL] PLL is not kept in bypass before re-programming
- SDOCM00078086: [Memory Map] Alignment request on common memory map for Feb Integra SDK for Centaurus
- SDOCM00075802: [Prints] False prints at console

New in this Release

Common

- Added IOCTL to configure PLL Frequency.
- Added interface to program the custom display-resolution (Not supported for HDMI driver).

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- Support for Slice based processing in Noise Filter Driver
- Added support for YUV422SP format in capture
- Bug fixes

TI814x

- SD Display is validated
- Change in the way of running application using on Chip HDMI, Instruction can be found at Sample Application with On-Chip HDMI section of HDVPSS Display Driver User Guide
- Capture using TVP7002
- Bug Fixes

Known Issues / Limitations

Common

- Few seconds delay is needed between board power cycle. When power cycle is done very fast, board doesn't get reset properly and hence I2C devices don't respond
- NTSC capture through VIP wil result in 243 lines per field instead of 240 lines. There is no mechanism to crop this in the VIP. Hence application has to allocate a bigger buffer and ignore the extra lines
- [Chains]: Option 8 in VS chains(netra)option 5 in VS chains(centarus) are not working due to lack of heap memory(Memory map modification is required to make it work)
- SDOCM00078387: [Display]: Mode 1080I is not working on some of the TVs on HDMI output
- SDOCM00077945: [Display] 2nd and 3rd VSYNC interrupts happens back to back within 1ms
- SDOCM00077713: [Chains] Repeated start/stop with GRPX enable hangs display driver during display start
- SDOCM00077946: [M2M NSF]SNF only and SNF and TNF both bypass modes not working -- HW bug, will be fixed in next version of silicon
- SDOCM00074833: [User Guide] Table of contents missing in HDVPSS user guide

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- SDOCM00076986: [Chains]: Chains option-9 with the DVO2 output is not working
- SDOCM00077445: [Chains] Multi-CH System use-case hangs in long duration test when display is set as 1080p60
- SDOCM00077446: Multi-CH System use-case hangs in long duration test when dual display is option is used
- SDOCM00075035: [HDVPSS]codes lost in VpsDlm_startStopClients
- SDOCM00076987: [Capture]:Capture does not report correct frame size for RGB output stream - Hardware Issue
- SDOCM00074110: [Capture]: ioctl IOCTL_VPS_CAPT_GET_CH_STATUS does not return size of the frame correctly.

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- SDOCM00077344: Stenciling feature is not supported in GRPX display driver - Hardware Limitation
- SDOCM00077437: Capture Driver - Lot of descriptors errors seen. No impact on the frames captured.
- SDOCM00078550: [Capture - TI814X] TVP7002 - 24 Bit capture doesn't work as expected
- SDOCM00078598: [Capture - TI814X] VC Alpha 1 - TVP7002 - Capture is intermittent - On some boards Luma is missing, on some other no frames are captured. Seems to be a Board Issue. Alpha 2 VC board dosen't have this issue.
- SDOCM00078546: HDMI PLL doesn't get locked on some of Centaurus boards. This is a known issue. Will be solved in PG2.0 version of Silicon.

Installation and Usage

Installation and Usage of the HDVPSS package could be found at HDVPSS User Guide

Upgrade and Compatibility Information

Following are the interfaces changes in the HDVPSS drivers compared to the previous release.

- File "$HDVPSS_Install_Dir\packages\ti\psp\vps\vps_displayCtrl.h" removed flag `vertDecimation` from `Vps_DcCigMainConfig` structure
- File "$HDVPSS_Install_Dir\packages\ti\psp\vps\vps_displayCtrl.h" removed `Vps_DcTimingInfo` structure
- File "$HDVPSS_Install_Dir\packages\ti\psp\vps\vps_displayCtrl.h" removed `frameWidth`, `frameHeight` and `scanFormat` from `Vps_DcModeInfo` structure and added an instance of `FVID2_ModeInfo` in this structure
- File "$HDVPSS_Install_Dir\packages\ti\psp\vps\fvid2.h" added structure `FVID2_ModeInfo` to specify timing information for any mode
- File "$HDVPSS_Install_Dir\packages\ti\psp\vps\fvid2.h" API `FVID2_getStandardInfo` added to get information about various FVID2 standards. More details could be found in the header file
- File "$HDVPSS_Install_Dir\packages\ti\psp\vps\vps_display.h" structure `Vps_DispRtParams` pointers added `inFrmPrms`, `vpdmaPosCfg`. These pointers are added to change input frame width, height and position during runtime. More details could be found in the userGuide and header file.
- File "$HDVPSS_Install_Dir\packages\ti\psp\vps\vps_m2mNsf.h" members `VPS_NSF_BYPASS_MODE_NONE` of enum `Vps_NsfBypassMode` has been changed to `VPS_NSF_DISABLE_NONE` to be in sync with TRM
- File "$HDVPSS_Install_Dir\packages\ti\psp\vps\vps_m2mNsf.h" member `inCropCfg` of structure `Vps_NsfDataFormat` is removed as cropping is not supported by NF hardware
- File "$HDVPSS_Install_Dir\packages\ti\psp\devices\vps_sii9022a.h" changed `Vps_SiI9022aModes modeId` with `FVID2_standard standard`

- File "$HDVPSS_Install_Dir\packages\ti\psp\platforms\vps_platform.h", `outputClk` member of `Vps_SystemVPllClk` is now in terms of KHz and not of type enum `Vps_VPllClkFreq`

Dependencies

This release requires following tools/packages to be installed.

- Code Composer Studio Version : 4.2.0.09000 or 5.0.1.000xx
- XDC Tools Version : 3.20.07.86
- BIOS Version : 6.31.03.25
- CG Tool (TMS470) Version : 4.6.3
- IPC : 1.22.03.23
- Syslink : 02.00.00.67_alpha2

Devices Supported

- TI816x EVM
- TI814x EVM

Validation Information

- This release is validated on TI814x/TI816x EVMs for the above mentioned components.

Technical Support and Product Updates

For further information or to report any problems, contact http://e2e.ti.com or http://community.ti.com or http://support.ti.com.

Article Sources and Contributors

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