# TI81xx-HDVPSS-01.00.01.25 ReleaseNotes

## HDVPSS Version 01.00.01.25

**Release Notes**
**December 17th, 2010**

## Document License



## 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 sources on HDVPSS DSP/BIOS drivers, sample applications executable

### Display Drivers

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

### Capture Drivers

- Supports VIP capture driver (For TI814x only VIP 0 port A and port B are supported)

### 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 | Beta | EA |
| Bypass Path 0/1 Display | Beta | EA |
| Secondary Path 1 SD Display | EA | Not supported |
| 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-VIP0 SC3 M2M | NA | Not supported |
| 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 | Not supported |

## 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 (On-Chip HDMI not validated) |
| SD Display | YES | NO |
| Tri Display | YES | NO |
| 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 | NO |
| M2M SC Up Scale | YES | NO |
| M2M SC Multi Channel | YES | YES |

# What is Not Supported

## TI816x

- None

## TI814x

- SD Display is not supported
- Secondary Path 0/1 - VIP SC3/4 M2M
- SubFrame based processing in m2m drivers is not supported
- Stenciling feature of GRPX Display Driver is not supported
- Tri-Display sample application is not supported
- Option 5, 6, and 7 of chains sample application is not supported
- CCS based HDMI.out is not supported

# Fixed in this Release

## Common

- SDOCM00076819: HDVPSS 1.0.1.24 does not build on linux
- SDOCM00073152: [DC]: Re-Run of display is not working if display path is connected to VENC throug HDCOMP Mux
- SDOCM00075582: [Display] Driver doesn't update the runtime parameter present in the first frame submitted to driver
- SDOCM00076324: [GRPX]Driver fails to handle the region scaling case where the input region size is bigger than the venc output size
- SDOCM00072826: [SCWRBK]Scalar Writeback giveing warning when multiple frame submitted with same channel number
- SDOCM00075693: SCWRBK M2M: Driver open count is incremented even in failure case
- SDOCM00076828: [UserGuide] VIP Capture sample application section mentions many .xem3 application which is not present in the package

### TI816x

- SDOCM00076145: [DCTRL]: VENC overflow is not cleared at the startup
- SDOCM00075902: [SD Display]: Display does not start when Secondary path is connected to SD Venc with the small input video size
- SDOCM00075186: [TrippleDisplay]: Flickering on DVO2 output for option 1 in tridisplay application
- SDOCM00077000: [M2M SC] SEC0/1-SC3/SC4 scalar driver uses wrong SOCH number instead of using SOCH on secondary chroma client
- SDOCM00072187: [M2M DEI] Trailing effect seen on DEI HQ output in 5 field, advanced deinterlacing mode

### TI814x

- SDOCM00075801: FVID2_DeInt is not working
- SDOCM00076999: Vps_platformGetBoardId was returning incorrect boardId
- SDOCM00074780: [VIP Capture] Assert is generated when the chains is ran second time
- SDOCM00076739: [DEI M2M] Line average mode is used for deinterlacing even though 3 field mode is selected
- SDOCM00075907: [DEI] Centaurus DEI chains seems to drop frames after 50 mins or so...

## New in this Release

### Common

- Addition of VIP reset IOCTL `IOCTL_VPS_CAPT_RESET_VIP0` and `IOCTL_VPS_CAPT_RESET_VIP1`. Refer API guide for details
- Addition of NSF read advance config IOCTL `IOCTL_VPS_READ_ADV_NSF_CFG`

### TI816x

- M2M DEI - Supports runtime change of input resolution (only in DEI bypass mode)
- M2M SC3/SC4 - Supports YUV422SP input format
- M2M SC3/SC4 - Supports runtime change of input resolution, output resolution and scalar parameters
- A8 CCS executable to configure on-Chip HDMI encoder
- Bug fixes

### TI814x

- On-chip HDMI is supported on A8 side character driver
- VC chain option is verified with SIL9135 HDMI receiver
- GRPX driver is validated
- 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
- Cropping feature in all driver is done using scalar rather than VPDMA. Hence the entire frame bandwidth will be consumed
- 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

- SDOCM00075785: [M2M NSF] Driver not working in TNF bypass only mode
- SDOCM00076965: [SII9022] A small green bar is seen on the left corner from sii9022 output
- SDOCM00074833: [User Guide] Table of contents missing in HDVPSS user guide

### TI816x

- SDOCM00076436: Creation of SC4 Fails when VIP2 is active and already created
- SDOCM00074824: Randomly display getting blank with mosaic layout change
- SDOCM00075203: [DEI M2M] Compressor enable is not supported in progressive TNR mode

### TI814x

- SDVENC is not validated
- On-chip HDMI does not work with 1080P60 mode
- Stenciling feature is not supported in GRPX display driver
- SDOCM00077435: TVP 7002 won't work on VC card
- SDOCM00077437: Capture Lot of descriptors errors seen. No impact on the frames captured.

## 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 "$HDVPSS_Install_Dir\packages\ti\psp\vps\vps_capture.h" structure `Vps_CaptCreateParams` variable added `inScanFormat`. Userneed to set this variable depending upon the input scan format. More details could be found in the header file and userGuide.
- File "$HDVPSS_Install_Dir\packages\ti\psp\vps\vps_displayCtrl.h" structure `Vps_DcOutputInfo` variables added `dvoFidPolarity`, `dvoVsPolarity`, `dvoHsPolarity` and `dvoActVidPolarity`. These variables needs to be set according to the polarity of the control signals required out of the Venc. More details could be found in the userGuide and header file.
- File "$HDVPSS_Install_Dir\packages\ti\psp\vps\vps_displayCtrl.h" member `tInfo` of structure `Vps_DcModeInfo` has been changed from a pointer to an instance.
- Occurrence of DEIMQ/DeiMq for DEI enums, file name, structures and structure members are replaced with DEI/Dei. Like `Vps_DeiMqEdiMode` is renamed to `Vps_DeiEdiMode`
- XDC build support is removed
- Functions are added in platform folder to get the CPU, base board and daughter card revisions.
- `clkEdge` field added to `Vps_VideoEncoderCreateParams` structure to enable the application to specify whether the clock should be enabled in rising or falling clock edge.

## Dependencies

This release requires following tools/packages to be installed.

- Code Composer Studio Version : 4.2.0.09000 or 5.0.0.000xx
- XDC Tools Version : 3.20.05.76
- BIOS Version : 6.31.00.18
- CG Tool (TMS470) Version : 4.6.3
- IPC : 1.22.00.19
- Syslink : 02.00.00.66_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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