

Processor SDK - Vision

Version 03.07.01

Release Notes
July 2019

Contents

Major New Features in the Release	3
<i>Installation and Usage (BIOS ONLY)</i>	<i>3</i>
<i>Example use-cases (BIOS ONLY).....</i>	<i>3</i>
<i>SDK Features (BIOS ONLY)</i>	<i>3</i>
<i>Example use-cases (Linux + Bios).....</i>	<i>8</i>
<i>SDK Features (Linux + Bios).....</i>	<i>8</i>
<i>Installation and Usage (Linux + Bios)</i>	<i>10</i>
Component Versions.....	10
Validation Hardware	10
SW Quality – Status	12
Bugs Fixed In This Release	14
Known Issues	16
Known Limitations.....	17
Compatibility Info.....	18



IMPORTANT NOTES: <MUST READ>

- *VSDK folder structure has been modified since 3.0 releases. Kindly refer VisionSDK_Getting_Started_Guide.pdf for details.*
- *VSDK build flow has been modified to improve the build time, see the VisionSDK_UserGuide_BuildSystem.pdf for details.*
- *For OpenCV, OpenCL & OpenVX, this is a preliminary release with limited testing (Alpha Quality).*
- *CCS version 6.0.1.00040 or higher should be used along with vision SDK 2.10 release onwards.*
- *BSP/Starterware is merged into single package – PDK Any reference to BSP/Starterware in the documentation refers to PDK.*



Build ID: 03.07.01.00

IMPORTANT NOTE: Vision SDK by default supports the TDA2xx, TDA2Px, TDA3xx & TDA2Ex super set device configuration. Please refer to the Device Data Manual to know the details of the CPUs supported in that part. Vision SDK supports selecting only the CPUs available for the specific part.

Major New Features in the Release

New features in the release vs previous Vision SDK release are:

- TIDL OD and Object Classification usecase support on BIOS and Linux
- AR0237 RGBIR Sensor Support
- OV2311 Sensor Driver and ISP Tuning
- [DMS] Added Usecase with OpenVX compute with links with network read and write
- MPEG4 Encoder Integration in DSP on TDA3x
- OD demo enhanced to provide ADABOOST weights externally
- Eve loader PRCM sequencing support for 900 MHz EVE operation.

Radar new features:

- [RADAR] Cascade Radar control via Radar Studio
- [RADAR] 10 Tx MIMO Usecase Enhancements
 - EVE 32-bit tuning of parameters for consistent results with the DSP.
 - EVE 32-bit performance correlation with Radar System Planner
 - Data capture at 300 Mbps and 600 Mbps with ES3.0 board.
 - Verify advanced frame configuration sub frame without multi-burst.
- [RADAR] Tx beamforming Only Alg function support with multi-burst support

Installation and Usage (BIOS ONLY)

- Kindly refer user guides \vision_sdk\docs\UserGuides\VisionSDK_UserGuide_TDAxxx.pdf

Example use-cases (BIOS ONLY)

- Vision SDK demonstrates use-cases as examples. For the list of supported usecases/examples refer \vision_sdk\docs\VisionSDK_Usecases.xlsx

SDK Features (BIOS ONLY)

- Support the following SoC/Platforms
- TDA2x SoC ES1.1/ES2.0 EVM, RVP
- TDA3x SoC ES2.0/ES2.1 EVM, RVP, Starter Kit
- TDA2Ex Soc ES1.0/ES2.0 EVM
- TDA2Ex 17x17 (J6 Entry) Soc ES2.0/ES2.1 EVM
- TDA2Px Soc ES1.0 EVM
- Support for all CPU's in the TDA2xx Device (IPU1-0, IPU1-1, IPU2, DSP1, DSP2, EVE1, EVE2, EVE3, EVE4, A15-0)
- Single-channel Capture via VIP for OV10635 sensor, HDMI receiver



- Multi-channel Capture (via VIP with LVDS, via Ethernet with AVB)
- Dual Display and Display Controller for VENCs (LCDx and On-Chip HDMI)
- Single-channel DSS Write Back Capture
- VPE (Scalar), Encode (MJPEG/H264), Decode (MJPEG/H264)
- Stripe based capture – support for OTF processing
- Dual A15 support (SMP BIOS mode)
- 4CH OV10635 capture via UB960/OV490/TIDA00455 to support for Low cost surround view on TDA2xx
- Support for creating Image pyramid using VPE.
- Support for TDA2xx secure boot on HS samples.
- TI Deep Learning File Input/Output use case.
- IPU2 (SMP mode) support
- All SoC supports Links Such as Dup, Merge, Select, Sync, NullSrc, Null and IPC (In/Out).
- Gate Link – Gives selective control to application on part of usecase data flow.
- Split Link (TDA2xx only) – Allows single video buffer of higher resolution to be split into multiple channels of lower resolutions on same output queue.
- Display module supporting multiple display sync'd pipes
- Algorithm link with algorithm plug-in's support on all CPU's
- DSS M2M link in VSDK to support overlay write back
- Utility to measure time taken for a function in multi-task environment
- Support for all CPU's in the TDA3xx Device (IPU1-0, IPU1-1, DSP1, DSP2, EVE)
- Capture via ISS CAL OV10640 Rev E (CSI2), AR132 (Parallel), AR140 (parallel), IMX224 (CSI2)
- ISS M2M-ISP & ISS M2M-SIMCOP Links
- Single Display and Display Controller for VENCs (LCD, SD VENC (NTSC/PAL) and Off-Chip HDMI.
- ISS Image tuning tool (DCC – Dynamic Camera Configuration), AWB, AE library
- Tuned AR140, OV10640 Rev E, IMX224 with WDR
- Multiple channel processing support for ISS CAPTURE and ISS M2M-SIMCOP Links.
- Fast boot mode which allows capture-display to bring up first without DSP/EVE and Seamless switch to Object Detect usecase after DSP and EVE are up
- Frame freeze detect using display write back & HW CRC
- 4CH AR140 CAL CSI2 capture via UB960 CSI2 Hub for Low cost surround view with HW LDC support for distortion correction.
- RTI configuration, expiry detection and recovery.
- Enhanced ISP based 3D Surround View on TDA3x with HW LDC
- Support for single pass & multi-pass WDR.
- Improved imaging for SRV with Improved AE stability & Photometric alignment
- New Algo Link “DeWarp” primarily used for multiple channel LDC correction.

- Support to add various tap-points for dumping the frames in different points in the ISS ISP frame processing.
- Support for creating Image pyramid using ISS.
- Support added for TDA3x RVP.
- Added split screen 2D + 3D Surround View with HW LDC for 3D & DSP LDC for 2D
- AR0132 Image Tuning, enabled with 2A and WDR
- Support for TDA3xx secure boot on HS samples
- Support 128MB DDR 3D SRV on TDA3xx
- 3D SRV + Rear view with lane marking and marking movement based on vehicle movement
- Front Cam (EU-NCAP) use-case – OD, SFM, FCW, TLR, OC (Object Classification)
- Validated TIDL use case on TDA3xx EVM
- Support for all CPU's in the TDA2Ex 23x23 and 17x17 (J6 Entry) Device (IPU1-0, IPU1-1, DSP1, A15-0)
- CSI2 capture support, 4ch capture (CSI2) + Display with channel switching (YUV) on TDA2Ex
- 2D SRV Support (UB964 & 4 modules of SAT0088) on TDA2Ex and TDA2Ex 17x17
- Capture & Display usecase with UB9640 & 4 modules of SAT0088 on TDA2Ex and TDA2Ex 17x17
- 4ch Ethernet SRV with 1MP H.264 AVB camera on TDA2Ex based Ethernet SRV platform
- TDA2Px (J6+) platform Support with VSDK
- AR0143 Sensor Support
- IVA H264 Encoder - IDR frame only configuration support
- AVB Ethernet based Surround View on TDA2x and TDA2Ex (23x23, 17x17)
- 2D SRV Support (UB964 & 4 modules of SAT0088) on TDA2Ex and TDA2Ex 17x17
- Support for Safety features and Freedom From Interference (FFI).
- Support for Firewalls in L3, XMC, ECC, CRC (HW CRC TDA3xx only), TeSOC (TDA3xx only), RTI (TDA3xx only), DCC(TDA3xx only), ESM (TDA3xx only), MPU (Memory Protection Unit).
- Support for SafeIPC in Vision SDK.
- Enhanced sensor framework to support easy integration of new sensors
- System and Local EDMA support on all cores
- TCP/IP support via NDK/NSP on IPU1-1 (TDA2xx, TDA3xx, TDA2Ex), A15-0 (TDA2xx,TDA2Ex)
- Support for TFDTTP stack on IPU1-1 (TDA2xx, TDA3xx, TDA2Ex), A15-0 (TDA2xx,TDA2Ex)
- Support for FAT File system with MMC/SD card. (Note: for TDA3x EVM, both Networking and FAT FS should not be enabled simultaneously)
- Low latency IPC support in VSDK to reduce the CPU load and latency
- Power Management
- CPU idle (A15 – Retention, M4 – Auto Clock Gate, DSP – Auto Clock Gate, EVE – Auto Clock Gate) & Temperature measurement support.

- Thermal management Limp Home Mode demonstration in Front Cam (EU-NCAP) use-case.
- Demonstration of DSP and EVE to power domain off and reboot for analytics standby low power state in TDA3xx Fast Boot use case.
- Ability to measure the Actual time for which the CPU was in low power.
- Ability to measure the power drawn by different voltage rails from on board INA226 on TDA2xx.
- Links framework, BSP/Starterware drivers modified to support optional static memory allocation (Refer VisionSDK_DevelopmentGuide.pdf for more details).
- Debug and Instrumentation Framework
- Performance log (FPS, CPU Load, Heap memory usage)
- Debug log (exception log, assert log)
- DDR BW statistics via HW statistic collectors
- PRCM status and reading clock frequencies of different modules.
- Reading Voltage values of different device voltage rails from PMIC.
- Link statistics logic updated to get link statistics and CPU status without sending command to remote core.
- Enhanced TDA3X 3D SRV - Flash size optimization and configurable blend seems
- Multi camera harmonization for TDA3x 3D SRV
- IMX390 Sensor Driver and IQ Tuning
- TIDA1130 (OV2775) Sensor Driver and IQ Tuning
- Custom SWMS link to use VPE (scalar) internally to avoid DMA copy
- TIDL deep learning demo for object detection
- 4/6 camera capture and display with Fusion board and TDA2x+ using both CSI2 PHYs (Phy1 and Phy2)
- IMX390 Sensor IQ Tuning
- Enable AEWB for all 4 Channels for ISS based 3D SRV on TDA2Px and TDA3x
- [TDA3x 3D SRV]: Added support for Output Resolution change
- Retransmit support in TFDTP receive
- Support in the makefile to allow for file specific compile options
- DSS Link to support override the input data format of the link.
- Added support for TDA2x RVP and TDA3x Starter Kit
- Radar capture and processing support included in VSDK 3.2 release
- Multiple boot mode support
- TDA2x EVM: QSPI boot, SD boot, NOR boot, CCS boot
- TDA3x EVM: QSPI boot, QSPI+SD boot (SBL in QSPI, ApplImage in SD card), CCS boot
- TDA2Ex EVM: QSPI boot, SD boot, NOR boot, CCS boot
- TDA2x xCAM: QSPI boot, SD boot, CCS boot
- TDA3x RVP: QSPI+SD boot (SBL in QSPI, ApplImage in SD card), CCS boot

- GEL installation package has changed, New package and installation methods are available at :http://processors.wiki.ti.com/index.php/Device_support_files
- Open CV Support for A15 host (Bios) with DSP acceleration.
- Open CL Support for A15 host (Bios) with offloading algorithms to DSP.
- Open VX Framework support on BIOS and Linux.
- Car black box demo usecase on Linux on TDA2ex (23x23, 17x17)
- AVB Ethernet based Surround View on TDA2x and TDA2Ex (23x23, 17x17)
- 2D SRV Support (UB964 & 4 modules of SAT0088) on TDA2Ex and TDA2Ex 17x17
- Support Auto use-case generation tool. Refer VisionSDK_UsecaseGen_Overview.pdf & VisionSDK_UsecaseGen_UserGuide.pdf under docs folder for details.
- 1GB memory map for TDA3x-RVP for ~200+ 3D SRV view points
- SMP support for IPU1 sub-system of TDA3xx
- Adaptive 3D SRV – enhancements
- Coexistence of Camera and Radar usecases
- 2 New platforms from D3 Engineering TDA2x RVP & TDA3x Starter Kit supported with VSDK
- Added support for IPv6 network configuration
- ARGB32 output support for Iss_memResizer Link
- Integrated MCAL IPC and Sample App on IPU2 with VSDK using IPC lib Links on IPU1-0
- Vision SDK restructuring.
- PDK Integration with Vision SDK.
- SDK Framework and application separation.
- Integrated below TI algorithms (sample reference algorithms only)
- Pedestrian Detection
- Traffic Sign Recognition
- Lane Detection
- Sparse Optical Flow
- Dense Optical Flow
- Edge Detection
- Structure from Motion
- Traffic Light Detection
- Forward Collision Warning
- Object Classification.
- Stereo (xCAM ONLY)
- 2D Surround View
- Added support for [IVA] 617 MHz TDA2Ex PRCM sequence
- Integrated AutoSAR/MCAL application on IPU2 with VSDK on IPU1
- Integrated TIOP (post processing) to improve TIDL object detection
- A15 Performance optimization for networking

- DSP CGT migration from 7.4.2 to 8.2.4 version

Radar features:

- Support the following SoC/Platforms
 - TDA3x SoC + AWR12 D3 RVP Board.
 - TDA3x SoC + FPDLink AWR12 D3 RVP Board.
 - TDA2x SoC ES1.1/ES2.0 (23x23) EVM
 - TDA2px SoC ES1.0 EVM
- Support for CPU's in the TDA3xx/TDA2xx Device (IPU1-0, IPU1-1, DSP, EVE)
 - Support for AR12xx Radar Sensor Data Capture
 - Support for the Dynamic Chirp Configuration API for ES2.0 AWR1243.
 - Support for multi-channel processing as part of the Radar Algorithm Process.
 - Driver support for Monitoring and run time calibration.
 - Support for Radar Processing Algorithm Plugin with FFT Algorithm Function and FFT Heat Map Draw Algorithm Functions.
 - EVE FFT, Peak detection and Beam forming algorithm integrated using WorkQ.
 - Support for TDA2px EVM using Network and File read and write of Radar Data.
 - Support for Radar System Planner to the documents section for offline analysis of TDA compute and bandwidth requirement.
 - Support for AWR12 advanced frame configuration, Dynamic Configuration of parameters to change the radar waveform properties.
 - Support for Cascade Radar Board.
 - Cascade Radar Data processing demonstration.
 - DSP algorithms for second dimension, peak detection and angle of arrival detection.
 - Migration to MMWAVEDFP 01.02.00 with AWR1243 ES3.0 Support
- Linux support for Processor SDK Radar
- Radar SDK Linux – Enabled PCIe based raw radar data capture and storage to SSD driver
- EVE 32-bit FFT integration for Doppler FFT processing for Cascade Radar
- Add support for Different MIMO antenna configurations and Beam forming based peak detection
- Added support for Radar configurations read from a file

Example use-cases (Linux + Bios)

- Vision SDK demonstrates use-cases as examples. For the list of supported usecases/examples refer `\vision_sdk\docs\VisionSDK_Usecases.xlsx`

SDK Features (Linux + Bios)

- Support the following SoC/Platforms
- TDA2x SoC ES1.1/ES2.0 EVM, RVP
- TDA2Ex Soc ES1.0/ES2.0 EVM
- TDA2Ex 17x17 (J6 Entry) Soc ES2.0/ES2.1 EVM
- TDA2Px Soc ES1.0 EVM



- Compatible with Processor SDK Linux version 4.4, Linux on A15 (4.4 kernel) & BIOS on all other cores
- Support for IPU2 as the main IPU core in SMP mode
- Support the following CPU's in the TDA2xx system (IPU2, IPU1-0, DSP1, DSP2, EVE1, EVE2, EVE3, EVE4, A15-0)
- This release supports Rev-E and higher versions of TDA2xx EVM
- Support the following CPU's in the TDA2Ex system (IPU2, IPU1-0, DSP1, A15-0)
- Support display only on M4 (Bios) for TDA2xx, TDA2Ex and TDA2Ex 17x17.
- Single-channel Capture via VIP for OV10365 sensor
- Multi-channel Capture (via VIP with LVDS, via Ethernet with AVB)
- VPE (Scalar), Encode (MJPEG/H264), Decode (MJPEG/H264)
- IPU1 based EVE loader
- LG 10 inch LCD display support for VSDK-Linux
- VSDK Linux - Display device & sensors configure from M4/Bios with dedicated I2C
- GPU optimization to allow Both fragment and Vertex shader to work in parallel
- GPU based 3D Surround View (360 Degree Flyaround , on Linux + BIOS Vision SDK ONLY) with Dynamic bowl creation in 3D surround view on TDA2x.
- Improved 3D SRV with auto-calibration using SGX (Open-GL Algo) for creating the "360 degree view of the car with virtual camera motion" is integrated
- AVB and NDK support on IPU2 when A15 is running Linux
- New usecase demonstrating 3-D perception.
- sgxFrmcpy, sgx3Dsrv, sgx3Dsfm, Algorithm link and other connector links (Dup, Merge, Select, Sync, Gate, NullSrc, Null and IPC (In/Out) ported to A15 Linux
- Inter processor communication framework infrastructure between A15 running Linux and other cores running BIOS,
- Basic SGX/OpenGL support - SGX link on A15 can be used to render/texture the video frames
- Support GPU off-screen rendering using EGL PixMap and IPU allocated buffers
- Debug and Instrumentation Framework (same as BIOS only Vision SDK)
- EVE loader updated to use SBL Lib and PM Lib.
- Support for common links on the Linux side for VSDK Linux and InfoAdas.
- Support for IPUMM along with Vision SDK on single IPU core
- Open CV Support for A15 host (Linux) with offloading algorithms to DSP with more DSP kernels.
- Open CL Support for A15 host (Linux) with offloading algorithms to DSP.
- AVB based 3D SRV demo on both TDA2x, TDA2Ex & TDA2Ex 17x17
- TDA2Ex CSI2 based 3D SRV with UB964 & 4 modules of SAT0088 on TDA2Ex & TDA2Ex 17x17
- Car Black Box support on TDA2Ex & TDA2Ex 17x17
- InfoADAS CMEM, Android/QNX supported on TDA2x



- Dynamic bowl creation in 3D surround view on TDA2x.
- 3D SRV with UB96x on TDA2Ex (17x17).
- 2MP SRV (ISP+GPU) with IMX390/OV2775 with Fusion board on TDA2Px EVM
- Auto use case generation tool (same as BIOS only Vision SDK)
- vDRM Display distributor links for HLOS compositor (Weston) with M4 display
- Early Boot Sample usecase
- VSDK Linux support on boards with > 2 GB RAM
- VSDK on IPU1 with IPUMM on IPU-2 for VSDK Linux
- GST Video encode and decode support on VSDK Linux
- VSDK Linux - Early Boot support with QSPI
- IVI application support with concurrent omapdrm and vdrm

Installation and Usage (Linux + Bios)

- Kindly refer `vision_sdk\docs\Linux\VisionSDK_LinuxUserGuide.pdf`

Component Versions

The versions of the different components included in Vision SDK Release Package can be referred to “`vision_sdk\docs\Processor_SDK_Vision_manifest.html`”.

Validation Hardware

This software package is tested with the below hardware

- **TDA2xx EVM/RVP**
 - Single Camera use-cases: Vision Application Board + OV10635 sensor or HDMI capture + LCD or HDMI display
 - LVDS Multi Camera use-cases: Vision Application Board + De-serializer board + 4~5xSerializer board + 4~5x OV10635 sensor + LCD or HDMI display
 - AVB Multi Camera use-cases: Vision Application Board + HDMI display + AVB talker (on Linux on PC)
- **TDA3xx EVM/RVP/Starter Kit**
 - Single Camera VIP use-cases: OV10635 sensor or HDMI capture + LCD or SDTV or HDMI display
 - LVDS Multi Camera use-cases: De-serializer board + 4xSerializer board + 4x OV10635 sensor + SDTV display
 - Single Camera ISS use-cases: OV10640 Rev E(CSI2) or AR0132 (Parallel) sensor + LCD or SDTV or HDMI display
 - Surround view use-case: Requires UB960 EVM with 4 TIDA00262 camera modules and HDMI Display
- **TDA2Ex & TDA2Ex 17x17 EVM**
 - Single Camera use-cases: Vision Application Board + OV10635 sensor + HDMI display



- LVDS Multi Camera use-cases: Vision Application Board + De-serializer board + 4xSerializer board + 4x OV10635 sensor + HDMI display
- **TDA2Px EVM**
 - 1MP Surround view use-case: UB964 EVM with 4 OV10640 IMI camera modules and HDMI Display
 - 2MP Surround view use-case: Fusion Board with 4 OV2775 or IMX390 camera modules and HDMI Display
- **Boot mode Supported**
 - TDA2x EVM: QSPI boot, SD boot, NOR boot, CCS boot
 - TDA3x EVM: QSPI boot, QSPI+SD boot (SBL in QSPI, ApplImage in SD card), CCS boot
 - TDA2Ex (23x23, 17x17) EVM: QSPI boot, SD boot, NOR boot, CCS boot
- **Radar**
 - TDA3xx, TDA2xx and TDA2px EVM
 - TDA3xx RVP + AWR1243 (Direct Connection & FPDLink)
 - TDA2xx 4 Chip AWR1243 Cascade Radar Board:
- **Boot mode Supported (Radar)**
 - TDA2x EVM: QSPI boot, SD boot, NOR boot, CCS boot
 - TDA3x EVM: QSPI boot, QSPI+SD boot (SBL in QSPI, ApplImage in SD card), CCS boot
 - TDA3x RVP: QSPI boot, QSPI+SD boot (SBL in QSPI, ApplImage in SD card), CCS boot

Refer user guide for exact board number and revision that this release is validated with.

SW Quality – Status

Software Component	System Testing	MISRA - C *	Static analysis	Quality / Safety
SBL	Yes	Yes	Yes	TI SW Development process
CSL/FL / StarterWare	Yes	Yes	Yes	TI SW Development process
BSP / Drivers	Yes	Yes	Yes	TI SW Development process
EVE SW	Yes	Yes	Yes	TI SW Development process
VXLib (C66x)	Yes	Yes	Yes	TI SW Development process
NDK / NSP / AVB	Yes	Yes	Yes	TI SW Development process
IVAHD codecs	Yes	No	Yes	TI SW Development process
EDMA LLD	Yes	Yes	Yes	TI SW Development process
Framework Components	Yes	Yes	Yes	TI SW Development process
BIOS	Yes	Yes	Yes	TI SW Development process
BIOS-IPC	Yes	Yes	Yes	TI SW Development process
IPCLib	Yes	Yes	Yes	TI SW Development process
Links Framework [‡]	Yes	Yes	Yes	TI SW Development process
AutoSAR MCAL	Yes	Yes	Yes	ASIL – B

[‡] Vision Software Development Kit (Vision SDK) is broadly divided into

- **Core SDK Framework (links_fw)**
 - Core SDK – Contains Links and Chain Framework for both Bios and HLOS
 - SW quality processes like MISRA-C/KW static checker etc. are done only for links framework
- **Demo Application (apps)**
 - Demo applications to validate VSDK FW
 - SW quality processes like MISRA-C/KW static checker etc. are NOT done for apps and sample_app



Compilers	Production ready	Compiler Qualification Kit
EVE TI compiler	Yes	Available from TI
ARM M4 compiler	Yes	Available from TI
C66x TI compiler	Yes	Available from TI
ARM A15 compiler	Yes	3P

Bugs Fixed In This Release

Key	Summary	Description	Severity
ADASVISION-2216	Cascade: TDA2: Remove mem=1024M from bootargs	Need to remove mem=1024M from the bootargs for cascade board. This needs to be updated in uEnv.txt. There is a benefit to performance.	S2-Major
ADASVISION-2221	Parallel SPI communication is not working on TDA2 Radar Setup with Radar Studio	Parallel SPI communication is not working on TDA2 Radar Setup	S1-Critical
ADASVISION-2222	VIP Single cam OpenVx usecase does not close properly	Vip single cam usecase using Openvx gets stuck while stopping the usecase	S2-Major
ADASVISION-2223	ISS single cam usecase using OPENVX does not show usecase menu on exiting	ISS single cam usecase using OPENVX does not show usecase menu on exiting	S2-Major
ADASVISION-2100	Radar Front End Configuration Support is Broken	There are 3 issues with the radar front-end configuration support. * If there is an extra empty line at the end of configuration file, the parser will not read the file correctly. * When the configuration file is not presented, the use case in Linux will not run. * In Linux, if slave configuration files don't have the common configuration, the use case will break.	S2-Major
ADASVISION-2120	TDA3x : LDC 3D SRV : Blend table : Corrupted	With custom view points the generated blend seam is in-correct.	S3-Minor
ADASVISION-2212	Raw data Dump Support on Null Link running on Linux	Null Link running on linux dump bitstream data without checking its buf type.	S2-Major
ADASVISION-2122	FA_CREATE_ALWAYS flag is missing from file open API	FA_CREATE_ALWAYS flag is missing from the file open API. So, if attempted to write a smaller size MLO/Applmage, it won't be written to the SD card.	S3-Minor
ADASVISION-2213	Default TSR weights does not work	When external weights for TSR is enabled then it hangs.	S2-Major
ADASVISION-2217	AWR1243 crashed for higher monitoring data rates	TDA2 Ethernet Library for Radar Configuration crashed during Monitoring Steps to re-create: Enable Monitoring reports from Studio. Trigger Slave 1 Trigger Slave 2 Trigger Slave 3	S3-Minor

		<p>Trigger Master Wait for monitoring reports</p> <p>Crash is seen within few seconds of monitoring report.</p>	
ADASVISION-2075	PCIe throughput on Cascade Radar Board limited to 1.6 Gbps	The PCIe raw data capture throughput is limited to 1.6 Gbps. In practice we should be getting 4 Gbps.	S2-Major
ADASVISION-2266	TDA2 VIP can only capture 2048 chirps per frame	The limitation is that the TDA2 line count has to be less than 2048 per frame.	S2-Major
ADASVISION-2277	Captured files do not have read permissions for owner and group	The captured b0000*_data.bin should have read permissions set for owner and group as well. Right now, the read bit is set only for others.	S3-Minor
ADASVISION-2279	Powering off slaves doesn't happen when Disconnect command is sent to TDA	When Disconnect command is sent to TDA, only master gets powered off. It is necessary to power off the slaves so as to power on them again in the same session.	S2-Major
ADASVISION-2227	Cascade Radar data capture with less than 4 AWR	Cascade radar data capture usecase does not work when less than 4 AWR are enabled.	S3-Minor
ADASVISION-2368	DataCollect master file size is improper	When using separate file for separate AWR, master files dumps n less number of frames(n is no of active slaves).	S2-Major

Known Issues

Key	Summary	Description	Workaround	Severity	Affected Versions
ADASVISION-2218	CW streaming mode should be enabled in TDA2 capture software	CW streaming mode not enabled. Use ContStreaming Tab to configure CW mode. Use RadarStudio user guide. Trigger Slaves Trigger Master CSI2 data would not come with Frame end.	None	S3-Minor	VISION_SD K_03_07_00_00, VISION_SD K_03_07_00_01
ADASVISION-2131	OOM Error in Single Camera ISP Usecase	Capture Source : OV2311 Usecase : 1CH ISS capture + ISS ISP + ISS LDC+VTNF + Display Error : ISSM2MSIMCOP: Insufficient memory provided by user In single channel usecase, we demonstrate how links can use the user provided memory. This memory is allocated in usecase assuming 1MP SRV usecase..	Comment out call to chains_issIspSimcop_Display_SetMemAllocInfo and chains_issIspSimcop_Display_FreeMemory, so that usecase won't allocate memory and link will allocate required memory.	S3-Minor	VISION_SD K_03_06_00_00, VISION_SD K_03_07_00_00, VISION_SD K_03_07_00_01

Also refer the Release Notes of "PDK" and "InfoADAS" for additional known issues

Known Limitations

JIRA ID	Summary	Affects Version/s	Severity
ADASVISION-835	Deadlock in recursive System_linkControl calls on Linux	VISION_SDK_02_09_00_00 & Later	S3-Minor
ADASVISION-867	CBUF on OCMC RAM 2 does not work	VISION_SDK_02_10_00_00 & Later	S3-Minor
ADASVISION-1848	[TDA3x/TDA2Px] Known Image Quality issue with 2A & AEWB	VISION_SDK_03_03_00_00 & Later	S3-Minor
ADASVISION-420	[Vision_SDK] LCD probing is not return success first time on LVDS set-up. Return LCD not connected error	VISION_SDK_02_01_00_00 & Later	S3-Minor
ADASVISION-455	[Vision_SDK] Frame drop observed in 4th channel AVB SRV usecase, while AVB on A15	VISION_SDK_02_02_00_00 & Later	S3-Minor
ADASVISION-533	[Vision SDK] After running SOF usecase , EVE based use-case fail	VISION_SDK_02_03_00_00 & Later	S3-Minor
ADASVISION-587	[TDA2Ex] [TDA2Ex] for some board NDK: Link Status messages displayed continuously	VISION_SDK_02_06_00_01 & Later	S3-Minor
ADASVISION-552	TDA3x Errata: i873 - DSS: First Two Columns Of Active Video Are Always Black At The Output Of Video Encoder	VISION_SDK_02_06_01_01 & Later	S3-Minor
ADASVISION-876	Ethernet does not work on TDA2ex linux with Rev C	VISION_SDK_02_10_00_00 & Later	S3-Minor
ADASVISION-1042	1GBPS stability issue with TDA2xx Rev E board	VISION_SDK_02_11_00_00 & Later	S3-Minor
ADASVISION-1176	Network Rx with YUV422 1280x960 fails after some time	VISION_SDK_02_12_00_00 & Later	S3-Minor
ADASVISION-1175	Network Tx throughput issue with TCP/IP	VISION_SDK_02_12_00_00 & Later	S3-Minor
ADASVISION-1622	Ethernet packet drop issue on TDA2PX EVM	VISION_SDK_03_01_00_00 & Later	S3-Minor

Refer the Release Notes of PDK and InfoADAS for additional Limitations



Compatibility Info

This section contains information about compatibility of APIs between this release and previous release.

NOTE: It is recommended to recompile the user created use-cases, alg plugins, links against the new release interface files even if no code level change is required in the user application.

Link API

Module	Interface file	Change in user application required	Change details
Algorithm Link	algorithmLink.h	No	Addition of algorithm ID for TIDL Preproc, TIDL OpenVX and MPEG4 Encode.
Data Collect Link	dataCollectLink.h	No	New Parameters for number of pre-allocated files and radar data packing.
Display distribution Link	dispDistSrcLink.h	No	Decreased the max number of display distribution links.
Network Control	networkCtrl_if.h	No	Addition of support for reading and writing RAW08 data.
System Link ID	system_linkId.h	No	Added support for Radar Dev Control Links.