

Vision Software Development Kit

Getting Started Guide

Version 03.xx.xx

December 2017

Contents

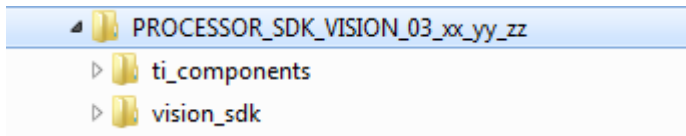
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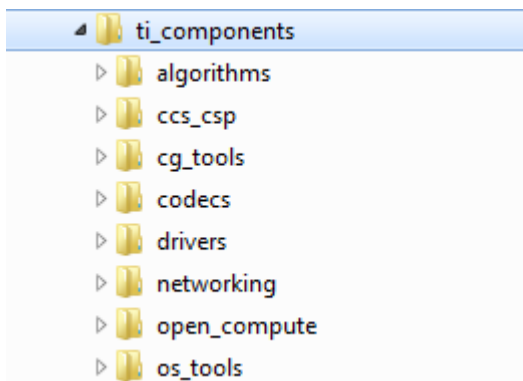
Introduction:

- Vision SDK is a multi-processor multi-channel software development package for TI's family of ADAS SoCs. The software framework allows users to create different ADAS application dataflow involving video and Radar capture, processing, analytics algorithms and display.
- VSDK Frame work is generic enough to plug-in application specific algorithms in the system. Vision SDK is currently targeted for the TDAxx family of SoCs (TDA2xx, TDA2Ex and TDA3x).
- VSDK package also includes sample ADAS applications which exercises different CPUs and HW accelerators in the ADAS SoC and demonstrates how to effectively use different sub-systems within the SoC.
- Vision Software Development Kit (Vision SDK) can be broadly divided into
 - **Core SDK Framework (links_fw)**
 - **Demo Application (apps)**

Directory structure:

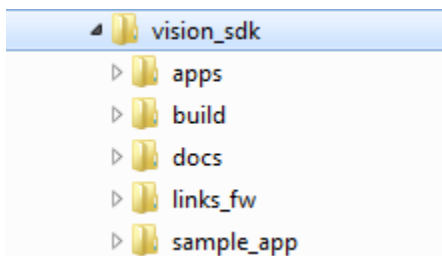


- **ti_components** - Includes all the dependent components to build Vision SDK



Note: "algorithms" and "open_compute" are used only in VSDK "apps"

- **vision_sdk** – Includes Core SDK (links_fw) and Demo Applications



How to Use Vision SDK:

- Below table describes the VSDK top level directory structure overview,

links_fw	Core SDK – Contains Links and Chain Framework for both Bios and HLOS
	Include - Public header files of all the Links and Utils APIs
	SW quality processes like MISRA-C/KW static checker etc. are done only for links framework
build	GNU based make system - Common for Links FW & Apps
	Make/config/build files for both Bios and HLOS platforms
sample_app	Sample application for customer; refer this to build customer applications
	Has its-own memory map and apps main configurations
	All required config & build infrastructures is included
	Add/modify sample “nullsrc -> display” dataflow to customer usecase/dataflow
	“sample_app” along with “links_fw” and “build” is enough to build the customer application
docs	Vision SDK documentation
	Refer “Index.html” to effectively navigate through vision SDK documentation
	Kindly refer “VisionSDK_ReleaseNotes.pdf” for the complete features list of the release
	Please refer the user guides under ‘\vision_sdk\docs\UserGuides\’ folder to understand, build and test Vision SDK.
apps	Demo applications to validate VSDK FW, contains <ul style="list-style-type: none">ISS - Sensor FW, ISS tuning utilitiesVision based Demos Apps (multi-channel Surround View, single channel Front/Rear Camera, Stereo etc.) for both RTOS and HLOSRadar Demo AppsOpenCompute - OpenCV, OpenCL and OpenVX Demo Apps
	Has its-own memory map and apps main configurations
	SW quality processes like MISRA-C/KW static checker etc. are NOT done for apps and sample_app
	Customer can either ignore this “apps” folder completely or refer the same to build their application.
	Contains 50+ demos and huge LUTs (look-up tables) that make “apps” very heavy
	Strip out “apps” folder completely to remove all TI Demo Applications from Vision SDK FW while building customer Application.

Revision History

Version #	Date	Author Name	Revision History
0.1	06/6/2017	Shiju S	First draft
0.2	10/6/2017	Shiju S	Review comments addressed
0.3	13/10/2017	Shiju S	Updated for VSDK3.1
0.4	22/12/2017	Shiju S	Updated for VSDK3.2
0.5	06/04/2018	Chetan.M	Updated for VSDK 3.3