Release version: 00.05.01.00

Algorithm	Algorithm Configuration	Processor	Processor Configuration	Cycle Per API Call
tiadalg_image_preprocessing (Creates 3 planes of planner RGB data for deep learning processing)	• **Image resolution** : 768x16 • **Color conversion** : YUV420 nv12 to RGB planner (3 separate plane for B , G & R) • **No Mean subtraction and scaling**	C66x	*common processor configuration	18K
	• **Image resolution** : 768x16 • **Color conversion** : YUV420 nv12 to BGR planner (3 separate plane for B , G & R) • **No Mean subtraction and scaling**	C66x	*common processor configuration	17K
	• **Image resolution** : 768x16 • **Color conversion** : RGB interleaved to RGB planner (3 separate plane for R , G & B) • **No Mean subtraction and scaling**	C66x	*common processor configuration	36K
	• **Image resolution** : 768x16 • **Color conversion** : RGB interleaved to BGR planner (3 separate plane for B , G & R) • **No Mean subtraction and scaling**	C66x	*common processor configuration	37K
tiadalg_image_color_blending (Color blending of input image for pixel level detection by semantic segmentation task or other similar task)	• **Image resolution :** 768x384	C66x	*common processor configuration + Input and output present in cached DDR	1.2 Mega Cycle
tiadalg_fisheye_transformation (Transforms list of points from fish eye to rectilinear image	• **Number of Points : 8**	C66x	*common processor configuration	330

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domain or vice-versa)				
tiadalg_dof_plane_seperation (Creates 3 RGB plane data to be fed to deep learning network from packed flow data generated from DMPACK h/w accelerator)	• **Image resolution** : 768x384	C66x	*common processor configuration + Input and output present in cached DDR	2.94 Mega Cycle
	• **Image resolution** : 768x16	C66x	*common processor configuration	30K
tiadalg_select_top_feature (Matching of list of 64 element descriptors, and finding top matches with 2-way consistency check)	• **Number of current feature : 187** • **Number of map features: 2619** • **Descriptor size: 64 int16**	C66x	*common processor configuration	10.8 Mega Cycle
	• **Number of current feature : 187** • **Number of map features: 2619** • **Descriptor size: 64 int8**	C66x	*common processor configuration	7.1 Mega Cycle
tiadalg_solve_pnp (Camera pose estimation from p3p technique)	• **Number of points pair : 50** • **Number of RANSAC iteration : 200**	C66x	*common processor configuration + 2d and 3d points are in L2 memory	4.95 Mega Cycle
tiadalg_sparse_upsampling (sparse up sampling of data and later 7x7 convolution)	• **Number of sparse feature points : 575** • **Output descriptor in 16 bit**	C66x	*common processor configuration	1.07 Mega Cycle
tiadalg_visual_localization (Given the list of key points, and their descriptor, current frame location is estimated with the help of fixed map data at create time)	• **Number of current Frame feature points : 300** • **Number of Map feature : 7.5K** • **Number of points pair for solvePnP: 50** • **Number of RANSAC iteration for solvePnp: 200**	C66x	*common processor configuration	~ 44 Mega Cycle

*Common Processor configuration

  • **Input and output in L2 internal memory (IF not mentioned explicitly)**

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- **Stack in L2 memory**
- **L1D 32 KB cache**
    - L2D 128 KB cache

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