

MD Parameters Configuration

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1 CarSentry MD Parameters Configuration

The following table describes the configuration of the CarSentry MD parameters, including configurable parameter, suggested value, range, and remark.

1.1 Main Parameters

Parameter	Suggested Value	Range	Remark
InputFileType	1	0/1/3	Input file type
InputFilePath	-	-	Input file path <ul style="list-style-type: none"> Filename requirements: - End with _P420 (YUV420) or _P422 (YUV422) - InputFileType=1, filename end with: WxH_P420 or WxH_P422 Example: "../data/xxx_480x384_P420.yuv"
InputWidth	480	-	Input video/image width(W), ignore if InputFileType=1
InputHeight	384	-	Input video/image height(H), ignore if InputFileType=1
StartFrameIdx	0	0~N-1	Start frame index ≤ the total frames(N) of the video
FramesToBeProcessed	-1	-1 or 1~N-1	Number of frames to be processed -1 =all frames, or else no more than (N-StartFrameIdx)
OutputFilePath	"output"	-	Output file path
MD_RefFrmIdx	1	1-7	Frame rate dependent: <ul style="list-style-type: none"> ≤ 10FPS:1 ≤ 15FPS:3 ≤ 24FPS:6 ≤ 30FPS:7 changing on the actual situation
MD_ScaledW	480	≤ 640	8-pixel aligned
MD_ScaledH	384	≤ 480	8-pixel aligned
MD_ShiftHistMag2	3	0-7	<i>Not mod</i>
MD_ShiftMetric2_Th	6	0-15	<i>Not mod</i>
MD_NeighborCorrelation	1	0/1	0: Disable 1: Enable, FP reduction <i>Not mod</i>
MD_ActBlk_MinMaxRatio_Scale	16	1-255	<i>Not mod</i>
MD_ActBlkRepeatFrmCntTh	3	0-15	<i>Not mod</i>
MD_ActNeighborBlkCntTh	2	0-9	<i>Not mod</i>
MD_HogDist_Th_	4	0-31	<i>Not mod</i>
nnAdj_Scale			

Parameter	Suggested Value	Range	Remark
MD_HogDist_Th_highActiveAdj_scale	12	0-31	<i>Not mod</i>
MD_HogDist_Th_AvgYDiffAdj_Scale	42	0-255	<i>Not mod</i>
MD_LowDelayEn	1	0/1	0: Disable 1: Enable <i>Not mod</i>
MD_HogDist_Th_lowDelay_shift	1	0-3	<i>Not mod</i>
MD_HogDist_Th_lowDelay_m_count	1	0-15	<i>Not mod</i>
MD_HogDist_Th_lowDelay_prev_nn_count	1	0-7	<i>Not mod</i>
MD_HogDistAvailCheck	1	0/1	Block effectiveness 0: skip, all available 1: conditional check <i>Not mod</i>
MD_HogCellSize	16	8/16	HOG Cell size
MD_HogGradX	"-1,-2,0,2,1"	-	1×5 GradX kernel, 1x5 only <i>Not mod</i>
MD_HogGradY	"-1,-2,0,2,1"	-	1×5 GradX kernel, 1x5 only <i>Not mod</i>
MD_HogMagnitudeWeightEn	1	0/1	Weighted gradient magnitude 0: Disable 1: Enabl. <i>Not mod</i>
MD_HogSmoothBinsEn	1	0/1	Smoothing filter to the histogram bins 0: Disable 1: Enable <i>Not mod</i>
MD_HogNormalizeMode	0	0/1/2	HOG feature normalization 0: Disable 1: Enable, output hist norm 2: Enable, output sum of gradient magnitude <i>Not mod</i>
MD_HogDist_AvgYDiffThre_Scale	8	0-255	Higher=↓FP↑FN
MD_HogDist_WeighMethod	0	0/1	Weighting method for distance 0: curBlkVar + abs(curBlkVar - refBlkVar) 1: curBlkVar + MAX(curBlkVar-refBlkVar, 0)
MD_HogDist_Scale2	15	0-255	Higher=↓FP↑FN
MD_HogDist_Th	20	0-255	Higher=↓FP↑FN

Legend:

FP=False Positive, FN=False Negative

Not mod=Not recommended to modify

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