SONY

IMX316 | Offline calibration

Revision 1 : 2018/7/11

SSS Corporation Sensing Solutions Business Div.

IMX316 | Offline calibration – input/output

Calibration	input/output	File name	Contains	Directory
cat tree	input	cat_tree_data.mat	confidence / raw phase	IMX316_MI_calib_cat_tree\test_data\iu316_minikit \Viewer_CEC
cat tree	output	results.csv	radial diatance of each target (designed value) / ROI of each target / raw phase of each target	IMX316_MI_calib_cat_tree\test_data\iu316_minikit \Viewer_CEC
turntable	input	mode_cattree_offline.json	temp slope / coefficient from cat tree / mode settings	IMX316_MI_calib_cat_tree\test_data\iu316_minikit
turntable	input	ID_3160_*_.yaml	register setting for sensor and LDD	IMX316_MI_calib_cat_tree\test_data\iu316_minikit \configurations
turntable	input	view_*_phase_060.00.skv	raw phase of each frames / temperature of each frames	IMX316_MI_calib_cat_tree\test_data\iu316_minikit \configurations\Offline_Calibration\ID_3160_EE01 _30FPS_100MHz_DT25_570us
turntable	output	calibration_iu316_minikit_201807 03_165854.json	cyclic error coefficient / lens model / offset / temp slope / temp by the time of offset calib / mode name	IMX316_MI_calib_cat_tree\test_data\iu316_minikit \configurations\Offline_Calibration

IMX316 | Offline calibration – cat tree

Calibration	input/output	File name	Contains	Directory
cat tree	input	cat_tree_data.mat	confidence / raw phase	IMX316_MI_calib_cat_tree\test_data\iu316_minikit\Viewer_CEC
cat tree	output	results.csv	radial diatance of each target (designed value) / ROI of each target / raw phase of each target	IMX316_MI_calib_cat_tree\test_data\iu316_minikit\Viewer_CEC
turntable	input	mode_cattree_offline.json	temp slope / coefficient from cat tree / mode settings	IMX316_MI_calib_cat_tree\test_data\iu316_minikit
turntable	input	ID_3160_*_.yaml	register setting for sensor and LDD	IMX316_MI_calib_cat_tree\test_data\iu316_minikit\configurations
turntable	input	view_*_phase_060.00.skv	raw phase of each frames / temperature of each frames	IMX316_MI_calib_cat_tree\test_data\iu316_minikit\configurations\Offline_Calibration\ID_3160_EE01_30FPS_100MHz_DT25_570us
turntable	output	calibration_iu316_minikit_20180703_165854.json	cyclic error coefficient / lens model / offset / temp slope / temp by the time of offset calib / mode name	IMX316_MI_calib_cat_tree\test_data\iu316_minikit\configurations\Offline_Calibration

1. Place [cat_tree_data.mat] under *IMX316_MI_calib_cat_tree¥test_data¥iu316_minikit¥Viewer_CEC*.
2. Run [rawdata_viewer_offline.py] so software will process on cat_tree_data.mat file and outputs [result.csv] in the same directory.
3. Radial distance, ROI, raw phase in [result.csv] will be used for turntable calibration.

IMX316 | Offline calibration – turntable

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cat tree	input	cat_tree_data.mat	confidence / raw phase	IMX316_MI_calib_cat_tree\test_data\iu316_minikit\Viewer_CEC
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turntable	input	view_*_phase_060.00.skv	raw phase of each frames / temperature of each frames	IMX316_MI_calib_cat_tree\test_data\iu316_minikit\configurations\Offline_Calibration\ID_3160_EE01_30FPS_100MHz_DT25_570us
turntable	output	calibration_iu316_minikit_20180703_165854.json	cyclic error coefficient / lens model / offset / temp slope / temp by the time of offset calib / mode name	IMX316_MI_calib_cat_tree\test_data\iu316_minikit\configurations\Offline_Calibration

1. Place [view_*_.skv] under following directory *IMX316_MI_calib_cat_tree¥test_data¥iu316_minikit¥configurations¥Offline_Calibration¥ID_3160_EE01_30FPS_100MHz_DT25_570us*.
2. Open [mode_cattree_offline.json] and copy coefficient from cat tree (radial distance, ROI, raw phase) obtained in previous page.
3. Open [run.py] and modify line 29 as below;

   mode = Mode.offline. # for online calibration mode

   mode = Mode.full_calibration # for offline calibration mode

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IMX316 | Offline calibration – turntable

Calibration	input/output	File name	Contains	Directory
cat tree	input	cat_tree_data.mat	confidence / raw phase	IMX316_MI_calib_cat_tree\test_data\iu316_minikit\Viewer_CEC
cat tree	output	results.csv	radial diatance of each target (designed value) / ROI of each target / raw phase of each target	IMX316_MI_calib_cat_tree\test_data\iu316_minikit\Viewer_CEC
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turntable	output	calibration_iu316_minikit_20180703_165854.json	cyclic error coefficient / lens model / offset / temp slope / temp by the time of offset calib / mode name	IMX316_MI_calib_cat_tree\test_data\iu316_minikit\configurations\Offline_Calibration

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4. Open [skv_app.json] and modify line 5 and 11 with full path of the directory for skv files and write folder name which contains skv files in line 12.
5. Run [run.py] to start offline calibration so SW will calculate calibration parameter.