#### SONY

# **IMX316** | Offline calibration

Revision 1: 2018/7/11

SSS Corporation Sensing Solutions Business Div.

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## **IMX316** | Offline calibration – input/output

C	Calibration	input/output	File name	Contains	Directory
	cat tree	input	cat_tree_data.mat	confidence / raw phase	I <mark>M</mark> X316_MI_calib_cat_tree\test_data\iu316_minikit \Viewer_CEC
	cat tree	output	results.csv		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	redister semind for sensor and CDD	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	OUITOUT		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	Iracilite cev	- 1	IMX316_MI_calib_cat_tree\test_data\iu316_minikit
			ROI of each target / raw phase of each target	\Viewer_CEC
turntable	input	mode_cattree_offline.json	temp slope / coefficient from cat tree / mode settings	MX316_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		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.
- 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

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

- Place [view\_\*\_.skv] under following directory
   IMX316\_MI\_calib\_cat\_tree\text\_data\text{iu316\_minikit\text{\text{configurations\text{\text{VOMPS}\_100MHz\_DT25\_570us}}}.
- 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
  Continued on next page



## **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
turntable	input	imode cantee online ison	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	iview * phase ubu.uu.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	ALITALIT		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

#### Continued from previous page

- 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.





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