



ELDIM
ELECTRONICS FOR DISPLAYS AND IMAGING DEVICES

Application Note: Configuration Files

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0.1	2020/11/17	Initial version

ELDIM
1185 Rue d'Epron (Ancienne)
14200 Hérouville Saint-Clair
France

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1 Introduction

Description of the configuration files of the application.

If a file is required and not present, it is created with default values.

File name	Target	
demo.json	Application	
config.json	Library	
DisplayStreamOption.json	Application	Defines the processing configuration of DisplayStream command.
CaptureSequenceCaptures.json	Library	Defines the captures files used to reprocess Capture Sequence and generate X, Y, Z files.
CaptureSequenceExposureTime.json	Library	
CaptureSequenceExportOption.json	Library	

2 demo.json

Configuration of the application

```
{
  "Application": {
    "LogMasks": [
      "State",
      "StateMachine",
      "Worker"
    ],
    "autoExposure": true,
    "bAdmin": false,
    "bStreamProcessedData": false,
    "enableWarningMessage": true
  }
}
```

To be configured manually:

"LogMasks"	filter some logs
"bAdmin"	Add some controls (to be used with caution)
"enableWarningMessage"	Disable the poppu warnings

3 config.json

Current configuration of the library.

This file is present for memory purpose, it allows to retrieve previously set command parameters.

Those settings are not meant to be modified manually.

```
{
  "CaptureSequence": {
    "bAutoExposure": true,
    "bSaveCapture": true,
    "bUseExpoFile": false,
    "bWaitForSensorTemperature": false,
    "eIris": 0,
    "eNd": 0,
    "exposureTimeUs_FilterX": 10000,
    "exposureTimeUs_FilterXz": 10000,
  }
}
```

```

        "exposureTimeUs_FilterYa": 10000,
        "exposureTimeUs_FilterYb": 10000,
        "exposureTimeUs_FilterZ": 10000,
        "nbAcquisition": 1,
        "sensorTemperature": 25
    },
    "CmdMeasure": {
        "bTestPattern": false,
        "binningFactor": 0,
        "exposureTimeUs": 40000,
        "nbAcquisition": 1
    },
    "CmdProcessing": {
        "bAbsolute": true,
        "bBiasCompensation": true,
        "bFlatField": true,
        "bLinearisation": true,
        "bSensorDefectCorrection": true,
        "bSensorPrnuCorrection": true
    },
    "CmdSetup": {
        "eFilter": 2,
        "eIris": 0,
        "eNd": 0,
        "sensorTemperature": 25
    },
    "DebugSettings": {
        "debugMode": false,
        "dummyRawImagePath": "",
        "emulateCamera": false,
        "emulateWheel": false
    },
    "Settings": {
        "AEEspoTimeGranularityUs": 1,
        "AELevelPercent": 80,
        "AEMaxExpoTimeUs": 980000,
        "AEMeasAreaHeight": 200,
        "AEMeasAreaWidth": 288,
        "AEMeasAreaX": 3808,
        "AEMeasAreaY": 2902,
        "AEMinExpoTimeUs": 10,
        "RoiXLeft": 0,
        "RoiXRight": 6004,
        "RoiYBottom": 6004,
        "RoiYTop": 0,
        "bUseRoi": false,
        "capturePath": "./Capture",
        "cfgPath": "./Cfg",
        "exportFileNameFormat": "",
        "exportFormat": 0,
        "fileNameAppend": "",
        "fileNamePrepend": ""
    },
    "SettingsI": {
        "AEMaxNbPixel": 5000,
        "cfgFileIsZip": true,
        "cfgFileName": "Cfg.zip"
    }
}

```

4 DisplayStreamOption.json

This file is created when DisplayStream is launched with bProcessed checked

By default, only defect pixels removal is enabled:

```
{
  "ExportOption": {
    "bAbsolute": false,
    "bBiasCompensation": false,
    "bFlatField": false,
    "bLinearisation": false,
    "bSensorDefectCorrection": true,
    "bSensorPrnuCorrection": false
  }
}
```

For example, to use DisplayStream to align correctly the taprisiot unit, all options must be set to true (linearization is the most important parameter).

Please note that the refresh rate will be

5 CaptureSequenceCaptures.json

The file is created when CaptureSequence is launched and emulatedCamera is checked.

Files mentions in this file will be used to generate X, Y, Z files

Note: those files are the processed files

```
{
  "FilePath": {
    "Filter_X": "./capture/filt_X_nd_0_iris_5_proc_1.bin",
    "Filter_Xz": "./capture/filt_Xz_nd_0_iris_5_proc_1.bin",
    "Filter_Ya": "./capture/filt_Ya_nd_0_iris_5_proc_1.bin",
    "Filter_Yb": "./capture/filt_Yb_nd_0_iris_5_proc_1.bin",
    "Filter_Z": "./capture/filt_Z_nd_0_iris_5_proc_1.bin"
  }
}
```

6 CaptureSequenceExposureTime.json

When CaptureSequence is called with useExpoFile is checked.

If the file does not exist, it is created.

```
{
  "ExposureTimeUs": {
    "Filter_X": 10000,
    "Filter_Xz": 10000,
    "Filter_Ya": 10000,
    "Filter_Yb": 10000,
    "Filter_Z": 10000
  }
}
```

7 CaptureSequenceExportOption.json

When CaptureSequence is called, the files is created with the configuration of the processing option used.

Then it is possible to change the configuration.

By default, all the parameters must be set to true. Other configuration are for debug purpose.

```
{
  "ExportOption": {
    "bAbsolute": true,
    "bBiasCompensation": true,
    "bFlatField": true,
    "bLinearisation": true,
    "bSensorDefectCorrection": true,
    "bSensorPrnuCorrection": true,
    "generateXYZ": true
  }
}
```