CA378-AOIS for JetsonTX2
Color Management Guide

Version 1.1.2

Dated: 2018/06/14

Home Page *https://www.centuryarks.com/*

History

Date	Version	Comment
2018/06/14	v1.1.2	Initial Release

Environment configuration

Before running CA 378-AOIS software, please install the following environment.

Install RAW development software

```
$ sudo apt-get update
$ sudo apt-get install ufraw
$ sudo apt-get install v4l-utils
```
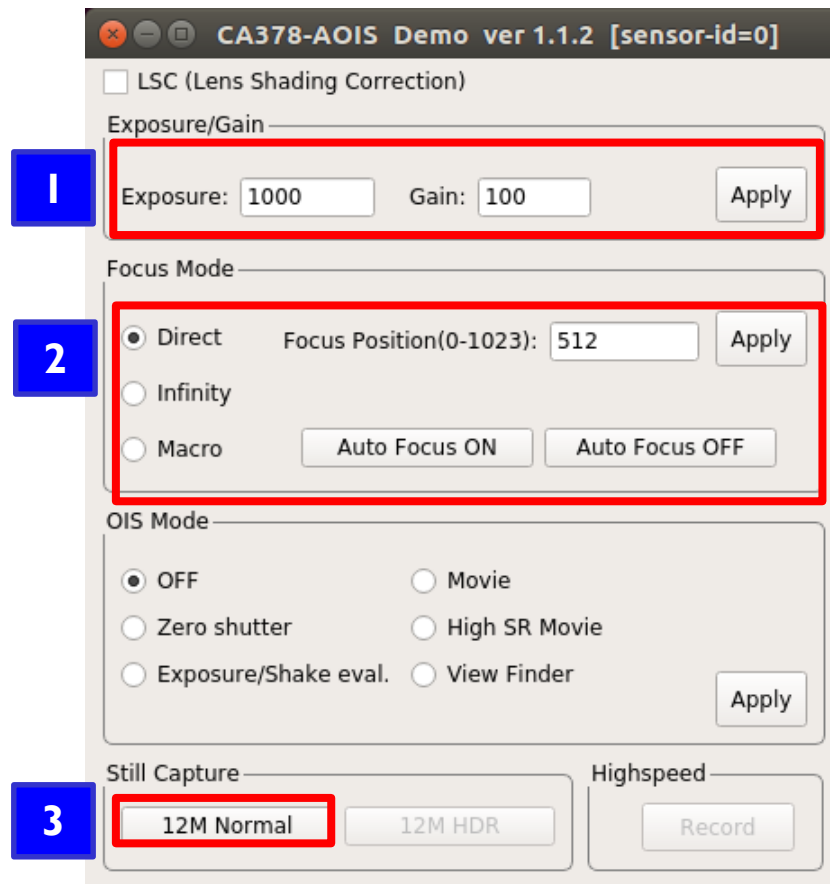
12Mpixel still image capturing

Procedure of capturing 12Mpixel still image:
1. Adjust the Exposure / Gain.
2. Adjust the focus.
   (It is useful to turn on Auto Focus and turn Auto Focus OFF when focus is on)
3. Click the [12M Normal] button

How to Color Management
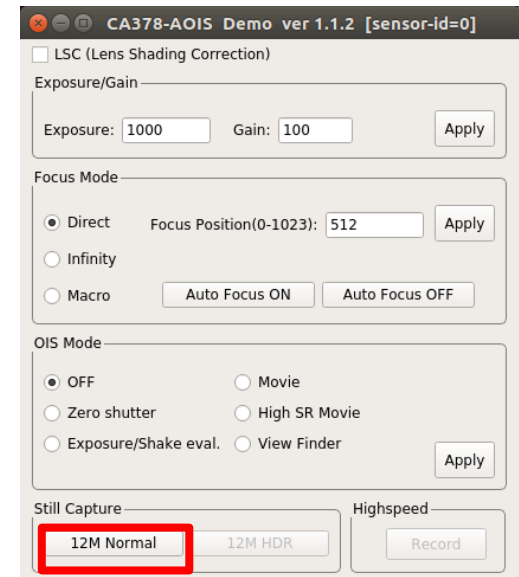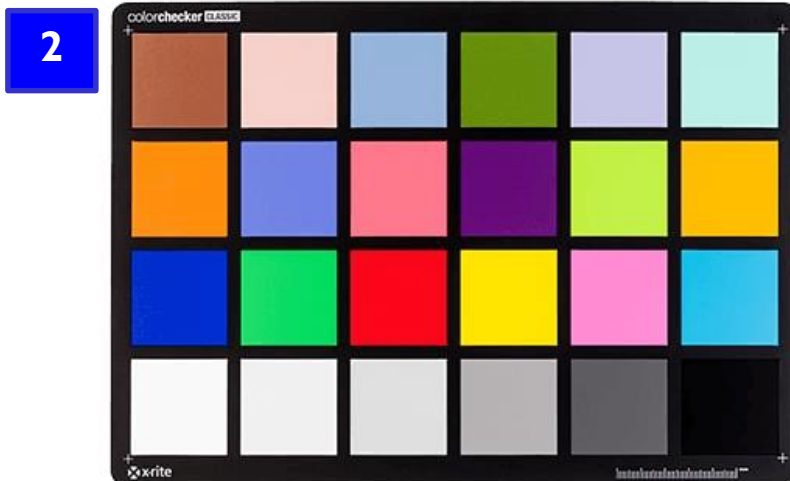
(1) How to adjust color management

1. Install color management tool.

```
$ sudo apt-get update
$ sudo apt-get install argyll
```
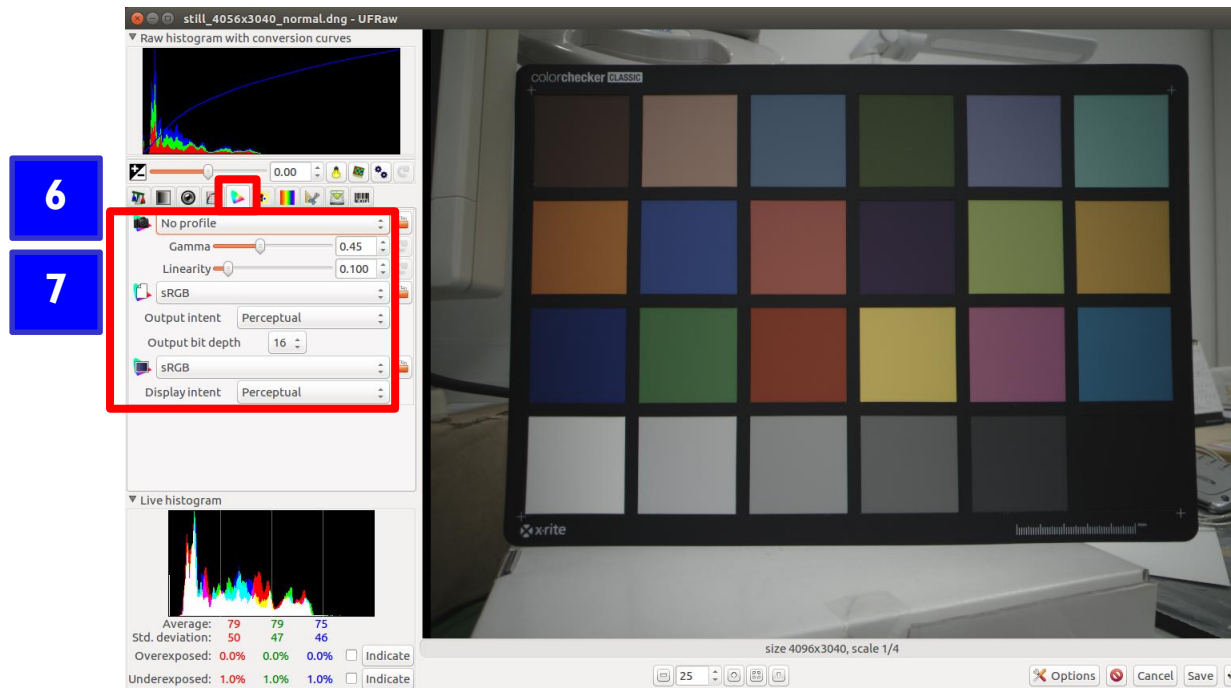
2. Prepare a color checker (24 colors).
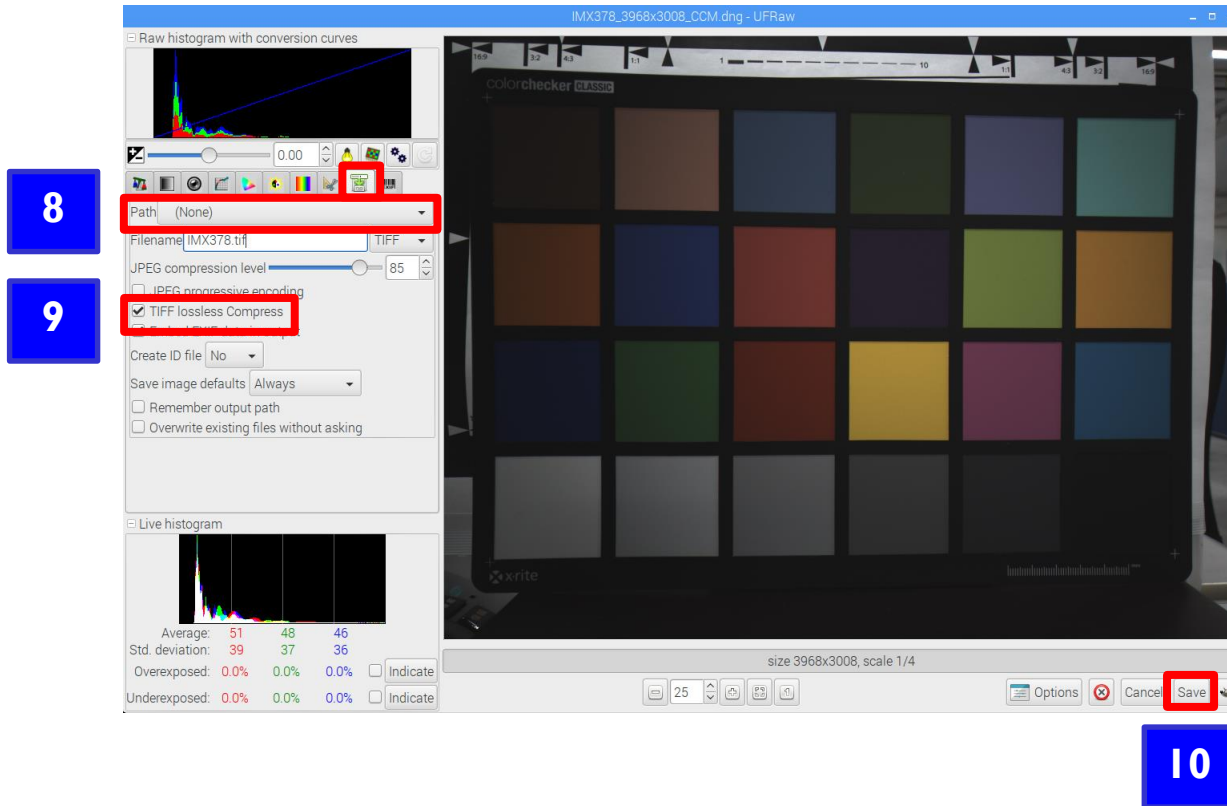   https://www.xrite.com/categories/calibration-profiling/colorchecker-classic

3. Run the procedure of capturing 12Mpixel still image.

Raw configuration

5. UFRaw will be started when capturing is completed.
6. Set the camera profile of color management to "No profile".
7. Set Gamma to "0.45".
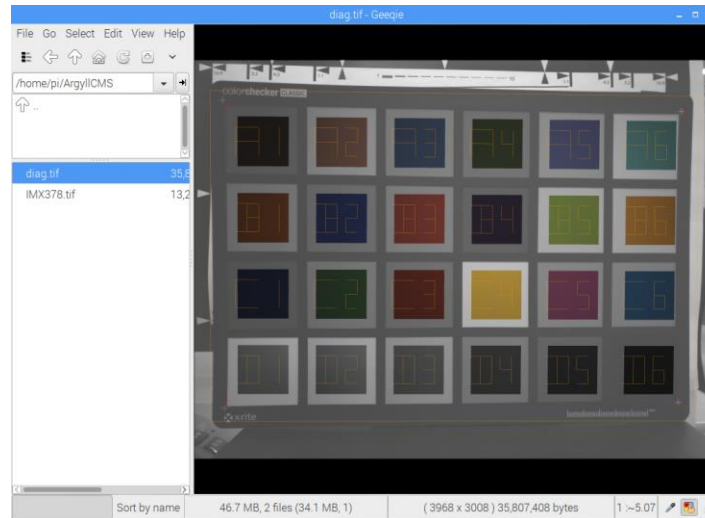   Set Output bit depth to "16".
   Set Display to "sRGB".

Raw configuration

8. Change "Filename" of Save to "IMX378.tif".
9. Check "TIFF lossless compress".
10. Click the [Save] button.
11. Exit UFRaw
12. Exit Demo

Adjust color management

13. Adjust the color management using Argyll.

```
$ cp -r /usr/share/color/argyll/ref/ ~/ArgyllCMS
$ mv ~/demo/IMX378.tif ~/ArgyllCMS/
$ cd ~/ArgyllCMS
$ scanin –v –p –a –G 0.45 -dipn IMX378.tif ColorChecker.cht ColorChecker.cie diag.tif
```

14. Open the output "diag.tif" with the image viewer and confirm the measurement result.

15. If it was measured successfully, run colprof to create the .icc profile.

```
$ colprof -v -qh -am -nc -u IMX378
```

Reference URL:
http://www.russellcottrell.com/photo/LinuxWorkflow.htm

Display still image capturing

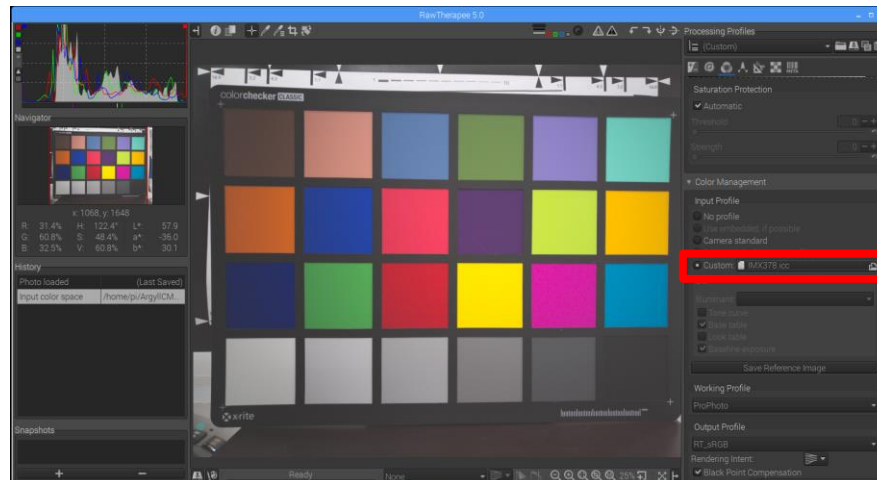(2) How to display still images with JetsonTX2:

1. Install RAW development software (RawTherapee).

```
$ sudo apt-get update
$ sudo apt-get install rawtherapee
```

2. Start RawTherapee.

```
$ rawtherapee IMX378_4056x3040.dng
```

3. Specify "IMX378.icc" in the color management function profile.
(Please select "No profile" if color management adjustment is not done)

Display in other environments

(3) How to display still images in environments such as PCs and smartphones:

1. Please download "~/demo/IMX378_4056x3040.dng" and "~/ArgyllCMS/IMX378.icc" on PC or smartphone with WinSCP etc.
2. Display dng file with UFRaw/RawTherapee/Adobe Photoshop Lightroom etc.
   * Please specify "IMX378.icc" or "No profile" with the color management function.