

CustomApplets

**FullLineRGB24_Chromasens,
MediumLineRGB24_Chromasens,
DualBaseLineRGB24_Chromasens,
DualBaseLineGray12_Chromasens**

Version 2.0

Quick Start Guide

Imprint

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Revision History

Version	Author	Date	Change Log
1.0	JT	26.05.2015	Initial Version
2.0	J. Trein	18.12.2015	Changed to CustomApplets classes. Added applets DualBaseLineRGB24_Chromasens and DualBaseLineGray12_Chromasens.l

1 Introduction

This quick start guide demonstrates the use of CustomApplets FullLineRGB24_Chromasens, MediumLineRGB24_Chromasens, DualBaseLineRGB24_Chromasens and DualBaseLineGray12_Chromasens for microEnable IV AD4-CL/-PoCL. The guide is focused on the usage with a Chromasens line scan camera using the FVAL on Camera Link.

1.1 Applet Properties

The applets are modifications of the released line applets FullLineRGB24 and MediumLineRGB24 and dual base gray and RGB applets. For documentation of these applets in HTML or PDF format use the following link:

http://www.siliconsoftware.de/download/live_docu/RT5/en/advancedacquisitionapplets/overview_mE4_CL.html

The applets are modified to use a camera's FVAL. Instead of considering the LVAL only and generate images from the incoming lines with the applets image trigger module, the applet will directly use the camera's frames for DMA transfer.

The applet will use all incoming lines from the camera. No lines are discarded. If the incoming frame is less or equal the parameterized ROI height in the applet (Parameter FG_HEIGHT), the applet will output the smaller camera image directly to the DMA. Therefore, it is possible to have varying frame heights. In contrast, if the parameterized ROI height is less than the camera images, the applet will split the camera's image into smaller sub-images i.e. chunks. The last chunk of each incoming image will have bit 32 set in the flag which can be read with parameter FG_IMAGETAG.

The applet contains no trigger module anymore. However, you can bypass digital signals at the GPIO connector of the grabber to the CC signals on the Camera Link connection. Use parameters FG_CC1 to FG_CC4 for the mapping. If you are using the applet in microDisplay, you can find the parameters in category Digital I/O.

For selecting one of our I/O Add-On hardware and for electrical connection, feel free to contact our sales and support.

Parameters are not listed in fgrab_define.h header file. To obtain the ID of the parameters in your software either use the include file of this applet package or use function

`Fg_getParameterIdByName()`

2 Requirements

2.1 Hardware

microEnable IV AD4-CL/-PoCL

Chromasens camera with FVAL enabled.

2.2 Runtime

Version 5.2 in 32Bit or 64Bit version. Newer sub-versions will work, too. You can download the runtime from

<http://www.silicon-software.info/en/downloads.html>

2.3 Applet

File FullLineRGB24_Chromasens.dll, MediumLineRGB24.dll, DualBaseLineRGB24_Chromasens.dll or DualBaseLineGray12_Chromasens.dll for Windows 32bit or 64Bit runtime.

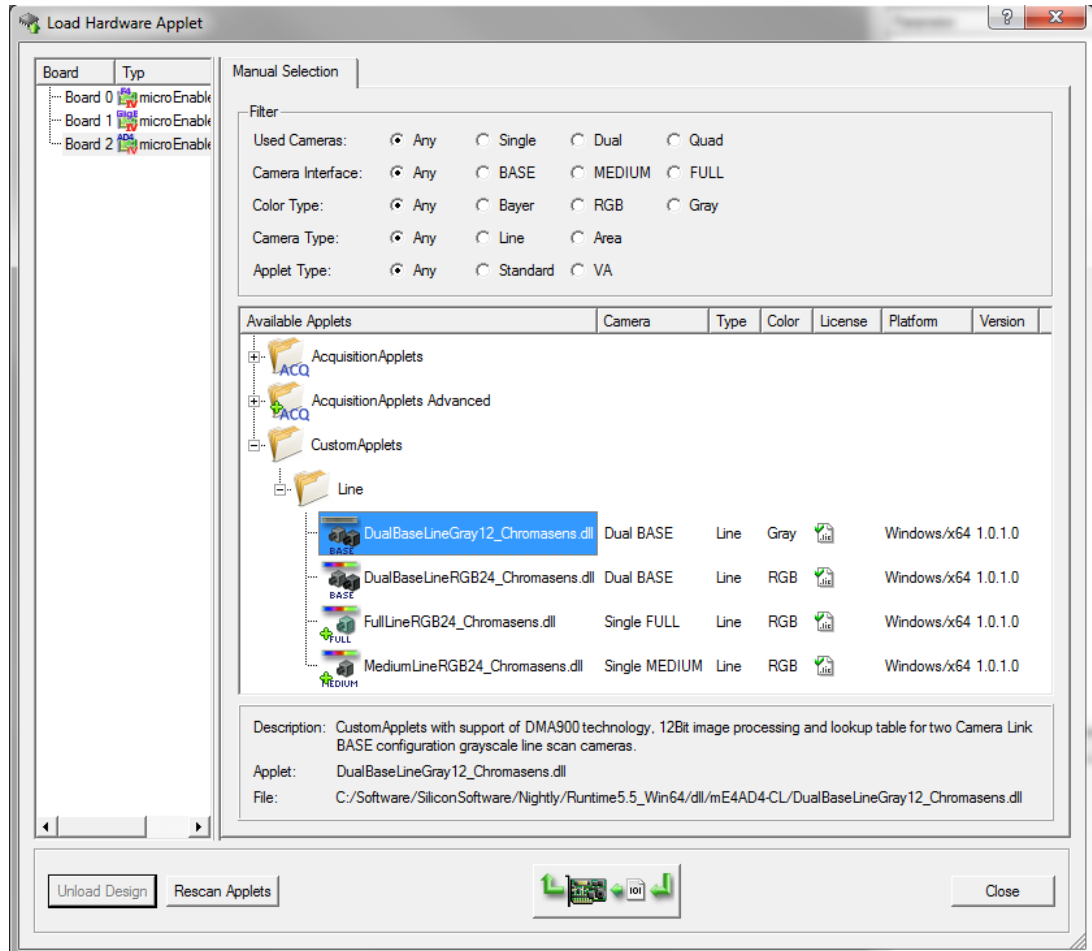
2.4 Documentation

This document. For further applet descriptions check documentation for released applets where these applets are derived from.

3 Installation

1. Install the frame grabber to PC as described in the hardware installation guide.
2. Connect the camera to the grabber and power up the camera
3. Install the runtime as described in the runtime installation guide.
4. Copy the applet DLLs in 32Bit or 64Bit version to directory %SISODIR5%\DLL\mE4AD4-CL.

5. Configure the camera to use FVAL. Use Chromasens tools and Camera Link's serial interface for camera configuration.
6. You can now use the applet e.g. in microDisplay
 - a. Start microDisplay and load the applet



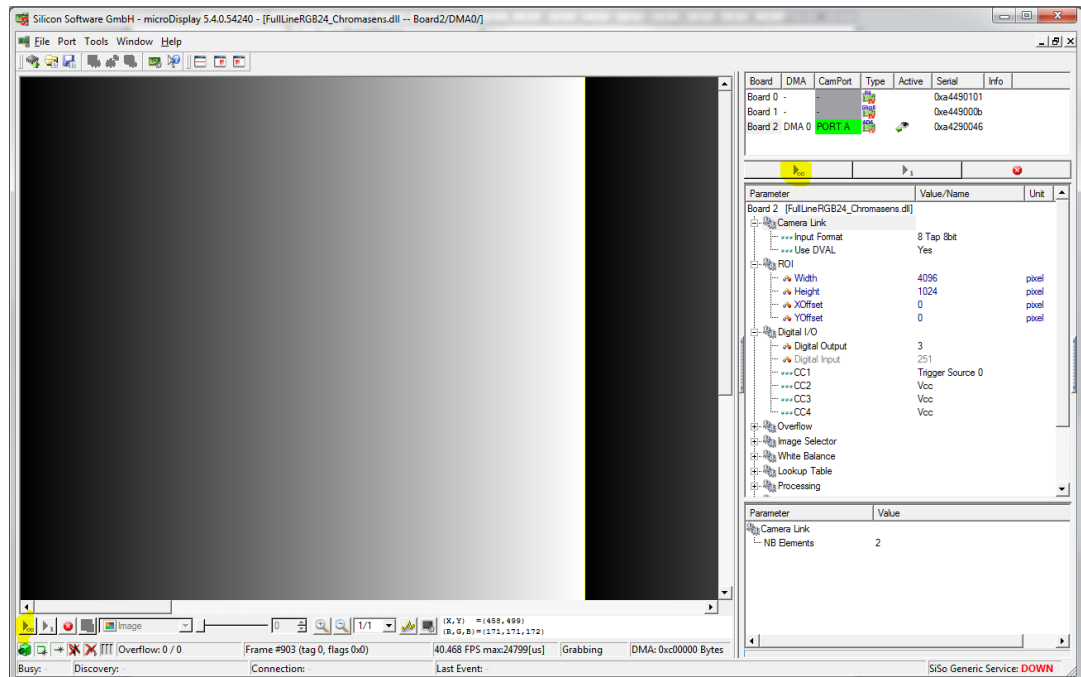
- b. Parameterize the applet according to your requirements and the applet documentation. Important parameters are:

Parameter	Value/Name	Unit
Board 2 [DualBaseLineGray12_Chromasens.dll]		
Camera Link		
Input Format	Dual Tap 8bit	
Use DVAL	Yes	
ROI		
Width	1024	pixel
Height	1024	pixel
XOffset	0	pixel
YOffset	0	pixel
Sensor Correction		
Readout Preset	SMODE_UNCHANGEDI->	...
Digital I/O		
Digital Output	3	
Digital Input	255	
CC1	Trigger Source 0	
CC2	Vcc	
CC3	Vcc	
CC4	Vcc	
Overflow		
Image Selector		
Lookup Table		
Processing		
Output Format		
Camera Simulator		
Miscellaneous		

Parameter	Value
Readout Preset	SMODE_UNCHANGEDI->
Format	ENUM
SDK Param	FG_SENSORREADOUT
Elements	
SMODE_UNCHANGEDI->	SMODE_UNCHANGED = 0
SMODE_REVERSE	< SMODE_REVERSE = 3
SMODE_TAB2_0	1> 2> SMODE_TAB2_0 = 1
SMODE_TAB2_1	<2 < SMODE_TAB2_1 = 4
SMODE_TAB2_2	1> <2 SMODE_TAB2_2 = 6
Access	RWC
Description	Preset for Sensor Readout Correction. This will apply the selected tap geometry.

- i. Camera Link format
- ii. ROI size
- iii. CC1 to 4 mapping of outputs to inputs.
- iv. Sensor Correction (Tap Geometry Sorting)

- c. You can now start the applet by hitting one of the acquisition buttons.



4 Next Steps

Of course you can use the applet now in your own application with our SDK interface or one of the third party software integration interfaces.

Parameters are not listed in fgrab_define.h header file. To obtain the ID of the parameters in your software either use the include file of this applet package or use function

```
Fg_getParameterIdByName()
```

Check further applet parameters to use processing, too.

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