

Technical Note:

Notification for Cognex VisionPro7.2 with GigE camera

Sensor Technology Co., Ltd

1 Introduction

This document show the procedure how to use the VisionPro7.2 with Sentech GigE camera.

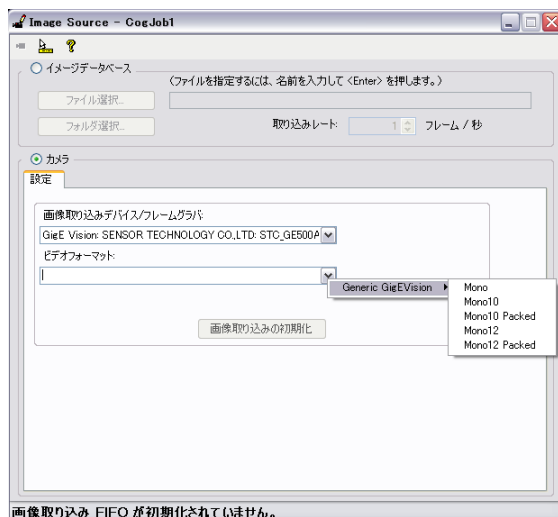
2 Notification for installing

- Sentech recommend PCI Express for obtaining wider band width for data transition.
For the NIC card on Pc, install the board that Congnex recommend.
- If user install VisionPro7.2 and Sentech Driver on the same PC. VisionPro 7.2 should be installed earlier than Sentech Driver. In this case, Sentech Driver should be v1.04.0007 or older.
Sentech Driver has newer eBus driver than Vision Pro7.2. Therefore if Sentech Driver have to be installed earlier than Vision Pro7.2. Vision Pro driver would be overwritten and error occurred when Vision Pro7.2 is launched.

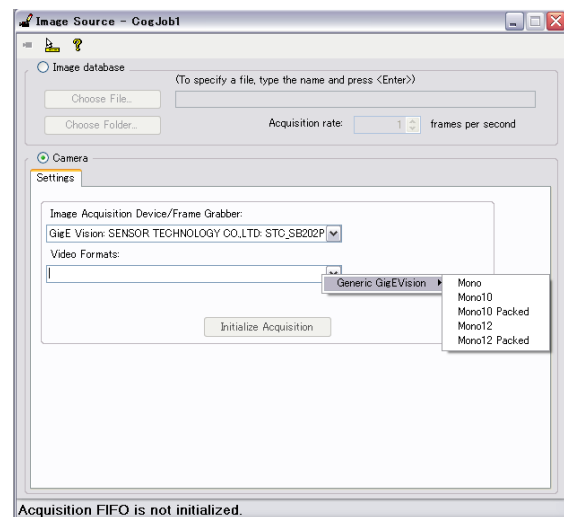
3 Camera Setting

- Select the camera through “Image Source” on QuickBuild of VisionPro7.2

3.1 For the “Settings” tab before acquisition of initializing Pixel Format can be selected on “Video Formats”.

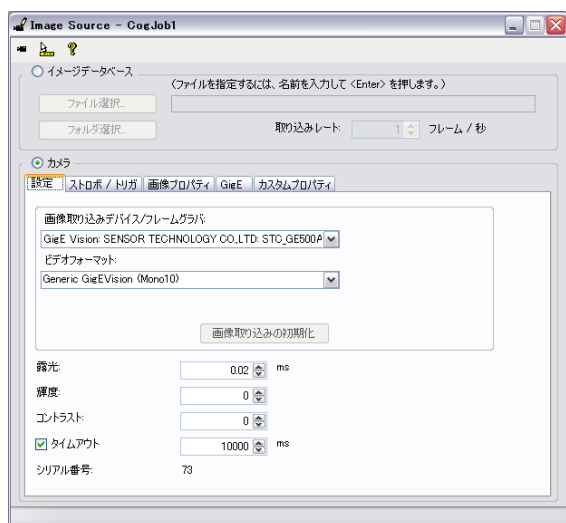


日本語

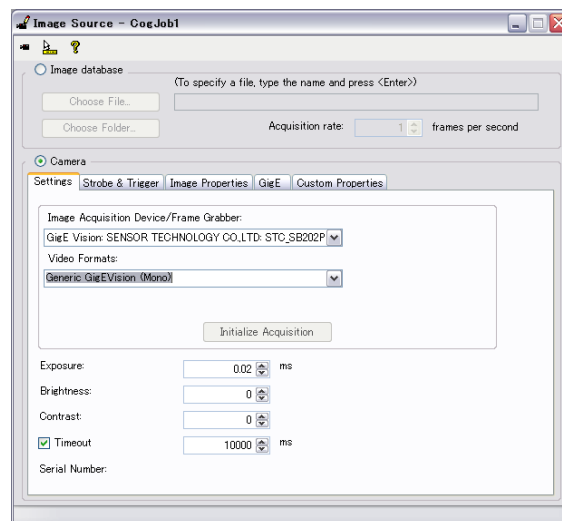


English

3.1 For the “Settings” tab after acquisition of initializing



日本語



English

GenIcam	VisionPro(English)	VisionPro(Japanese)	Setting value(Max) on VisionPro	Formula
ExposureTimeRaw	Exposure	露光	—	$\text{ExposureTimeRaw} = (\text{Setting Value}/1000)\mu\text{S}$
BlackLevelRaw	Brightness	輝度	31	$\text{BlackLevelRaw} = \text{Setting Value} * 0.31$
GainRaw	Contrast	コントラスト	255	$\text{GainRaw} = \text{Setting Value} * 0.255$

Table. 1 GenIcam table of function

① Exposure

This function is equivalent to “ExposureTimeRaw” on GenIcam.

GenIcam の「ExposureTimeRaw」露光時間に該当しています。

$\text{ExposureTimeRaw} = (\text{Setting Value}/1000)\mu\text{S}$

Example

Setting Value =999 → $\text{ExposureTimeRaw} = 999/1000 = 0 \mu\text{S}$

Setting Value =1999 → $\text{ExposureTimeRaw} = 1999/1000 = 1 \mu\text{S}$

On the VisionPro window, time unit is “ms”. However actual value is “us” on GenIcam.

② Brightness

This function is equivalent to “BlackLevelRaw” on GenIcam. Maximum value of “BlackLevelRaw” is “31”, therefor setting value is normalized on “1”.

$\text{BlackLevelRaw} = \text{Setting Value} * 0.31$

Example

Setting Value =0.1 → $\text{BlackLevelRaw} = 0.1 * 0.31 = 3$

Setting Value =0.13 → $\text{BlackLevelRaw} = 0.13 * 0.31 = 4$

③ Contrast

This function is equivalent to “GainRaw” on GenIcam. Maximum value of “GainRaw” is “255”, therefor setting value is normalized on “1”.

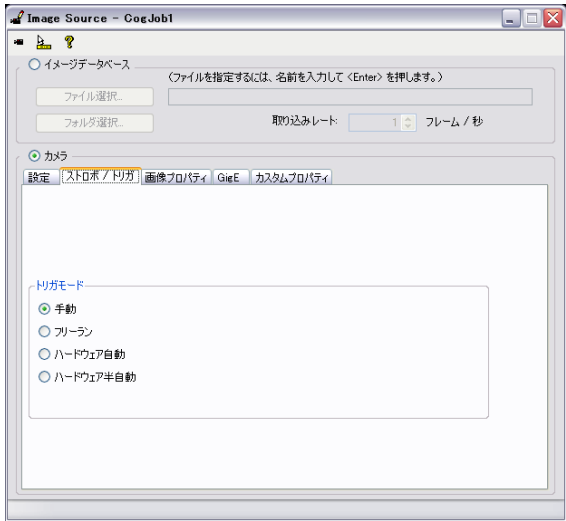
$\text{GainRaw} = \text{Setting Value} * 0.255$

Example

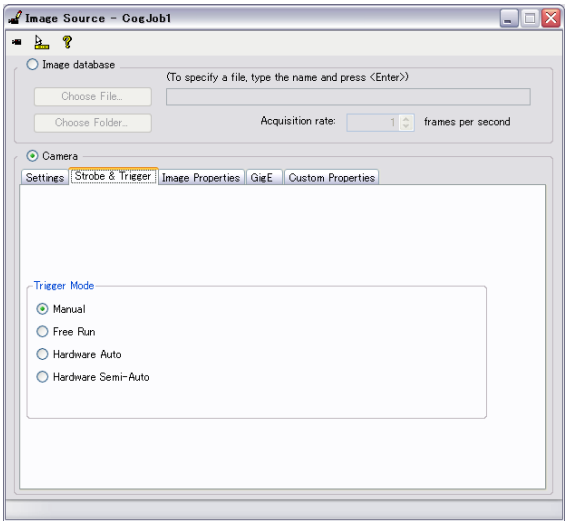
Setting Value =0.1 → $\text{GainRaw} = 0.1 * 0.255 = 25$

Setting Value =0.15 → $\text{GainRaw} = 0.15 * 0.255 = 38$

3.2 Strobe & Trigger



日本語



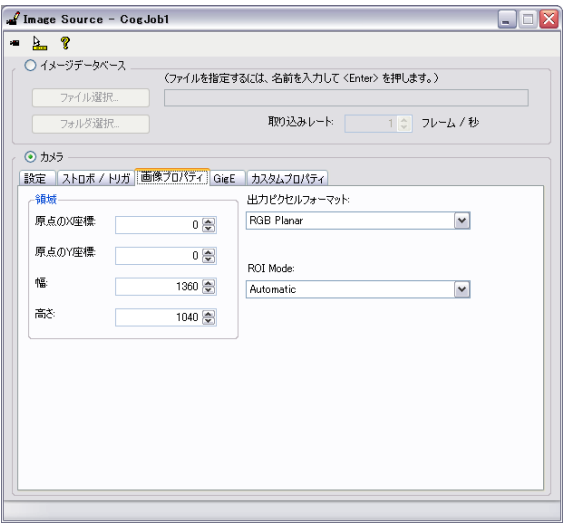
English

Cognex Trigger Mode (English)	Cognex Trigger Mode (Japanese)	GenICam Register Settings	
		TriggerMode	AcquisitionMode
Manual	手動	Off	SingleFrame
Freerun	フリーラン	Off	Continuous
Semi-auto	ハードウェア自動	On	SingleFrame
Auto	ハードウェア半自動	On	Continuous

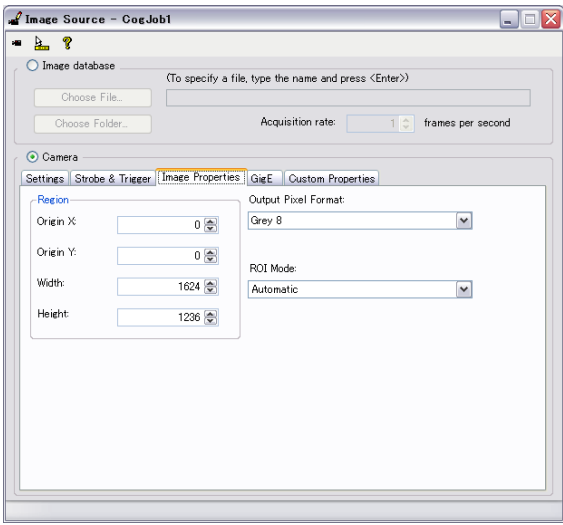
Table. 2 Table of Trigger Mode

If it was on the SingleFrame mode, frame rate would be half for SingleFrame is distributed after obtained the image.

3.3 Image Properties



日本語

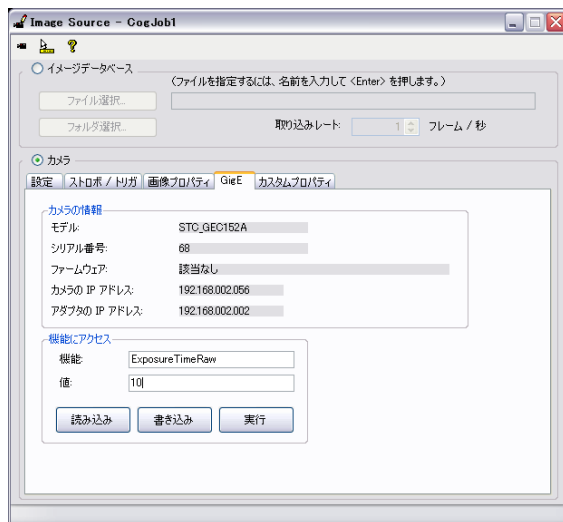


English

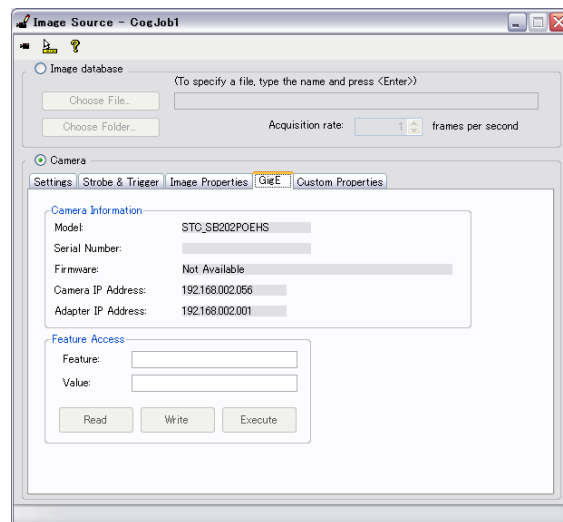
GenIcam	VisionPro(English)	VisionPro(Japanese)	機能 Function
OffsetX	Origin X	原点のX座標	各GenIcamに相当 Equivalent of GenIcam function.
OffsetY	Origin Y	原点のY座標	各GenIcamに相当 Equivalent of GenIcam function.
Width	Width	幅	各GenIcamに相当 Equivalent of GenIcam function.
Height	Height	高さ	各GenIcamに相当 Equivalent of GenIcam function.
-	Output Pixel Format	出力ピクセルフォーマット	PCメモリバッファの出力フォーマットです。 カメラのパラメータではありません Output format from PC memory buffer. Not camera
-	ROI Mode	ROI Mode	カメラに合わせて設定した座標とサイズを自動計算するか 設定

Table. 3 Table of GenIcam functions

3.4 GigE



日本語



English

All of GenICam commands can be executed through this window.

① Parameter

Example

Feature : ExposureTimeRaw

Value : 10

Click the “Write” button to set ExposureTimeRaw=10.

② Command

Example

Feature : UserSetSave

Value : Blank

Click the “Execute” button to execute UserSetSave.

③ Saving the setting parameters

1. Set the parameter

Feature : UserSetSelector

Value : UserSet1

Click the “Write” button.

3. Feature : UserSetSave

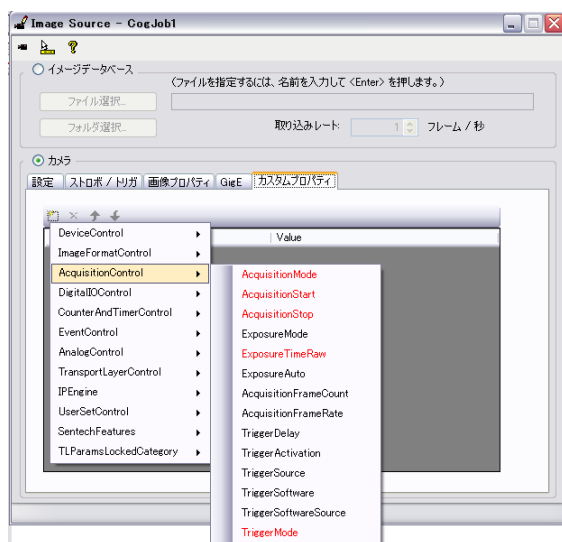
Value : Blank

Click the “Execute” button.

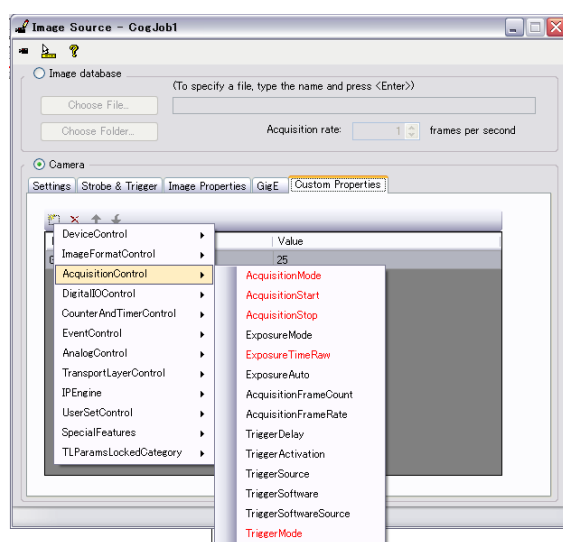
3.5 Custom properties

This Custom Properties tab show the table of GenICam commands. Red letter items are using on QuickBuild. These parameters could be over written.

Another tab values can be checked through this “Custom properties”. These items are not reflecting the current value directly. The item should be added, deleted and re-add to reflect the value.



日本語



English

End

Update record

Rev	Date	Descriptions	
1.00	2012/12/03	● New	

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