

# Configuring an Unsupported Camera Link Frame Grabber to Run a Point Grey Camera Link Device

Technical Application Note TAN2011003

Revised March 14, 2011

## 1.1 Subject

Technical Application Note (TAN2011003): Configuring an Unsupported Camera Link Frame Grabber to Run a Point Grey Camera Link Device

## 1.2 Applicable Product(s)

- **Gazelle**

## 1.3 Application Note Description

This application note guides customers through the steps of configuring a frame grabber that is not supported by Point Grey with a camera configuration file to work with a Point Grey Camera Link imaging device.

## 1.4 Introduction

To simplify the process of configuring a Point Grey Camera Link imaging device to operate with a Camera Link frame grabber, Point Grey provides camera configuration files (CCFs) that can be downloaded, and then referenced from your frame grabber's serial interface tool. The CCF establishes the proper settings between the camera and the frame grabber, such as supported pixel encoding formats, image size parameters, output taps, and bit depth, making it easy to get started with image capture.

Point Grey recommends using the *Gazelle* Camera Link camera with frame grabbers that are supported by Point Grey with CCFs. For a list of supported frame grabbers, see Knowledge Base Article 359 (<http://www.ptgrey.com/support/kb/index.asp?a=4&q=359>).

If you are using a frame grabber for which Point Grey does not provide a CCF, the steps in this application note may be used as a guide for configuring the frame grabber settings manually so that it can work properly with the *Gazelle*.

The configuration steps are based on the Dalsa Xcelera-CL frame grabber. When referencing these steps, keep in mind the following:

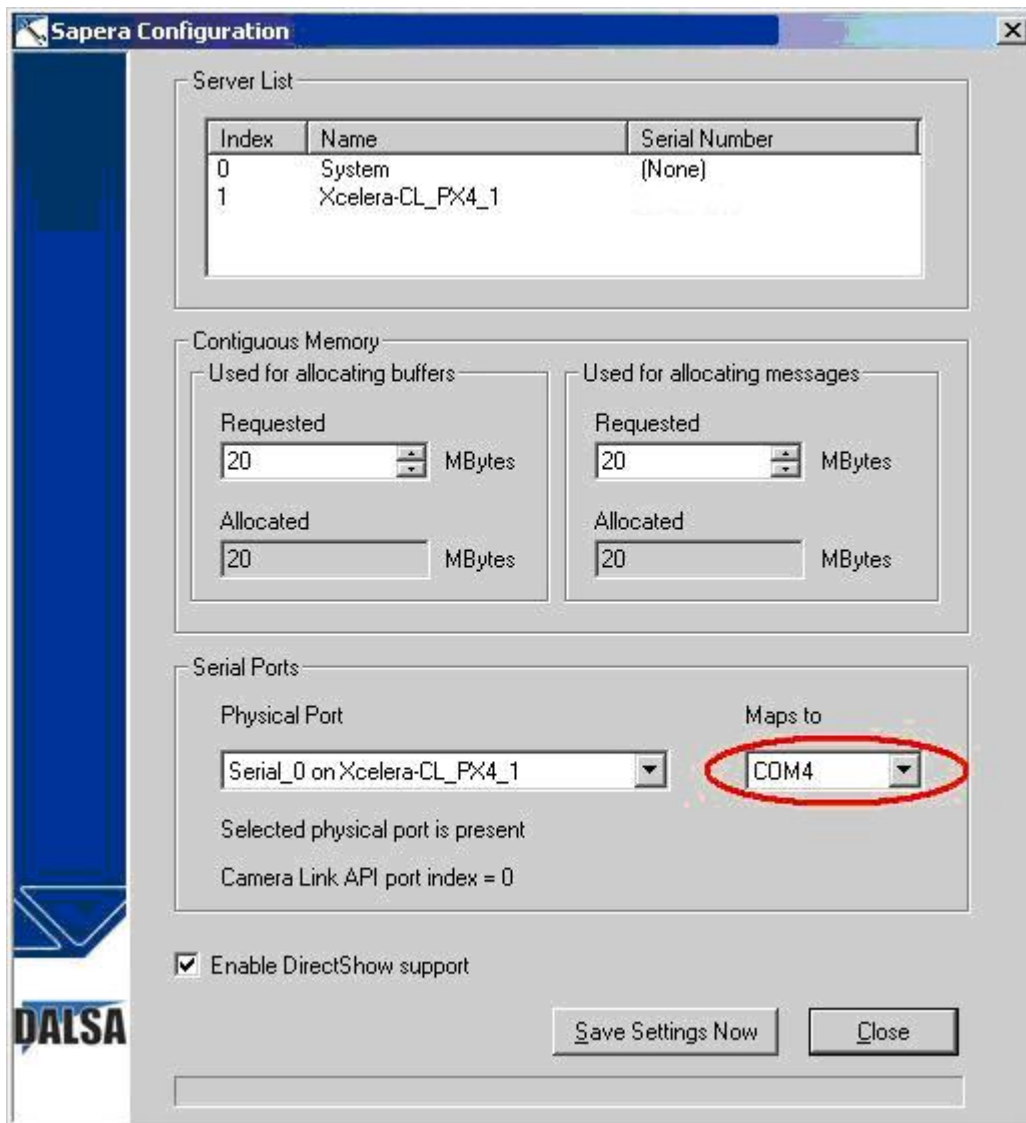
- The steps serve only as an approximate guide for what is required to configure the particular make and model of your frame grabber. The configuration tools will not match this particular example.
- The Dalsa Xcelera-CL is already supported by Point Grey with a CCF. This example serves only as a guide for configuring other frame grabbers that are not currently supported by Point Grey.

## 1.5 Manually Configuring the Dalsa Xcelera-CL Frame Grabber

### Step 1: Configure the COM Port

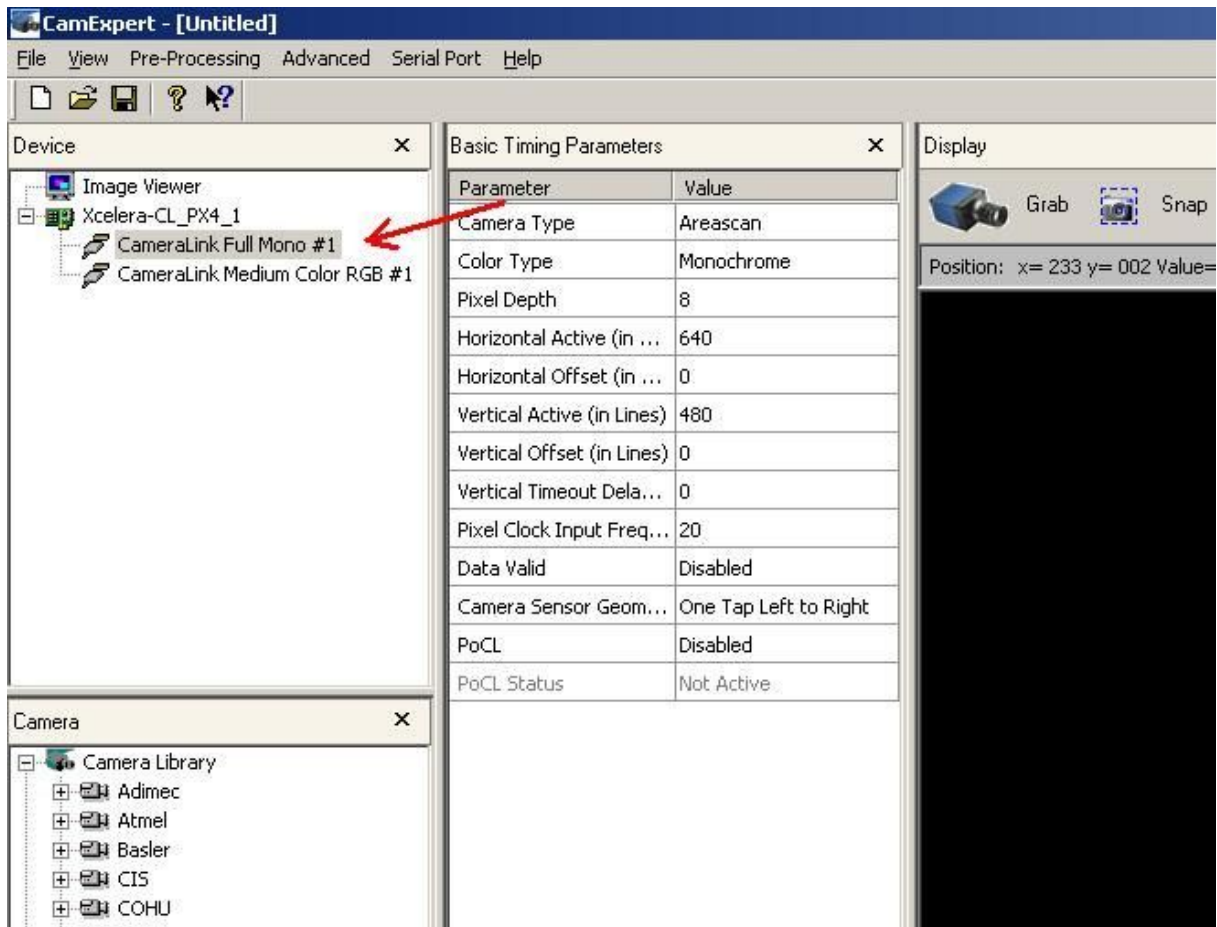
The COM port that will be used to communicate with the camera must be configured. On some frame grabbers, this step is configured automatically. However, on this frame grabber, it is manually configured using the *Sapera Configuration tool*. Only a COM port that is not currently being used by another device can be selected.

A system reboot is required to complete this configuration step.



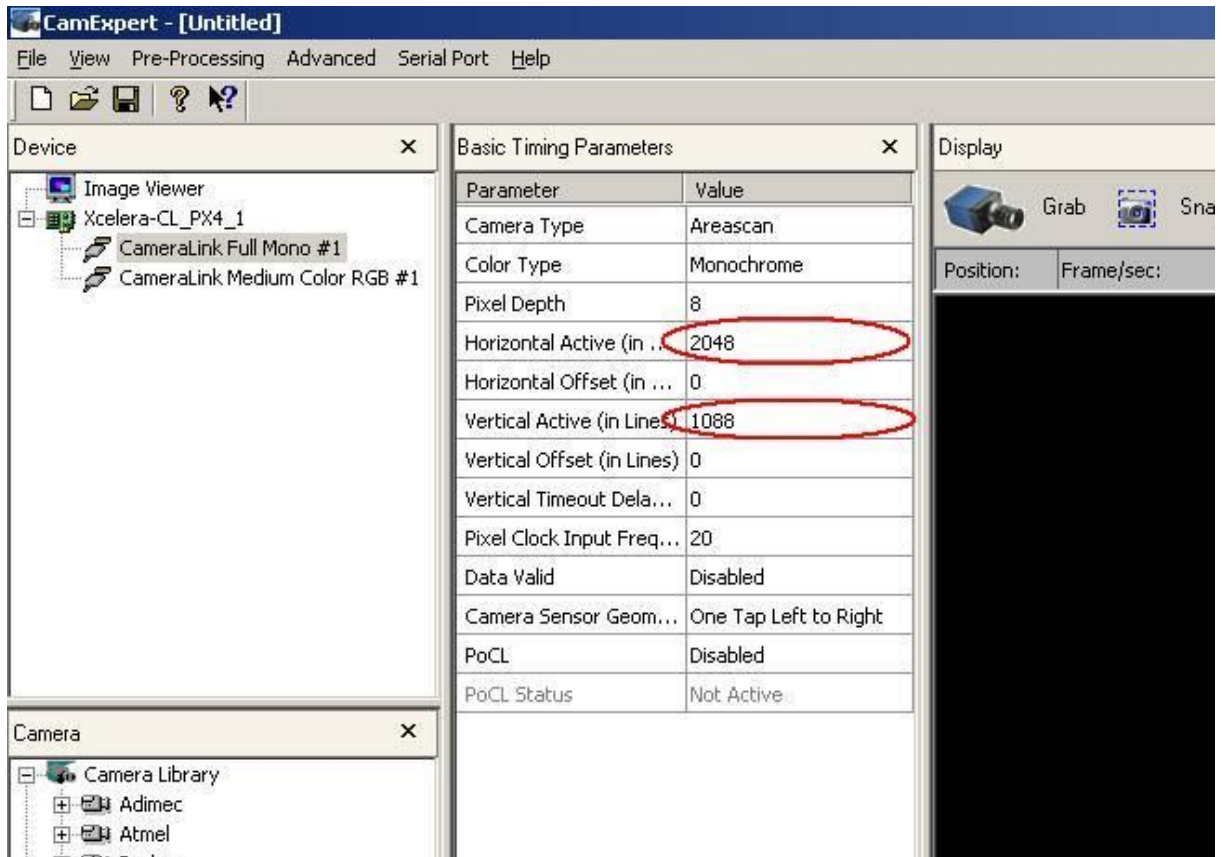
## Step 2: Configure the Proper Camera Link Configuration and Image Format Support

Launch the Dalsa CamExpert tool and select **CameraLink Full Mono #1** from the *Device* list. This selection enables the frame grabber for maximum Full (8-tap) output and Mono pixel format, which is supported on the *Gazelle*.



### Step 3: Configure Image Size

Under *Basic Timing Parameters*, configure the image size supported by the camera. For *Gazelle GZL-CL-22C5*, set *Horizontal Active* to **2048** and *Vertical Active* to **1088**. For *Gazelle GZL-CL-41C6*, set both *Horizontal Active* and *Vertical Active* to **2048**.

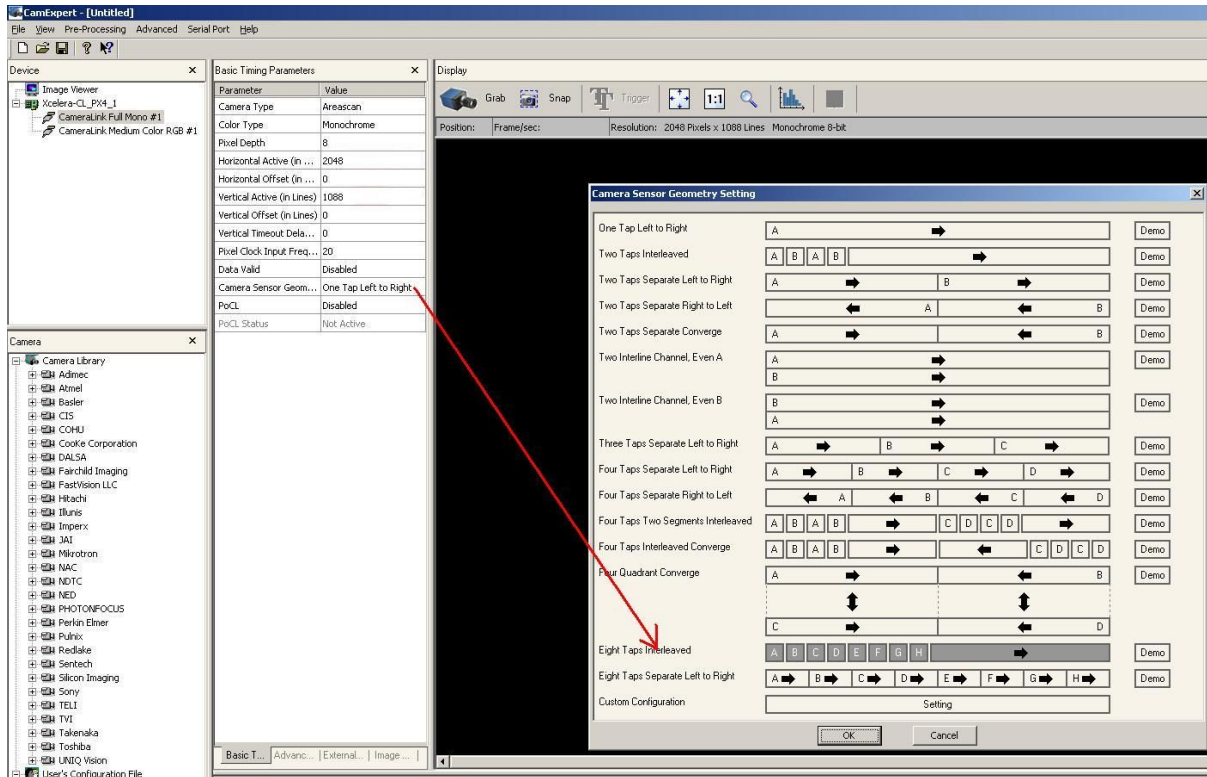


The screenshot shows the CamExpert software interface with the 'Basic Timing Parameters' window open. The 'Horizontal Active' and 'Vertical Active' values are highlighted with red circles.

Parameter	Value
Camera Type	Areascan
Color Type	Monochrome
Pixel Depth	8
Horizontal Active (in ...)	2048
Horizontal Offset (in ...)	0
Vertical Active (in Lines)	1088
Vertical Offset (in Lines)	0
Vertical Timeout Dela...	0
Pixel Clock Input Freq...	20
Data Valid	Disabled
Camera Sensor Geom...	One Tap Left to Right
PoCL	Disabled
PoCL Status	Not Active

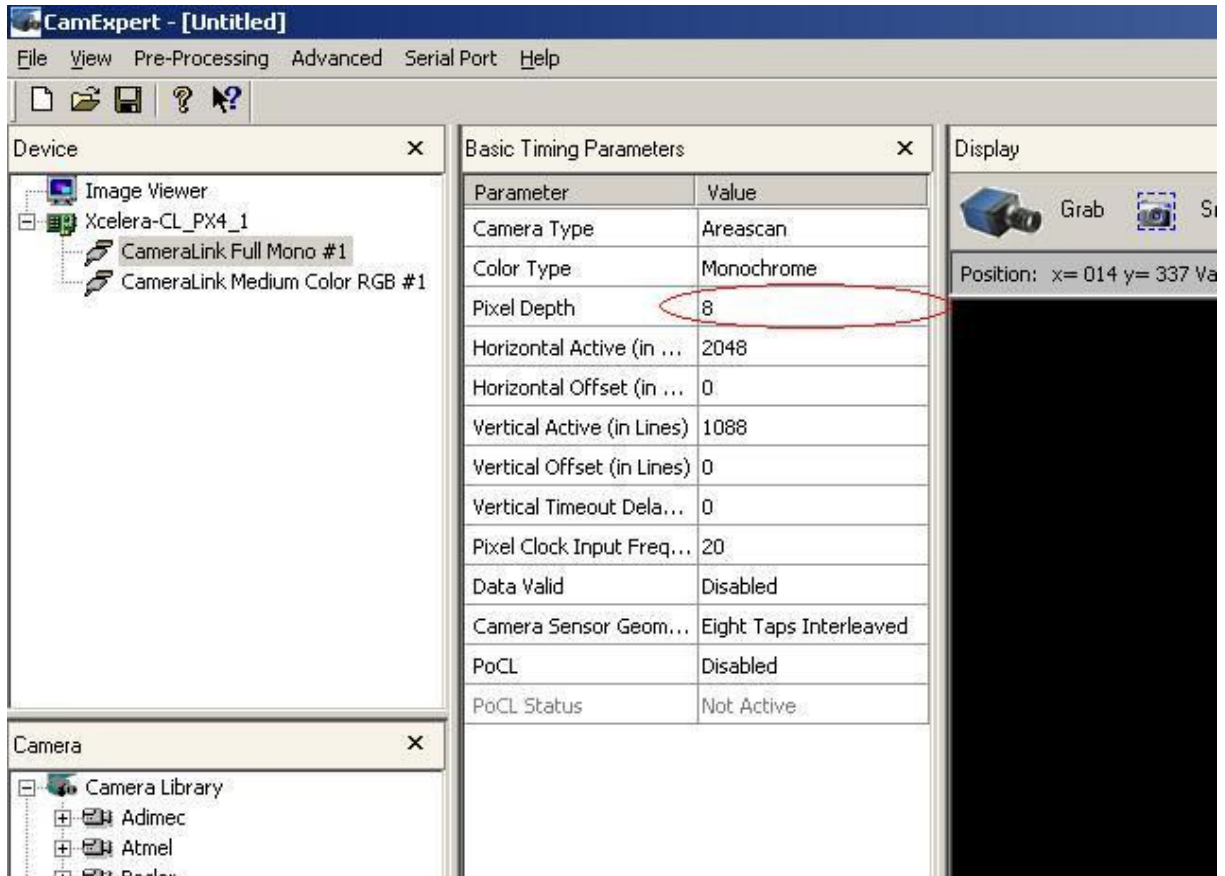
## Step 4: Configure Sensor Geometry (Number of Taps)

Under *Basic Timing Parameters*, click **Camera Sensor Geometry**. The *Camera Sensor Geometry Setting* window opens. To stream images in 8-tap configuration, select **Eight Taps Interleaved**. To stream in 2-tap configuration, select **Two Taps Interleaved**.



## Step 5: Configure Pixel Depth

The *Gazelle* supports just one pixel depth for each sensor geometry setting. Under *Basic Timing Parameters*, confirm the correct setting of the *Pixel Depth* field, and change if necessary. For eight-tap mode, pixel depth should be **8** bits. For two-tap mode, pixel depth should be **10** bits.



## Step 6: Grab Image

Under *Display*, click **Grab** to grab images with your newly-configured frame grabber.

## 1.6 Additional Downloads and Support

Access more Technical Application Notes on the web at [www.ptgrey.com/support/downloads](http://www.ptgrey.com/support/downloads).

Point Grey Research Inc. endeavors to provide the highest level of technical support possible to our customers. Most support resources can be accessed through the Product Support section of our website: [www.ptgrey.com/support](http://www.ptgrey.com/support).

### Creating a Customer Login Account

The first step in accessing our technical support resources is to obtain a Customer Login Account. This requires a valid name, e-mail address, and camera serial number. To apply for a Customer Login Account go to [www.ptgrey.com/support/downloads](http://www.ptgrey.com/support/downloads).

### Knowledge Base

Our on-line knowledge base at [www.ptgrey.com/support/kb/](http://www.ptgrey.com/support/kb/) contains answers to some of the most common support questions. It is constantly updated, expanded, and refined to ensure that our customers have access to the latest information.

### Product Downloads

Customers with a Customer Login Account can access the latest software and firmware for their cameras from our downloads site at [www.ptgrey.com/support/downloads](http://www.ptgrey.com/support/downloads). We encourage our customers to keep their software and firmware up-to-date by downloading and installing the latest versions.

### Contacting Technical Support

Before contacting Technical Support, have you:

1. *Read the product documentation and user manual?*
2. *Searched the Knowledge Base?*
3. *Downloaded and installed the latest version of software and/or firmware?*

If you have done all the above and still can't find an answer to your question, contact our Technical Support team at [www.ptgrey.com/support/contact/](http://www.ptgrey.com/support/contact/).