

# SVCam-EVO

EVO Camera Link Series

## 1, 2, 4 and 8 MegaPixel Versions

Pre-liminary



The camera is designed to reach high frame rates due to high speed Camera Link (Medium configuration). It is enclosed in a very compact housing.

Correlated Double Sampling (CDS) and 4 x 14 Bit A/D converters guarantee an excellent signal-to-noise ratio.

The internal FPGA allows different ways to adjust the exposure time and select trigger modes including:

- > Synchronization of image capture to an external event (trigger mode)
- > "Free running" with maximum frame rate
- > Exposure time control via Remote interface or by trigger pulse width
- > Longer exposure times under low light level conditions

The family concept of SVCam series (see separate datasheet) allows to upgrade systems in order to meet new specific requirements.

If the frame grabber in use supports „Power over Camera Link“, no extra power supply is required. Only 1 (Base) or 2 (Medium) CL-cables are needed.



GEN<i>CAM



### Technical Highlights/Technical Data

- > Progressive Scan 4-Tap CCD sensors
- > Monochrome and color sensors (Bayer Pattern)
- > Various trigger (int./ext./free running) and exposure modes
- > Adjustable gain
- > Low offset
- > Various binning modes
- > Partial Scan
- > C-Mount
- > Operating temp. range: -10°C (non condensing) to +45°C
- > Power supply: 10 - 25 V DC
- > 8, 10 or 12 Bit data (user selectable)
- > Refers to CameraLink Base and Medium Standard
- > Selectable data rate up to 65 Mhz per Tap
- > Outstanding frame rates possible
- > SW-Config. tool to control the camera via frame grabber interface
- > Power over Camera Link

## Overview

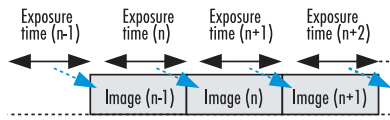
SVCam-EVO	Camera Link Versions*				
	evo1050XFHCPC	evo2050XFHCPC	evo2150XFHCPC	evo4050XFHCPC	evo8050XFHCPC
Camera Type	evo1050XFHCPC	evo2050XFHCPC	evo2150XFHCPC	evo4050XFHCPC	evo8050XFHCPC
Resolution	1.024 x 1.024	1.600 x 1.200	1.920 x 1.080	2.336 x 1.752	3.320 x 2.496
Frame Rate (Hz, max.)	190	105	100	50	27
Pixel ( $\mu\text{m}^2$ )	5.5 x 5.5	5.5 x 5.5	5.5 x 5.5	5.5 x 5.5	5.5 x 5.5
CCD-Size Equivalent	1/2"	2/3"	2/3"	1"	22.66 mm
Exposure Time int.	6 $\mu\text{s}$ - 2 s	6 $\mu\text{s}$ - 2 s	6 $\mu\text{s}$ - 2 s	6 $\mu\text{s}$ - 2 s	6 $\mu\text{s}$ - 2 s
Exposure Time ext.	6 $\mu\text{s}$ - $\infty$	6 $\mu\text{s}$ - $\infty$	6 $\mu\text{s}$ - $\infty$	6 $\mu\text{s}$ - $\infty$	6 $\mu\text{s}$ - $\infty$

\* Preliminary X = Monochrome, X = Color  
Cameras make use of high performance CCD made by **Image Sensor Technologies Acq.**®, formerly **Kodak** (USA). For more camera types see our SVCam-EVO product overview.

## Operation Modes

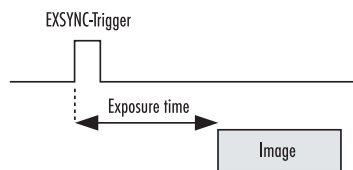
### Mode: Free Running/Fixed Frequency

In this mode the camera creates all sync signals itself. Camera is connected to PC and will create images immediately.



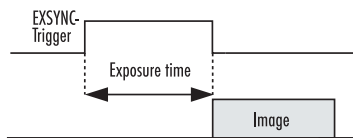
### Mode: External Trigger, Internal Exposure Control

The camera needs an external trigger to output images. The exposure time is set by the internal logic inside the camera.



### Mode: External Trigger, External Exposure Control

The camera needs an external trigger to output images. The exposure time is determined by the pulse width of the trigger signal and can be changed from frame to frame.



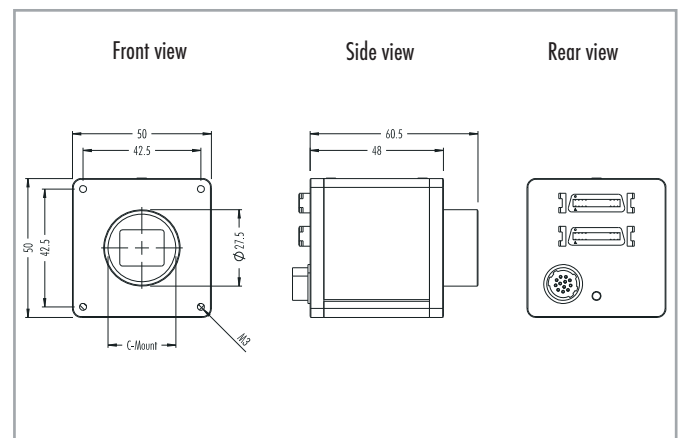
### Mode: Software Trigger

The PC sends a command to the camera in order to get data. Internal logic is set for the exposure time. Jitter must be observed.

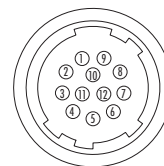
## Configuration Software

The SVCam cameras come with our "Convenient Cam"-software, which allows easy interactive setup of all camera parameters. The program runs under Windows XP and Windows 7 including 64 Bit operating system. Independently from "Convenient Cam", the camera can be configured using any terminal software that supports Serial communication.

## Dimensions [mm]



## Connector pin-out



- |                        |                                    |
|------------------------|------------------------------------|
| 1 VIN- (GND)           | 7 OUT1 (open drain max. 24V, 0.3A) |
| 2 VIN+ (10V to 25V DC) | 8 OUT2 (open drain max. 24V, 0.3A) |
| 3 RXD (RS232)          | 9 IN3+ (RS422)                     |
| 4 TXD (RS232)          | 10 IN3- (RS422)                    |
| 5 IN1 (0-24V)          | 11 OUT3+ (RS422)                   |
| 6 IN2 (0-24V)          | 12 OUT3- (RS422)                   |

## Ordering Guide

Monochrome:	Color:	
<b>evo1050MFHCPC</b>	<b>evo1050CFHCPC</b>	(max. 190 Hz)
<b>evo2050MFHCPC</b>	<b>evo2050CFHCPC</b>	(max. 105 Hz)
<b>evo2150MFHCPC</b>	<b>evo2150CFHCPC</b>	(max. 100 Hz)
<b>evo4050MFHCPC</b>	<b>evo4050CFHCPC</b>	(max. 50 Hz)
<b>evo8050MFHCPC</b>	<b>evo8050CFHCPC</b>	(max. 27 Hz)

