

## Compact 2-Megapixel Camera

**Preliminary**



This digital Machine Vision camera has a resolution of 1920 x 1080 pixel. The camera is designed to reach high frame rates at an excellent signal-to-noise ratio and is enclosed in a small housing.

Unique processing of the analogue CCD-signal using Correlated Double Sampling (CDS, a noise reduction method) and digital signal conversion, guarantees an excellent signal to noise ratio.

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

- Synchronisation of image capture to an external event (trigger mode)
- "Free running" with maximum frame rate
- Exposure time control via serial interface or by trigger pulse width
- Longer exposure times up to 8 minutes 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.

GEN*<i>*CAM **GIG<sup>TM</sup>** VISION **CAMERA Link<sup>TM</sup>**

- Progressive scan technology
- Resolution: 1920 x 1080 pixel
- Synchronization:
  - "free running" (frame rate adjustable)
  - external trigger with internal exposure control
  - external trigger with pulse width exposure control
- Housing dimensions: e.g. 51mm x 51mm x 74mm
- Monochrome and color sensors (Bayer Pattern)
- Up to 12 Bit video data stream (14 Bit ADC per tap)
- Adjustable gain
- Low offset
- 2 x 2 binning mode
- Partial scan mode for higher frame rates
- Standard C-Mount
- 12V DC @ approx. 600mA consumption
- Operating temperature range: -10°C to +40°C
- Full 2 years warranty

# SVCam-svs2150



## Camera Types:

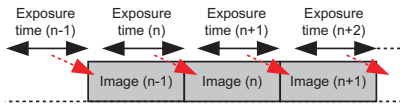
Camera Type	svs2150XTLGEC	svs2150XTLCPC	svs2150XTHCPC
Resolution	1920 x 1080	1920 x 1080	1920 x 1080
Frame Rate (Hz, max.)	33	36	48
Pixel ( $\mu\text{m}^2$ )	5.5 x 5.5	5.5 x 5.5	5.5 x 5.5
Exposure Time internal	75 $\mu\text{s}$ - 3 s	75 $\mu\text{s}$ - 8 min	75 $\mu\text{s}$ - 8 min
Exposure Time external	80 $\mu\text{s}$ - 00	80 $\mu\text{s}$ - 00	80 $\mu\text{s}$ - 00
CCD-Size Equivalent	12.1mm diag., 2/3" (16:9)	12.1mm diag., 2/3" (16:9)	12.1mm diag., 2/3" (16:9)

x = Monochrome  
x = Color

## Operation Modes:

### Mode: Free Running

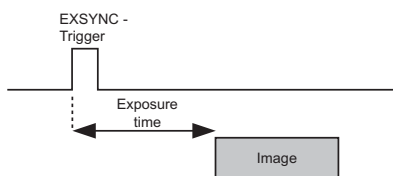
In this mode the camera creates all sync signals itself. The frame rate is at its maximum and there is no need to trigger the camera (by EXSYNC) in order to get data. Exposure time can be set by using the serial CameraLink interface of any PC. The enclosed software allows the user to set the specified values. Exposure time can be changed "on the fly" during image acquisition. The time set stays resident after power off.



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### Mode: External Trigger, Internal Exposure Control

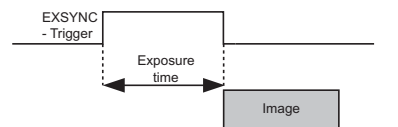
In this mode the camera starts image acquisition after an external trigger event. The exposure time is controlled by the camera. The value for the exposure time is entered via serial interface over the frame grabber CameraLink connection. The trigger signal is fed through the frame grabber or directly connected to the camera.



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### Mode: External Trigger, External Exposure Control

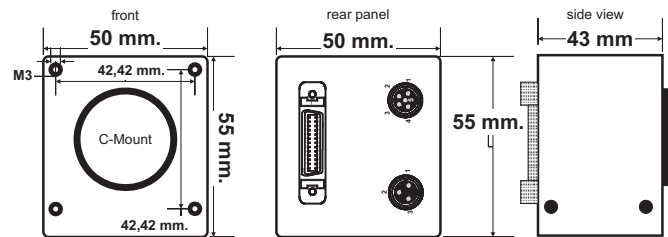
In this mode the camera is waiting for an external trigger which starts integration and read out. Exposure time can be varied using the length of the EXSYNC pulse (i.e. between the rising and the falling edge and the low going edge). The time settings in the control software are not activated. This mode is useful in applications where the light level of the scene changes during operation. Change of exposure time is possible from one frame to the next.



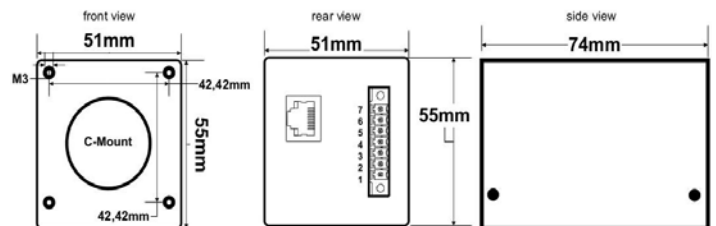
## Configuration Software:

The SVCam-cameras come with our "SVCapture"-software, which allows easy interactive setup of all camera parameters. The software including a SDK supports Windows XP including 64 Bit operating system. A LINUX Driver is also available. The camera can be configured using the XML File stored inside the camera. This complies also with the international GenICam standard.

## Dimensions CameraLink Version:



## Dimensions GigE Version:



## Ordering Guide:

Monochrome:	Color:	
svs2150MTLGEC	svs2150CTLGEC	(dual tap, frame rate 33 Hz)
svs2150MTLCPC	svs2150CTLCPC	(dual tap, frame rate 36 Hz)
svs2150MTHCPC	svs2150CTHCPC	(dual tap, frame rate 48 Hz)