

# SVCam-svs 16000



## Compact 16-Megapixel Camera

This digital Machine Vision camera has a resolution of 4872 x 3248 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 exposure time and select trigger modes including:

- Synchronisation of image capture to an external event (trigger mode)
- "Free running" with adjustable frame rate
- Exposure time control via serial interface or by trigger pulse width
- Longer exposure times up to 8 min under low light level conditions

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



- Progressive scan technology
- Resolution: 4872 x 3248 pixel
- Synchronization:
  - "free running" (frame rate adjustable)
  - external trigger with internal exposure control
  - external trigger with pulse width exposure control
- Housing dimensions: e.g. 65mm x 67mm x 43mm
- Monochrome and color sensors (Bayer Pattern)
- 10 Bit video data stream ("S" and "F" version), 12 Bit option ("U" version)
- Adjustable gain
- Low offset
- 2 x 2 binning mode
- Partial scan mode for higher frame rates
- M58 x 0.75 Mount (optional F-Mount adapter)
- 12V DC @ approx. 900mA consumption (model dependent)
- Operating temperature range: -10°C to +40°C
- Full 2 years warranty

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## Camera Types:

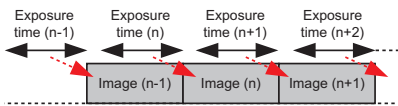
Camera Type	svs16000XSCP	svs16000XFCP	svs16000XUCP
Resolution	4872 x 3248	4872 x 3248	4872 x 3248
Frame Rate (Hz, max.)	1.5	3	4,7
Pixel ( $\mu\text{m}^2$ )	7.4 x 7.4	7.4 x 7.4	7.4 x 7.4
Exposure Time internal	220 $\mu\text{s}$ - 8 min	220 $\mu\text{s}$ - 8 min	220 $\mu\text{s}$ - 8 min
Exposure Time external	165 $\mu\text{s}$ - 00	165 $\mu\text{s}$ - 00	165 $\mu\text{s}$ - 00
CCD-Size Equivalent	43.3mm diag.	43.3mm diag.	43.3mm diag.

x = Monochrome  
x = Color

## Operation Modes:

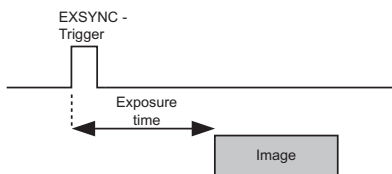
### Mode: Free Running

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 Camera Link 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.



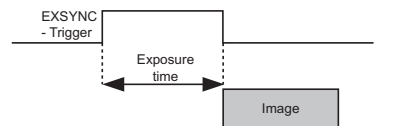
### Mode: External Trigger, Internal Exposure Control

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.



### Mode: External Trigger, External Exposure Control

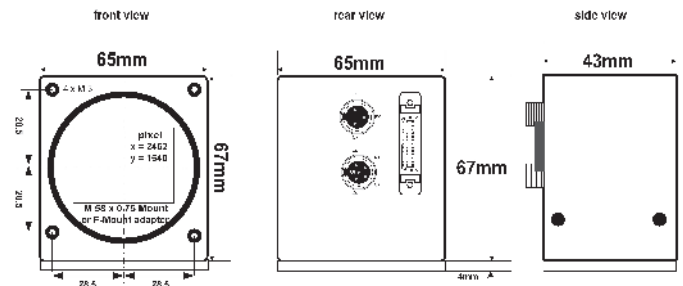
In this mode the camera is waiting for an external trigger which starts integration and read out. Exposure time can be varied using the length of the EXSYNC pulse (i.e. between the rising and the falling edge). The time settings in the control software are not activated. This mode is useful in applications 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 "Convenient Cam"-software, which allows easy interactive setup of all camera parameters. The program runs under Windows XP, Windows 2000. Independently from "Convenient Cam", the camera can be configured using any terminal software that supports serial communication.

## Dimensions:



## Ordering Guide:

<b>Monochrome:</b>	<b>Color:</b>	
svs16000MSCP	svs16000CSCP	(single tap, frame rate 1.5 Hz, 12 Bit)
svs16000MFCP	svs16000CFCP	(dual tap, frame rate 3 Hz, 10 Bit)
svs16000MUCP	svs16000CUCP	(dual tap, frame rate 4,7 Hz, 12 Bit)

Option: M58 or F-Mount adapter