SVCam-ECO

SVCam-ECO Line

GigE-CCD Cameras

GEN<i>CAM GigE VISION

SVCam-ECO cameras support the industrial image transfer protocol of Gigabit Ethernet. Gigabit Ethernet opens up absolutely new dimensions:

> Extreme small design
> High frame rates
> Industrial standard
> Cable length up to 100 m
> Budgetary cost level
> SVCam-ECO cameras are available in 19 different versions with resolutions from 640 x 480 up to 5 Megapixel. These cameras are designed to reach high frame rates at excellent signal-to-noise ratios and are enclosed in an utmost small housing.

The modular concept of SVCam cameras provides our customers with a fast and low-cost way to design customized versions for application specific requirements. Unique processing of the CCD signal guarantees an excellent signal-to-noise ratio. The internal logic allows different ways to adjust exposure time and select trigger modes including:

> Synchronization of image capture to an external event (trigger mode)
> "Free running" with adjustable frame rate
> Exposure time control via Ethernet interface or by trigger pulse width
> Extend the exposure time under low light level conditions; high IR sensitivity (eco618+eco285)
> Power over Ethernet (PoE) and Ip67 Options

Technical Highlights/Technical Data

> Progressive Scan technology
> 10 different resolutions
- eco618 640 x 480 pixel
- eco424 640 x 480 pixel
- eco414 640 x 480 pixel
- eco415 780 x 580 pixel
- eco204 1024 x 768 pixel
- eco445 1280 x 960 pixel
- eco267 1360 x 1024 pixel
- eco285 1360 x 1024 pixel
- eco274 1600 x 1200 pixel
- eco655 2448 x 2050 pixel

> Synchronization:
- "Free running" (frame rate adjustable)
- External trigger with internal exposure control
- External trigger with pulse width exposure control
- Software trigger via PC

> Housing dimensions: e.g. 38 mm x 38 mm x 33 mm
> Weight approx. 90 g
> Monochrome and color sensors (Bayer Pattern) with LUT (4 x)
> 64 MB memory inside
> 8/12 Bit video data stream (14 Bit ADC used)
> 1000 MBit Ethernet (Gigabit Ethernet) 100 MBit compatible
> Selectable AOI
> Sequence shutter mode
> Adjustable gain/auto gain
> Strobe output (e.g. for light flash)
> General purpose I/Os
> Time stamp capability
> Low offset
> 2 x 2 binning mode
> Partial scan mode for higher frame rates (AOI)
> CS-Mount and C-Mount
> 10V – 25V DC; e.g. 300 mA @ 12V consumption
> Operating temperature range: -10°C to +45°C
> Temperature sensor to avoid overheating
> Status LED
> Full 2 years warranty

Overview

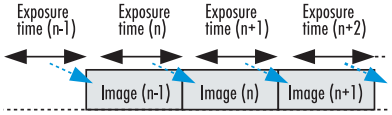
SVCam-ECO

Camera Type	eco618	eco424	eco414	eco415	eco204	eco445	eco267	eco285	eco274	eco655
Resolution	640 x 480	640 x 480	640 x 480	780 x 580	1024 x 768	1280 x 960	1360 x 1024	1360 x 1024	1600 x 1200	2448 x 2050
Frame Rate (Hz, max.)	150	124	125	86	47	30	25	34	26	10
Pixel (µm²)	5.6 x 5.6	7.4 x 7.4	9.9 x 9.9	8.3 x 8.3	4.65 x 4.65	3.75 x 3.75	4.65 x 4.65	6.45 x 6.45	4.4 x 4.4	3.45 x 3.45
CCD-Size Equivalent	1/4"	1/3"	1/2"	1/2"	1/3"	1/3"	1/2"	2/3"	1/1.8"	2/3"
Expos. Time internal	65 µs - 2 s	3 µs - 2 s	21 µs - 2 s	22 µs - 2 s	17 µs - 2 s	15 µs - 2 s	40 µs - 2 s	20 µs - 2 s	26 µs - 2 s	40 µs - 2 s
Expos. Time external	65 µs - ∞	3 µs - ∞	21 µs - ∞	22 µs - ∞	17 µs - ∞	15 µs - ∞	40 µs - ∞	20 µs - ∞	26 µs - ∞	40 µs - ∞

Operation Modes

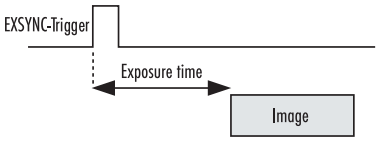
Mode: Free Running/Fixed Frequency

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



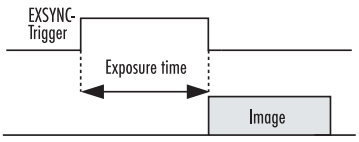
Mode: External Trigger, Internal Exposure Control

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.



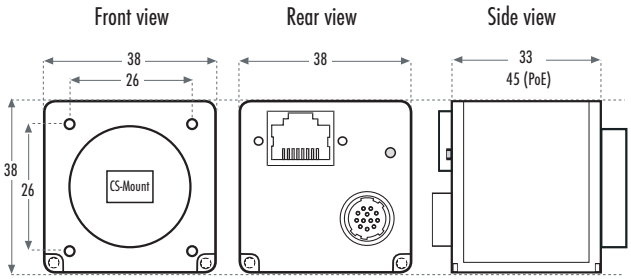
Mode: Software Trigger

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

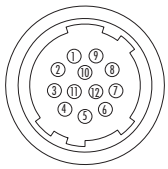
The SVCam-ECO cameras come with our "SVCapture"-software, which allows easy interactive setup of all camera parameters. The software including a SDK supports Windows XP and Windows 7 including 64 Bit operating system. A LINUX Driver is also available. The camera can be configured using the XML file stored inside the camera. This complies also with the international GenICam standard.

Dimensions



All dimensions in mm, eco285: C-Mount only

HR 10A-10R-12PB (mating connector HR 10A-10P-12S)



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

Standard		PoE	
Monochrome:	Color:	Monochrome:	Color:
eco618MVGE	**NA**	**eco618MPGE**	**NA**
eco424MVGE	**eco424CVGE**	**eco424MPGE**	**eco424CPGE**
eco414MVGE	**eco414CVGE**	**eco414MPGE**	**eco414CvGE**
eco415MVGE	**eco415CVGE**	**eco415MPGE**	**eco415CPGE**
eco204MVGE	**eco204CVGE**	**eco204MPGE**	**eco204CPGE**
eco445MVGE	**eco445CVGE**	**eco445MPGE**	**eco445CPGE**
eco267MVGE	**eco267CVGE**	**eco267MPGE**	**eco267CPGE**
eco285MVGE	**eco285CVGE**	**eco285MPGE**	**eco285CPGE**
eco274MVGE	**eco274CVGE**	**eco274MPGE**	**eco274CPGE**
eco655MVGE	**eco655CVGE**	**eco655MPGE**	**eco655CPGE**

Options:

> Mounting bracket with tripot thread fits on frontplate threaded holes
> CS- to C-Mount adapter ring
> IP67 Versions on request

SVS-VISTEK GmbH · Muehlbachstrasse 20 · 82229 Seefeld/Germany · Tel. +49-(0) 81 52 - 99 85 - 0 · Fax +49 - (0) 81 52 - 99 85 - 79
info@svs-vistek.com · www.svs-vistek.com