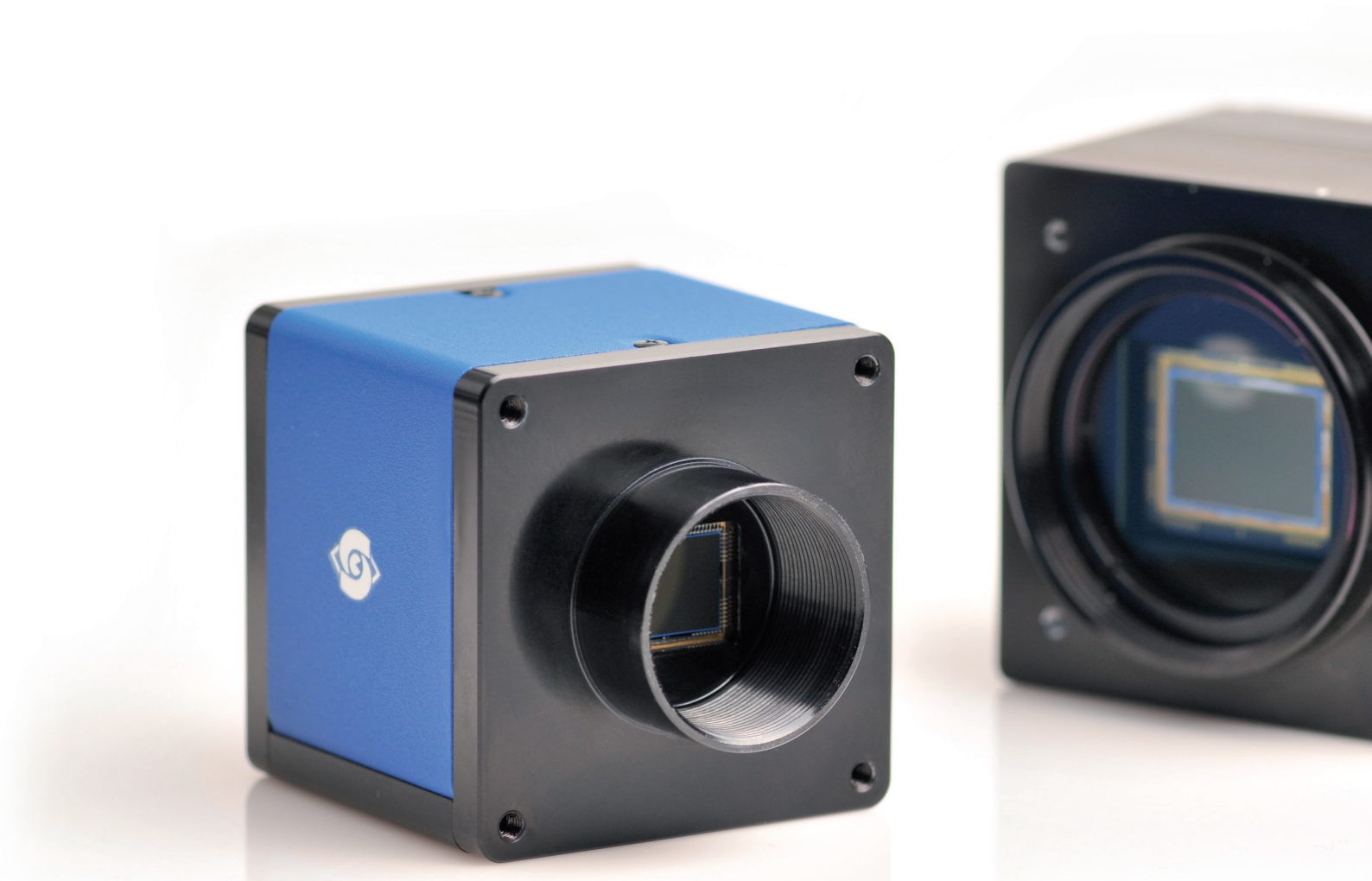
SVS-VISTEK

SVCam-EVO

Dual GigE and Camera Link in 1, 2, 4, 8 and 12 MegaPixel, standard- and IP67-versions

GiGE VISION™ CAMERA Link PoCL®



Scale your vision.

SVCam-EVO

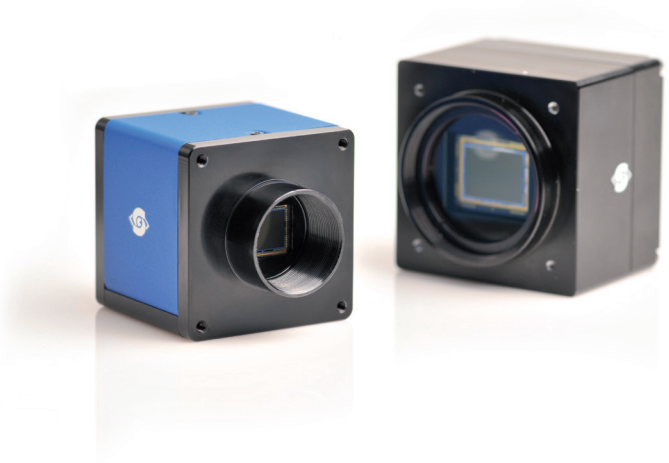
Dual GigE and Camera Link in 1, 2, 4, 8 and 12 MegaPixel Versions

A maximum of high-tech in a minimal enclosure – this was our goal for the SVCam-EVO series. EVO stands for EVOLUTION in the truest sense of the word. The EVO series was designed to offer extreme performance using high-end ON Semiconductor an newest Sony sensors featuring a wide dynamic range while maintaining a compact and robust housing. SVS-Vistek's unique overclocking technology enables superb imaging performance to be combined with the highest possible frame rates.

SVCam-EVO represents the latest level of the most common and relevant camera interfaces in the machine vision industry. Dual-Gigabit Ethernet and Camera Link interfaces – it's your choice. Both interfaces are internationally standardized for the highest data transfer rates between camera and PC, ensuring easy integration into both new and existing imaging systems.

With their cutting-edge electronics design and the use of quad-tap sensors the EVO cameras offer very high frame rates at extremely low noise levels. Sophisticated processing of the critical analog CCD video signal by Correlated Double Sampling (CDS) leads to significant noise reduction. Straight forward conversion into digital signals results in an excellent signal-to-noise ratio. Additionally, the integration of intelligent processing offers various modes for exposure time and trigger control settings. The compact housing allows installation even in limited space conditions.

The SVCam-EVO series provides for quick return-on-investment for demanding imaging systems by delivering an unbeatable combination of image quality, speed, features and reliability in a compact package.



All camera models of the SVCam-EVO series have the following features:

> Progressive Scan 4-Tap CCD sensors
> high dynamik, global shutter CMOS sensors
> Monochrome and color versions (Bayer Pattern)
> Various trigger (int./ext./free running) and exposure modes
> Adjustable gain
> Various binning modes
> Power supply: 10 – 25 V DC
> Optional 8 or 12 Bits transferred (ADC 14 Bits)
> Area of Interest (AOI)
> White Balance for Color Versions
> Isolated I/O-Concept: 2 x Input (0-24 V),
1 x Input RS-422, 2 x Output (24 V, 0,3 A),
1 x Output RS-422, 1 x Serial RS-232
> Sequence Shutter and enhanced Strobe Functionality
> Prepared for Lens- and Pan/Tilt Unit Control

Special Features of the EVO Camera Link series

> Fully Camera Link standard compatibility
> Selectable data rate up to 65 MHz
> Outstanding frame rates possible
> SW-Config. tool to control the camera via frame grabber interface
> Particle Image Velocimetry (PIV-Mode)
> Optional Power over Camera Link (PoCL)

Major advantages of GigE Vision

Allows easy and quick interchangeability between hardware resulting in shorter design cycles and reduced development costs.

> Cost effective
> Leverages off the shelf industrial-standard infrastructure
> Well established and widely adopted industry standard
> GigE- Vision (Gigabit Ethernet) standard compliant
> High bandwidth data transfer rate (120 MB/sec per Output)
> DualGigE-Vision interface with max. 240 MB/s Data rate
> Up to 100 m range without additional switch
> Remote service & maintenance capability alight
> SDK for Windows XP/8 (32/64 Bit) and Linux available
> up to IP67

								GigE	Camera Link
Camera Type	Sensor Size diag.	Resolution [Pixel]	Pixel Size [µm]	Architecture	Lens Mount	Dimensions [mm]	IP67	max. Frame Rate [fps]	
evo1050	1/2"	1,024 x 1,024	5.86 x 5.86	CCD	C	50 x 50 x 46.7	✔	147	180
evo2050	2/3"	1,600 x 1,200	4.54 x 4.54	CCD	C	50 x 50 x 46.7	✔	81.8	106
evo2150	2/3"	1,920 x 1,080	4.54 x 4.54	CCD	C	50 x 50 x 46.7	✔	78	100
evo4051	1"	2,336 x 1,752	3.69 x 3.69	CCD	C	50 x 50 x 46.7	✔	41.6	52
evo4070	4/3"	2,048 x 2,048	3.1 x 3.1	CCD	C/M42	50 x 50 x 46.7	✔	39.3	44
evo6040	1"	2,832 x 2,128	5.5 x 5.5	CMOS	C/M42	50 x 50 x 46.7		26	-
evo8051	4/3"	3,296 x 2,472	5.5 x 5.5	CCD	M42	50 x 50 x 46.7	✔	21.8	26.8
evo12040	4/3"	4,000 x 3,000	5.5 x 5.5	CMOS	M42	50 x 50 x 46.7		15	-
evo694*	1"	2,752 x 2,204	7.4 x 7.4	CCD	C/M42	50 x 50 x 46.7		20	20
evo814*	1"	3,360 x 2,712	7.4 x 7.4	CCD	C/M42	50 x 50 x 46.7		14	18
evo834*	1"	4,224 x 2,838	5.5 x 5.5	CCD	C/M42	50 x 50 x 46.7		11	14

* Preliminary

BlackLine – IP67

The SVS-VISTEK "BlackLine" option permits cost effective integration of the more exposed blocks of machine vision even in harsh industrial environments.

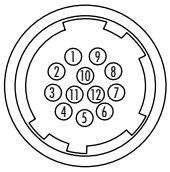
> Up to IP67 protection class (including lens tube)
> M12 connectors for industrial grade wiring
> Optimized temperature range (special requirements possible!)
> GigE Vision and GenICam-Standard

Power over Camera Link (PoCL)

Ideal for installations where a separate power cable can't be accommodated.
The PoCL version is the perfect choice when the production equipment does not require a direct connection to the camera. With only a single cable connecting the camera, the installation is greatly simplified.

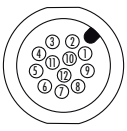
Connector pin-out

Standard



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

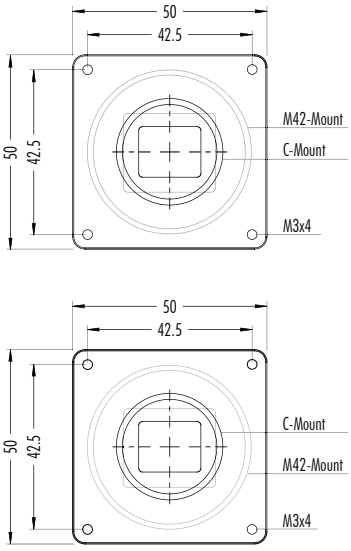
IP67 version



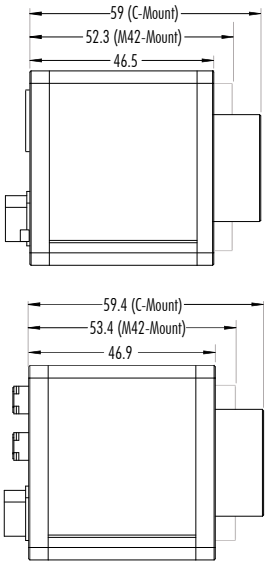
1	VIN+ (10 V to 25 V DC)
2	VIN- (GND)
3	RXD (RS232)
4	TXD (RS232)
5	IN1 (0-24V)
6	IN2 (0-24V)
7	OUT1 (open drain max. 24 V, 0.3A)
8	OUT2 (open drain max. 24 V, 0.3A)
9	IN3+ (RS422)
10	IN3- (RS422)
11	OUT3+ (RS422)
12	OUT3- (RS422)

Dimensions [mm]

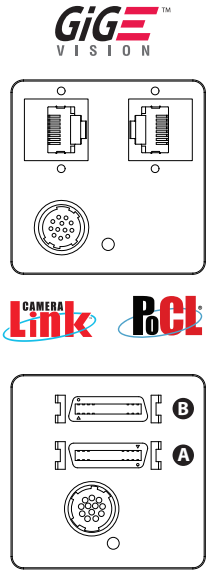
Front view



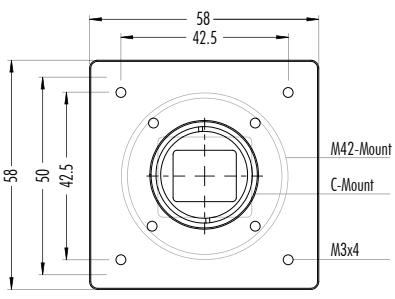
Side view

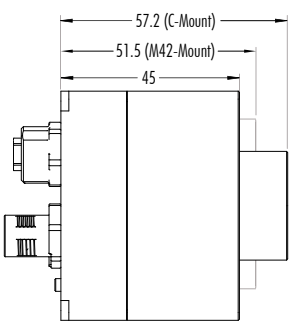


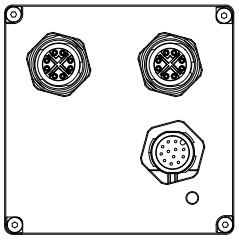
Rear view



IP67 version







Application Areas

SVCam cameras can be found in a broad range of industries:

> Aerospace
> Automotive
> Beverage
> Food
> Information
> Mechanical engineering
> Medical technology
> Optical metrology
> Pharmaceutical
> Photovoltaic/power engineering
> Plastics
> Printing
> Semiconductor
> Wood and Timber
> Traffic monitoring
> Intelligent Transportation Systems (ITS)

SVCam – High-performance CCD cameras made in Germany

„SVCam" is a universal family of machine vision cameras, representing the leading edge of performance, with a modular design that allows tailoring to specific customer requirements:

SVCam-ECO

Best choice for the small wallet. Impresses with its minimal footprint, without compromising on performance. VGA up to 5 megapixel. GigE Vision interface featuring PoE. Can be delivered in a housing with high IP rating (BlackLine series).

SVCam EXO

The natural choice for users requiring a high degree of flexibility. Featuring a wide range of CCD and CMOS sensors, paired with GigE Vision, CameraLink or USB3 Vision interface. Incorporates a unique LED illumination driver for individual control of up to 4 strobe lights.

SVCam-EVO

Combining high-resolution performance of CCD and CMOS sensors up 12 Megapixels with unsurpassed speed performance of Dual GigE Vision or Camera Link interfaces. Offering a wide range of user-friendly features and functions.

SVCam-HR

The top of the line product range targeting applications for which a compromise on quality is not an option. Fulfilling even the toughest demands for resolution combined with extremely high data rate.

SVIndividual

Application specific tailoring of cameras and imaging components to your unique requirements. SVS-VISTEK has more than two decades of experience in providing customized solutions for system integrators and builders. Ranging from non-branded housings to modification of mechanical or circuit designs. Challenge us with your ideas!

Supported Interfaces

CoaXPress – The next generation digital interface

GEN<i>CAM

GiGE VISION™

CAMERA Link

USB VISION™

For more information our sales team will be pleased to assist you with expert advice. Please contact us.

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03/2014