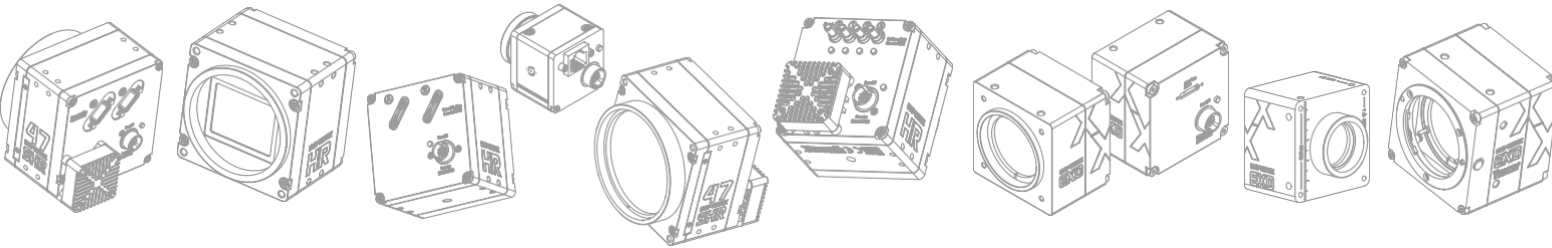
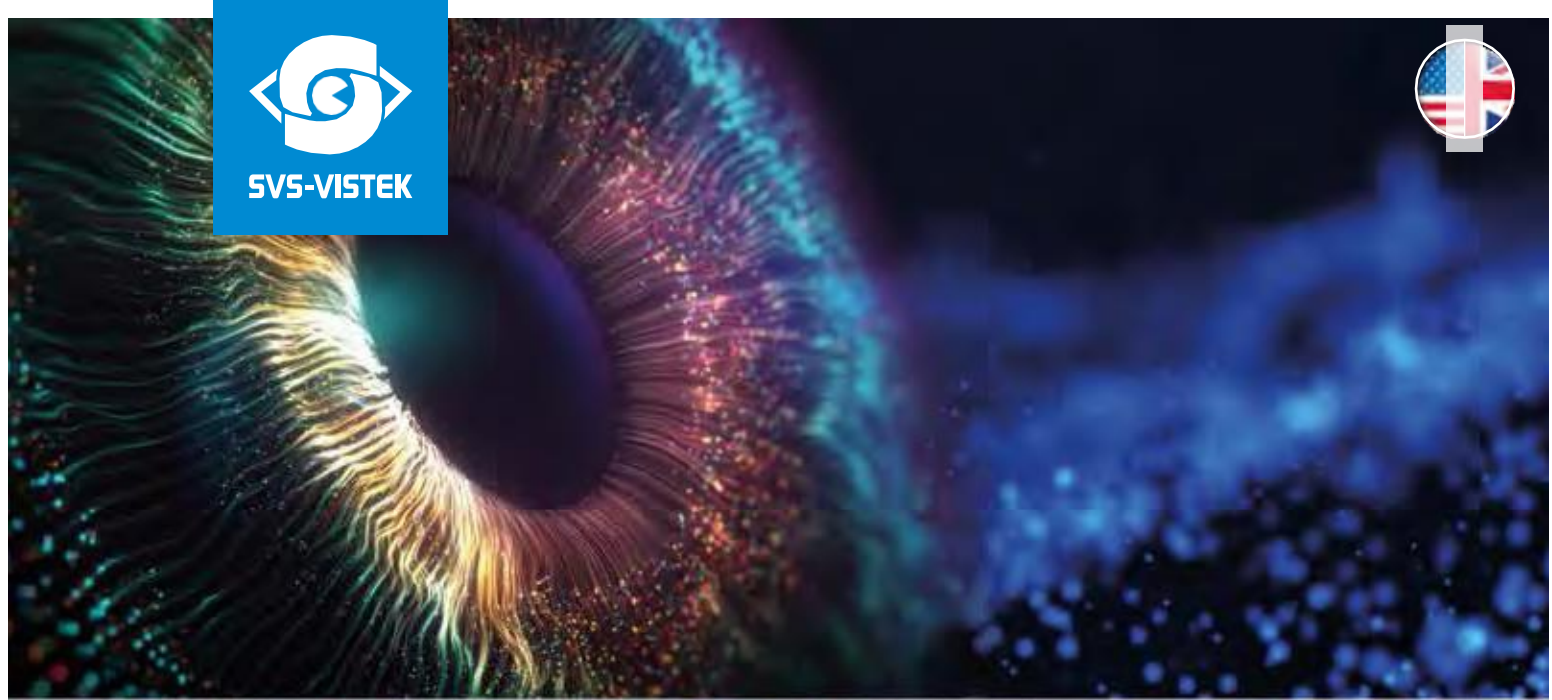




SVS-VISTEK



2021 / 10

Industrial Cameras

made by SVS-Vistek

USB

Vi

Vi

10

Link

CXP

Micro

SenSWIR

Polarsens

Scale your vision.



Feature List

| | ECO | EXO | FXO | HR | SHR |
|--------|--|------------------------------------|--------------------------|--|--------------------------|
| Sensor | 0.3 to 12 Mpixel CCD | 1.6 to 31.4 Mpixel CMOS and CCD | 5 to 24.5 Mpixel CMOS | 16.8 to 122 Mpixel CMOS | up to 151 Mpixel CMOS |
| | Sony | Sony and CMOSIS | Sony | SenSWIR Sony / CANON / Gpixel / ON Semiconductor | Sony |
| | mono and color versions | | | | |
| | progressive scan or global shutter (precise images without blur) | | | | |

| | | | | | |
|--------------------------|----------------------------|---|---------------------------------------|--|--------------------------------------|
| Camera Hardware Features | GigE Vision up to 120 MB/s | GigE Vision, Camera Link Base or USB3 Vision | 10GigE Vision or 1 x CoaXPress-12 | 10GigE Vision, Camera Link or 4 x CoaXPress-6 | 10GigE or 4 x CoaXPress-6 |
| | 64 MB internal memory | 256 MB internal memory | 1024 MB internal memory | 512 MB internal memory | 512 MB internal memory |
| | 8 or 12 bit pixel format | | | 8, 12 or 16 bit pixel format | |
| | | PoCL, PoUSB | PoE+, PoCXP | PoE+ (optional), PoCL, PoCXP | PoE+ (optional), PoCXP |
| | C or CS Mount | C Mount, M42, MFT, EF Mount | C Mount, EF Mount | M58 Mount (FFD 11.48), EF Mount | M72 Mount (FFD 19.55) |
| | | Lens Mount Adapters available | | | |
| | | optional Dynamic Lens Control (MFT) | | | |
| | 38 x 38 x 33 / 45 mm | 50 x 50 x X mm (M42: 58 x 58 x X) | 50 x 50 x X mm (depend. on interface) | 70 x 70 x X mm (depending on sensor) | 80 x 80 x X mm (depending on sensor) |
| | IP Class up to IP67 | precision machined housing | | | |
| | | **manual or auto tap balancing | | **manual or auto tap balancing | |

| | |
|--------------------------|--|
| Camera Firmware Features | 2 x 2 binning |
| | horizontal and vertical image flip |
| | custom defect pixel corr. – defect pixel map * |
| | shading correction |
| | AOI / ROI (area of interest / region of interest) |
| | read out control – custom acquisition timing (manual or delayed) GigE only |
| | white balance (manual / auto) |
| | exposure time control (manual, auto or external) |
| | gain (manual or auto) |
| | adjustable offset |
| | LUT (lookup table) |
| | trigger mode (internal, software or external) |
| | integrated temperature sensor – SDK accessible |

| | | |
|--------------|---|------------------------|
| I/O Features | up to 4 x open drain outputs | 4 x open drain outputs |
| | strobe controller – in-camera LED light driver/controller, up to 3 A (depending on series) – easy synchronization | |
| | sequencer – up to 32 programmable intervals with individual exposure and strobe out | |
| | programmable logic I/O functionality with timers | |
| | PWM – high frequency pulse width modulation | |
| | signal safe through high-low filter, debouncer and prescaler for trigger input | |
| | versatile I/O concept: 24 V signal levels – RS232 / RS422 differential signal | |

| | |
|-----------|--|
| Standards | GenICam compatible |
| | compatible with most 3 rd party software |
| |   |

*SenSWIR and Polarsens are trademarks of Sony Corporation, **not valid for all models



"High-quality cameras, components and Vision expertise from SVS-Vistek deliver reliable elements of your application. We are committed to ensuring this and will be pleased to provide experts to support you during the entire design-in process."



Camera Concept

Design

- > OEM Design for system integration
- > Flexible and scalable with identical connector pinout in all camera series
- > Individual custom OEM designs for system integrators
- > Industrial long-term support of cameras
- > Wide power supply range 10 – 25 V



Engineering and Production

- > Excellent optical precision
- > Precise and rugged long life mechanical design
- > Advanced temperature management
- > Industrial protection class up to IP67



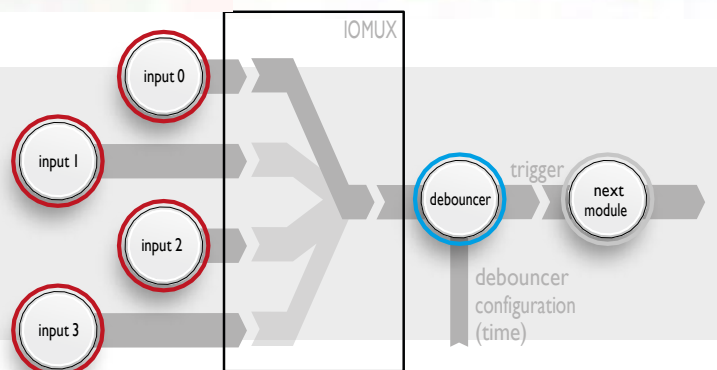
Unique Features

- > PWM power drives for LED lights (LED)
- > Programmable sequencer for shutter and LEDs (SEQ)
- > Programmable I/O logic (PLC)
- > Burst mode (BST)
- > Safe trigger (STT)
- > Precision time protocol (PTP)
- > Particle image velocimetry (PIV)
- > Dynamic lens control (MFT)



Powerful I/O Concept

- > Hirose and industrial M12 connectors
- > Configurable I/O matrix
- > Up to 4 x power PWM OUT max 3 A (depending on series)
- > Up to 4 x trigger IN, TTL-24V
- > Up to 2 x optical IN
- > RS232 or RS422 IN/OUT



Software

- > Works with any GenICam camera
- > Windows and Linux supported (x64, x86, ARM)
- > Compliant with standards such as USB3 Vision, CoaXPress, GigE Vision, GenICam, Camera Link
- > GenICam transport Layer for out-of-the-box compatibility to nearly all Machine Vision software such as CVB, HALCON, MERLIC, openCV, nVision, eyeVision, COGNEX VisionPro, Matlab, MIL, LabView, Visionbuilder, StreamPix, eBUS SDK and many others





VGA TO 12 MEGAPIXEL

ECO Series

LED

INT. LED CONTROLLERS

SEQ

INTEGRATED SEQUENCER

STT

SAFE TRIGGER TECHNOLOGY

BST

BURST MODE TECHNOLOGY

PLC

PROGRAMMABLE LOGIC CONTROL



ECO GigE Vision Cameras

Unsurpassed flexibility with great performance and affordability in a small package. This characterizes the ECO series best. You will find all popular CCD-Sensors from Sony in the ECO series. These cameras are available in more than 100 different versions with resolutions from VGA up to 12 megapixels. ECO series cameras are designed to achieve high frame rates while maintaining excellent signal-to-noise ratios and at the same time providing a small footprint. Supporting the standards of GigE Vision™ and GenICam™ the ECO series opens up new dimensions for integration into your application SW-Environment.

Special Features of the ECO Series:

- > Progressive Scan CCD sensors
- > Area of Interest modes (AOI)
- > 8/12 Bit video data stream (14 Bit ADC)
- > 64 MB frame buffer
- > White balance for color versions (one shot, auto, or manual)
- > Wide range Power conditions: 10 – 25 V DC
- > Sequence-Shutter and enhanced Strobe-Functionality
- > Up to 4 x direct drive and control of LED lighting
- > Dimensions [mm]: 38 x 38 x 33/45

| | | | | | | | | GigE | BlackLine |
|------------|------|--------------------|--------|-------------|------------|--------------|-------|-----------------------|-----------|
| ECO Series | [MP] | Resolution [Pixel] | Format | Sensor | Pixel [µm] | Architecture | Mount | max. Frame Rate [fps] | IP 67 |
| eco618 | 0.3 | 656 x 492 | 1/4" | Sony ICX618 | 5.6 | CCD | C/CS | 155 | ✓ |
| eco424 | 0.3 | 656 x 492 | 1/3" | Sony ICX424 | 7.4 | CCD | C/CS | 124 | ✓ |
| eco414 | 0.3 | 656 x 492 | 1/2" | Sony ICX414 | 9.9 | CCD | C/CS | 125 | ✓ |
| eco415 | 0.4 | 780 x 580 | 1/2" | Sony ICX415 | 8.3 | CCD | C/CS | 86 | ✓ |
| eco204 | 0.8 | 1,024 x 776 | 1/3" | Sony ICX204 | 4.65 | CCD | C/CS | 47 | ✓ |
| eco445 | 1.3 | 1,296 x 964 | 1/3" | Sony ICX445 | 3.75 | CCD | C/CS | 30 | ✓ |
| eco267 | 1.4 | 1,392 x 1,040 | 1/2" | Sony ICX267 | 4.65 | CCD | C/CS | 25 | ✓ |
| eco285 | 1.4 | 1,392 x 1,040 | 2/3" | Sony ICX285 | 6.45 | CCD | C | 34 | ✓ |
| eco274 | 2.1 | 1,600 x 1,236 | 1/1.8" | Sony ICX274 | 4.4 | CCD | C/CS | 26.5 | ✓ |
| eco655 | 5 | 2,448 x 2,050 | 2/3" | Sony ICX655 | 3.45 | CCD | C/CS | 10 | ✓ |
| eco625 | 5 | 2,448 x 2,050 | 2/3" | Sony ICX625 | 3.45 | CCD | C/CS | 20 | ✓ |
| eco674 | 2.8 | 1,920 x 1,460 | 1/2" | Sony ICX674 | 4.54 | CCD | C | 19.9 | |
| eco695 | 6 | 2,752 x 2,204 | 1" | Sony ICX695 | 4.54 | CCD | C | 10.1 | |
| eco815 | 9 | 3,360 x 2,712 | 1" | Sony ICX815 | 3.69 | CCD | C | 7 | |
| eco834 | 12 | 4,224 x 2,838 | 1" | Sony ICX834 | 3.1 | CCD | C | 5.5 | |

PoE versions on request



12.3 TO 20 MEGAPIX WITH MFT BAYONET

Tracer S

LED

INT. LED CONTROLLERS

SEQ

INTEGRATED SEQUENCER

STT

SAFE TRIGGER TECHNOLOGY

BST

BURST MODE TECHNOLOGY

PLC

PROGRAMMABLE LOGIC CONTROL

Micro Four Thirds



Tracer GigE Vision and USB3 Cameras

The Tracer's lens mount is a Micro Four Thirds (MFT) mount, covering all electric connections for lightning fast control of the lens zoom, focus and aperture. The optical lens specification of MFT allows for the best optical results. The MFT mount opens up a wide range of high-quality lenses for the Tracer. Control options for exposure time, focus, zoom, aperture and strobe lighting through a single GenICam interface. Combining this lens control with high performance sensors up to 20 MP of resolution and 72dB dynamic range, the Tracer can deliver cutting edge imaging technology.

Special Features of the Tracer Series:

- > Micro-Four-Thirds bayonet mount
- > Fast user control of zoom, aperture and focus
- > Lens settings controlled by GigE Vision interface, USB3 Vision and also GenICam
- > Data interface: GigE or USB3
- > User selectable AOI (Area Of Interest)
- > SDK for Windows (32/64bit) and Linux available
- > Frame buffer: 256 MB
- > Dimensions [mm]: 58 x 58 x 45

| | | | | | | | | USB3 | GigE |
|------------|------|--------------------|--------|--------------|------------|--------------|-------|-----------------------|------|
| Model | [MP] | Resolution [Pixel] | Format | Sensor | Pixel [µm] | Architecture | Mount | max. Frame Rate [fps] | |
| exo304 TR | 12.3 | 4,096 x 3,000 | 1.1" | Sony IMX 304 | 3.45 | CMOS | MFT | – | 10 |
| exo387 TR | 16.8 | 5,456 x 3,076 | 4/3" | Sony IMX 387 | 3.45 | CMOS | MFT | 22 | 7.4 |
| exo367 TR | 19.6 | 4,416 x 4,428 | 4/3" | Sony IMX 367 | 3.45 | CMOS | MFT | 19 | 6.2 |
| exo183 TR* | 20.2 | 5,496 x 3,672 | 1" | Sony IMX 183 | 2.4 | CMOS | MFT | – | 6 |

* Rolling Shutter

Legend of our Features

LED

4 INTEGRATED LED-CONTROLLERS

PWM power drives for LED lights

STT

SAFE TRIGGER TECHNOLOGY

Safe trigger technology

PLC

PROGRAMMABLE LOGIC CONTROL

Programmable I/O logic

SEQ

INTEGRATED SEQUENCER

Programmable sequencer for shutter and LEDs

BST

BURST MODE TECHNOLOGY

Burst mode technology

Micro Four Thirds

Dynamic lens control

PTP

PRECISION TIME PROTOCOL

Precision time protocol

PIV

PARTICLE IMAGE VELOCIMETRY

Particle image velocimetry



1.6 TO 31.4 MEGAPIXEL

EXO Seri

LED

INT. LED CONTROLLERS

SEQ

INTEGRATED SEQUENCER

STT

SAFE TRIGGER TECHNOLOGY

BST

BURST MODE TECHNOLOGY

PLC

PROGRAMMABLE LOGIC CONTROL



The EXO Concept

The EXO series is the perfect choice for system integrators with ever changing tasks. Simple and scalable integration with maximum functionality was our objective. The aluminum unibody housing is precisely machined with excellent thermal and mechanical properties and creates the platform for a complete offering of sensors and interfaces. A wide range of the latest CMOS and CCD sensors from Sony and CMOSIS makes it easy to select the right camera for virtually any application. On the interface side, the choices are GigE Vision, Camera Link Base or USB3.0.

Special Features of the EXO Series:

- > Sensors from Sony and CMOSIS
- > Global Shutter CCD and CMOS
- > 4 x direct drive and control of LED lightning
- > GigE Vision, Camera Link and USB3 supported
- > logical trigger functions
- > GenICam compliant
- > Dimensions [mm]: C-mount: 50 x 50 x X (depending on sensor)
M42: 58 x 58 x X (depending on sensor)
- > Operating temperature [C°]: -10 up to 60

All SVCam models incorporate the same full set of features – a highlight is the ability to control and power independent 4 LED lights – all 4 lights individually controlled by the camera.

EXO USB3 Vision Cameras

The EXO is one of the most flexible and scalable cameras for the industrial market segment. The USB3 Vision interface is easy to integrate in your system, with a data rate up to effective 350 MB/sec. The time to market for applications is shortened, reducing costs even further. Power and trigger the camera through a single interface connection and reduce cable complexity. EXO provides plug-and-play capability for the whole range of 2.3 to 31 MP resolution.


> Up to 350 MB/sec effective transfer rate

> Leverages existing infrastructure for cables and connectors

> Power camera with up to 4.5 W

> Cost effective/easy implementation and interfacing

> 256 MB frame buffer



EXO GigE Vision Cameras

EXO series cameras with GigE Vision interface give your applications an extremely high scalability. Quick and easy hardware interchangeability results in shorter design cycles and reduced development costs. Further value is added to your application by a virtually limitless feature set. As an example, the 4 I/O LED driver with standardized software control.

> "Off the shelf" industrial-standard plugs and cables


> Data transfer rate up to 120 MB/s

> Up to 100 m range without additional switch

> Wide range of applications in image processing

> Remote service capability

> 256 MB frame buffer




EXO Camera Link Cameras

EXO Camera Link models let you maintain the existing and proven infrastructure for years to come, while making use of the newest range of image sensors. The serialized interface has gained wide popularity and acceptance thanks to its high bandwidth. The EXO series was the first Camera Link model to include features such as 4 I/O strobe controller and look up table.

> SVCam Kit Software control

> 256 MB frame buffer




| | | | | | | | | GigE | Camera Link | USB3 |
|---------|------|--------------------|----------|----------------|------------|--------------|-------|-----------------------|-------------|----------|
| Model | [MP] | Resolution [Pixel] | Format | Sensor | Pixel [µm] | Architecture | Mount | max. Frame Rate [fps] | | |
| exo273 | 1.6 | 1,440 x 1,080 | 1/2.9" | Sony IMX273 | 3.45 | CMOS | C | 79 | – | – |
| exo174 | 2.3 | 1,920 x 1,200 | 1/1.2" | Sony IMX174 | 5.86 | CMOS | C | 52 | 105 | 160 |
| exo249 | 2.3 | 1,920 x 1,200 | 1/1.2" | Sony IMX249 | 5.86 | CMOS | C | 41 | – | 41 |
| exo252 | 3.1 | 2,048 x 1,536 | 1/1.8" | Sony IMX252 | 3.45 | CMOS | C | – | 78 | 115 |
| exo265 | 3.1 | 2,048 x 1,536 | 1/1.8" | Sony IMX265 | 3.45 | CMOS | C | 39 | – | 55 |
| exo4000 | 4 | 2,048 x 2,048 | 1" | CMOSIS CMV4000 | 5.5 | CMOS | C | 28 | – | 74 |
| exo250 | 5 | 2,448 x 2,048 | 2/3" | Sony IMX250 | 3.45 | CMOS | C | 24.5 | 49 | 75 |
| exo264 | 5 | 2,448 x 2,048 | 2/3" | Sony IMX264 | 3.45 | CMOS | C | 24.5 | – | 35 |
| exo547 | 5 | 2,448 x 2,048 | 2/3" | Sony IMX547 | 2.74 | CMOS | C | 24.5 | – | – N W |
| exo694 | 6 | 2,752 x 2,200 | 1" | Sony ICX694 | 4.54 | CCD | C | – | 25 | 25 |
| exo428 | 7.1 | 3,208 x 2,200 | 1.1" | Sony IMX428 | 4.54 | CMOS | C | 16 | – | 51 |
| exo546 | 8.1 | 2,840 x 2,840 | 2/3" | Sony IMX546 | 2.74 | CMOS | C | 15 | – | – N W |
| exo255 | 8.8 | 4,096 x 2,160 | 1" | Sony IMX255 | 3.45 | CMOS | C | – | – | 42 |
| exo267 | 8.8 | 4,096 x 2,160 | 1" | Sony IMX267 | 3.45 | CMOS | C | 13.5 | 28 | 32 |
| exo814 | 9 | 3,360 x 2,712 | 1" | Sony ICX814 | 3.69 | CCD | C | – | 18 | 18 |
| exo253 | 12.3 | 4,096 x 3,000 | 1.1" | Sony IMX253 | 3.45 | CMOS | C | – | – | 30 |
| exo304 | 12.3 | 4,096 x 3,000 | 1.1" | Sony IMX304 | 3.45 | CMOS | C | 10 | 20 | 23 |
| exo545 | 12.3 | 4,096 x 3,000 | 1.1" | Sony IMX545 | 2.74 | CMOS | C | 10 | – | – N W |
| exo542 | 16.1 | 5,320 x 3,032 | 16.8 mm | Sony IMX542 | 2.74 | CMOS | C | 7 | – | 23 N W |
| exo183* | 20.2 | 5,496 x 3,672 | 1" | Sony IMX183 | 2.4 | CMOS | C | 5 | 12 | 17 |
| exo541 | 20.3 | 4,504 x 4,504 | 17.45 mm | Sony IMX541 | 2.74 | CMOS | C | 6 | – | 18.4 N W |
| exo540 | 24.4 | 5,320 x 4,600 | 19.27 mm | Sony IMX540 | 2.74 | CMOS | C | 5 | – | 15 N W |

* Rolling Shutter

EXO USB3 / GigE Cameras with M42 mount

The EXO is expanding its range of resolutions. The new models have fast USB3 / GigE Vision interfaces and provide image resolutions of up to 31 megapixels. The sensors have large 3.45 µm pixels, delivering an excellent dynamic range up to 72 db and high light sensitivity. Due to the sensor size, the cameras come with a M42 mount.



| | | | | | | | | GigE | Camera Link | USB3 |
|--------|------|--------------------|--------|-------------|------------|--------------|-------|-----------------------|-------------|------|
| Model | [MP] | Resolution [Pixel] | Format | Sensor | Pixel [µm] | Architecture | Mount | max. Frame Rate [fps] | | |
| exo387 | 16.8 | 5,456 x 3,076 | 4/3 | Sony IMX387 | 3.45 | CMOS | M42 | 7.4 | – | 22 |
| exo367 | 19.6 | 4,416 x 4,428 | 4/3 | Sony IMX367 | 3.45 | CMOS | M42 | 6.2 | – | 19 |
| exo342 | 31.4 | 6,464 x 4,852 | 27.9 | Sony IMX342 | 3.45 | CMOS | M42 | 3.8 | – | 12 |



FXO Series



FXO 10GigE Vision and CoaXPress Cameras

The new 4th generation of sensors of the Pregius series from Sony is the heart of the FXO series. With its new backside illuminated technology, the sensor is even more light sensitive and less noise than the previous Pregius generations. The 2.74 µm pixel of the Pregius S with global shutter allows for cost-effective C mount lenses and faster, high resolution imaging.

A compact housing, specially milled for each sensor size, and the latest electronics offer the ideal working environment for this fast, high-performance sensor. The FXO combines the excellent image quality of the sensor with fast interfaces, powerful I/Os and camera features.

Areas of application FXO 10GigE

The modern, powerful 10GigE interface is an extremely economical version of the FXO. Up to 100 m cable length and PoE are possible. The control is transparent to GigE Vision.

Areas of application FXO CoaXPress

The FXO with CoaXPress-12 is suitable for extremely time-critical applications with minimal jitter and extremely constant data flow. PoCXP is supported.

| | | | | | | | | 10GigE | CoaXPress | |
|--------|------|--------------------|---------|-------------|------------|--------------|-------|-----------------------|-----------|--|
| Model | [MP] | Resolution [Pixel] | Format | Sensor | Pixel [µm] | Architecture | Mount | max. Frame Rate [fps] | | |
| fxo547 | 5 | 2,448 x 2,048 | 1/1.8 | Sony IMX547 | 2.74 | CMOS | C | 124 | 124 | |
| fxo546 | 8.1 | 2,840 x 2,840 | 11.1 mm | Sony IMX546 | 2.74 | CMOS | C | 88 | 88 | |
| fxo545 | 12.3 | 4,096 x 3,000 | 1/1.1 | Sony IMX545 | 2.74 | CMOS | C | 61 | 61 | |
| fxo542 | 16.1 | 5,456 x 3,076 | 16.8 mm | Sony IMX542 | 2.74 | CMOS | C | 45.6 | 45.6 | |
| fxo541 | 20.3 | 4,480 x 4,504 | 17.5 mm | Sony IMX541 | 2.74 | CMOS | C | 33 | 35.7 | |
| fxo540 | 24.5 | 5,320 x 4,600 | 19.3 mm | Sony IMX540 | 2.74 | CMOS | C | 30.4 | 30.4 | |



HR Seri



HR 10GigE Vision Cameras

Excellent image quality at the highest resolutions with the most flexible interface is the domain of the HR series. The new 10GigE interface offers almost ten times the transmission power with unchanged flexibility.

Easy integration with GenICam, a flexible M58 mount and robust electronics make the HR series the ideal workhorse for demanding machine vision tasks. They deliver excellent consistent images and the best S/N ratio for every sensor.

HR Camera Link Cameras

Our sophisticated sensor knowledge enables the Camera Link versions of the HR series the fast and direct connection to the sensor - often critical to your advantage. Available resolutions are 120 megapixels with the best of the CMOS technology. Newest high-speed CMOS sensors are optimally supported with Camera Link base, medium or full standard.

HR CoaXPress Cameras

Outstanding image quality is the core competence of the HR Series. Nonetheless, the HR Series achieves highest frame rates at highest resolutions. The CoaXPress interface of the HR delivers up to 25 GB/s of image data. Global Shutter and Rolling Shutter models are available. The HR Series is characterized by a high S/N ratio and an exceptionally homogeneous image.

| | | | | | | | | 10GigE | Camera Link | CoaXPress |
|--------|------|--------------------|----------|-------------------|------------|--------------|-------|-----------------------|-------------|-----------|
| Model | [MP] | Resolution [pixel] | Format | Sensor | Pixel [µm] | Architecture | Mount | max. Frame Rate [fps] | | |
| hr387 | 16.8 | 5,456 x 3,076 | 21.7 mm | Sony IMX387 | 3.45 | CMOS | M58/F | 56.4 | – | – |
| hr25 | 25 | 5,120 x 5,120 | 32.5 mm | ON Semi Python25K | 4.5 | CMOS | M58/F | – | 31.7 | 81 |
| hr342 | 31.4 | 6,464 x 4,852 | 27.9 mm | Sony IMX342 | 3.45 | CMOS | M58/F | 35.4 | – | 35.7 |
| hr49 | 49 | 7,008 x 7,000 | 37.4 mm | GMAX3265-49 | 3.2 | CMOS | M58/F | – | 17 | 30 |
| hr51 | 51 | 8,424 x 6,032 | 35 mm | GMAX4651 | 4.6 | CMOS | M58/F | 23.7 | – | 30 |
| hr455* | 61 | 9,568 x 6,380 | 43.24 mm | Sony IMX455 | 3.76 | CMOS | M58/F | 17.9 | – | 18.1 |
| hr65 | 65 | 9,344 x 7,000 | 37.4 mm | GMAX3265 | 3.2 | CMOS | M58/F | 17 | 13 | 34 |
| hr120* | 122 | 13,272 x 9,176 | APS-H | Canon 120MXSM | 2.2 | CMOS | M58/F | – | 6.8 | 9.3 |

PoE+ versions on request, * Rolling Shutter, all 10GigE cameras with PTP mode

Powerful Features of the FXO Series:

- > all CXP cameras with PIV mode
- > all 10GigE cameras with PTP mode
- > high resolutions in a small housing
- > Thermally highly optimized milled housing, up to 60°C operating temperature
- > State-of-the-art interfaces 10GigE and CoaXPress-12 with PoE+ or PoCXP
- > Mono and Color (Bayer) with auto white balance
- > Various trigger and exposure modes, global shutter
- > Auto and manual gain and exposure
- > Area of Interest (AOI/ROI)
- > 8 or 12 bit color depth
- > 1024 MB Memory
- > Logical trigger functions (PLC)
- > Power output (4-channel strobe controller) with 3A max
- > Electrical and optical inputs
- > Programmable timers and sequencers with logic modules
- > SDK for Windows and Linux (X86, ARM) available
- > GenTL driver, GenICam Standard 3.0

Special Features of the HR GigE Series:

- > all 10GigE cameras with PTP mode
- > 10GigE data interface
- > GigE Vision and GenICam standard compliant
- > Cable lengths up to 100 meters are possible
- > AOI (Area of Interest)
- > SDK for Windows (32/64 bit) and Linux available
- > 512 MB Memory
- > Dimensions [mm]: 70 x 70 x 60.7

Special Features of the HR Camera Link Series:

- > GenICam compliant
- > Power over Camera Link (PoCL)
- > 512 MB Memory
- > Dimensions [mm]: 70 x 70 x 56.3

Special Features of the HR Camera CXP Series:

- > GenICam compliant
- > Power over CXP
- > 512 MB Memory
- > Long distance interface cables
- > Dimensions [mm]: 70 x 70 x 56.9



SHR Series



SHR 10GigE Vision Cameras

Super High Resolution, Large Field of View, tremendous detail. The SHR 10GigE cameras incorporate all of this into an interface that allows long distance data delivery at high speeds, with high fidelity images as high as 16 bit. Combine this with power optics and our M72 mount, SVS-Vistek provides a tool for a high resolution imaging power house.

SHR CoaXPress Cameras

The SHR Series offers highest resolutions up to 151 MP with Rolling Shutter sensors and CoaXPress for quality control. Excellent temperature management ensures optimum image quality even with the large sensors. The SHR CoaXPress is one of the most powerful interface standards in industrial image processing and the SHR CXP Series benefits from its high bandwidth with its large images. The sophisticated 4 I/O system is the basis for a fast integration into the application.

| | | | | | | | | 10GigE | Camera Link | CoaXPress |
|---------|-------|--------------------|----------|-------------|------------|--------------|-------|-----------------------|-------------|-----------|
| Model | [MP] | Resolution [Pixel] | Format | Sensor | Pixel [µm] | Architecture | Mount | max. Frame Rate [fps] | | |
| shr461* | 101.2 | 11,648 x 8,742 | 55 mm | Sony IMX461 | 3.76 | CMOS | M72 | 8.7 | – | 8.7 |
| shr661 | 127.6 | 13,392 x 9,528 | 56.73 mm | Sony IMX661 | 3.45 | CMOS | M72 | 6.3 | | 17 |
| shr411* | 151.2 | 14,192 x 10,640 | 66.7 mm | Sony IMX411 | 3.76 | CMOS | M72 | 6.1 | – | 6.1 |

PoE versions on request, * Rolling Shutter; all 10GigE cameras with PTP mode



SWIR Cameras

Short Wave Infrared (SWIR) sensors with the latest technology from Sony. The sensors impress with an extremely wide range of wavelength bandwidth. Safe inspection solutions in the glass, wafer and food sectors. Easy integration with GenICam industrial interface. Typical applications: visualization of liquids or foreign materials, observation of transmission or temperature.

Special Features of our SWIR Cameras:

- > Small pixels, high sensitivity
- > Sensitive for wavelengths from 400 – 1,700 nm
- > Best homogeneity with high dynamic range

| | | | | | | | | GigE | Camera Link | CoaXPress |
|--------|------|--------------------|--------|-------------|------------|--------------|-------|-----------------------|-------------|-----------|
| Model | [MP] | Resolution [Pixel] | Format | Sensor | Pixel [µm] | Architecture | Mount | max. Frame Rate [fps] | | |
| exo991 | 0.3 | 640 x 512 | 1/4" | Sony IMX991 | 5 | CMOS | C | 260 | – | – |
| exo990 | 1.3 | 1,280 x 1,024 | 1/2" | Sony IMX990 | 5 | CMOS | C | 93 | – | – |
| fxo990 | 1.3 | 1,280 x 1,024 | 1/2" | Sony IMX990 | 5 | CMOS | C | – | – | 134 |



POLARIZED Cameras

The Sony Polarsens sensors allow a safe and very fast inspection of non-metallic surfaces and structures that are otherwise difficult to solve. We provide the associated SDK. Typical applications: the inspection of surfaces, reflective materials and tension analysis.

Special Features of our POLARIZED Cameras:

- Simultaneous measurement of
- > degree of polarization
- > direction of polarization
- > intensity

| | | | | | | | | GigE | Camera Link | USB3 |
|--------|------|--------------------|--------|----------------|------------|--------------|-------|-----------------------|-------------|------|
| Model | [MP] | Resolution [Pixel] | Format | Sensor | Pixel [µm] | Architecture | Mount | max. Frame Rate [fps] | | |
| exo264 | 5 | 2,448 x 2,048 | 2/3" | Sony IMX264MZR | 3.45 | CMOS pol. | C | 24.5 | – | 36 |
| exo250 | 5 | 2,448 x 2,048 | 2/3" | Sony IMX250MZR | 3.45 | CMOS pol. | C | 24.5 | – | 75 |
| exo253 | 12.3 | 4,096 x 3,000 | 1.1" | Sony IMX253MZR | 3.45 | CMOS pol. | C | 10 | – | 30 |

SVS-Vistek - the Partner for your Vision!

Light

Lenses

Compatibility

SDK / Platforms

Latest technology and multi- platform support

- > GenTL producer
- > Microsoft Windows
- > Linux
- > ARM / Jetson TX1 / TX2

Supported Features and Technologies:

- > VGA up to 151 MP
- > Global and Rolling Shutter CMOS sensors
- > CCD sensors with advanced Tap Balancing (manual or automatic)
- > Monochrome and Color Versions (Bayer Pattern)
- > White balance for color versions (one shot, continuous or manual)
- > programmable logic I/O functionality with timers
- > User-definable AOI (Area of Interest)
- > Decimation Modes for higher frame rates
- > Shading Correction
- > Defect Pixel Correction
- > Adjustable Gain and Offset
- > Auto-Exposure and Auto-Gain
- > Image Flip
- > Lookup Table (LUT)
- > Exposure controlled by Trigger, manually or automatically
- > 8, 10, 12 Bit (14 Bit on the ADC) or 16 Bit
- > Wide Range of Power Inputs: 10 – 25 V DC
- > Various Trigger (int./ext./free running) and Exposure Modes
- > Programmable Sequencer for shutter and strobe
- > Pulse-Width Strobe-Control
- > Logical Trigger Functions
- > Schmitt-Trigger (Debouncer)
- > Particle Image Velocimetry (PIV-Mode)
- > IP67
- > Built-in LED Controllers
- > Versatile I/O-Concept:
 - Configurable I/O-Matrix
 - up to 4 x Trigger Input
 - up to 4 x Power Output (open drain)
 - Differential RS-422 and serial RS-232 In- and Out-put
- > GigE or 10GigE Interface
- > Camera Link Interface
- > USB3 Interface
- > CoaXPress Interface
- > GigE Vision, USB3 Vision and GenICam Standard Compliant
- > Support for most Lens Mount Standards
- > Micro-Four-Thirds Bayonet (MFT) Standard supported
- > SDK for Windows (32/64 Bit) and Linux available
- > Intuitive Graphical User Interface
- > Power over Camera Link (PoCL)
- > Power over Ethernet (PoE) on request
- > Power over CoaXPress (PoCXP)

Hirose Pinout



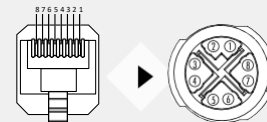
| Pin | Signal ECO, ECO2, EVO | Signal EXO, FXO, HR, SHR | Signal 4 I/O for option ECO |
|-----|--|--------------------------|-----------------------------|
| 1 | V IN- (GND) | V IN- (GND) | V IN- (GND) |
| 2 | V IN+ (10 – 25V) | V IN+ (10 – 25V) | V IN+ (10 – 25V) |
| 3 | RxD (RS232) not available for PoE versions | IN 4 RxD (RS232) | not connected |
| 4 | TxD (RS232) not available for PoE versions | OUT 4 TxD (RS232) | not connected |
| 5 | IN 1 (0 – 24 V) | IN 1 (0 – 24 V) | IN 1 (0 – 24 V) |
| 6 | IN 2 (0 – 24 V) | IN 2 (0 – 24 V) | IN 2 (0 – 24 V) |
| 7 | OUT 1 (open drain) | OUT 1 (open drain) | OUT 1 (open drain) |
| 8 | OUT 2 (open drain) | OUT 2 (open drain) | OUT 2 (open drain) |
| 9 | IN 3+ (RS422) | IN 3+ (opto IN +) | IN 3 (0 – 24 V) |
| 10 | IN 3 – (RS422) | IN 3 – (opto IN –) | IN 4 (0 – 24 V) |
| 11 | OUT 3+ (RS422) | OUT 3 (open drain) | OUT 3 (open drain) |
| 12 | OUT 3 – (RS422) | OUT 0 (open drain) | OUT 4 (open drain) |
| | Shielding | Shielding | Shielding |

M12 - I/O Connector



| Pin | Color Code | Signal |
|-----|----------------|--|
| 1 | brown | V IN+ (10 – 25V) |
| 2 | blue | V IN- (GND) |
| 3 | white | RxD (RS232) not available for PoE versions |
| 4 | green | TxD (RS232) not available for PoE versions |
| 5 | pink | IN 1 (0 – 24 V) |
| 6 | yellow | IN 2 (0 – 24 V) |
| 7 | black | OUT 1 (open Drain max. 24 V, 0.3 A) |
| 8 | grey | OUT 2 (open Drain max. 24 V, 0.3 A) |
| 9 | red | IN 3+ (RS422) |
| 10 | violet | IN 3 – (RS422) |
| 11 | grey / pink | OUT 3+ (RS422) |
| 12 | red / blue | OUT 3 – (RS422) |
| | yellow / green | Shielding |

RJ45 to M12 Connector



| Color Code | Pin RJ45 | Pin M12 |
|----------------|----------|---------|
| white / orange | 1 | 1 |
| orange | 2 | 2 |
| white / green | 3 | 3 |
| blue | 4 | 8 |
| white / blue | 5 | 7 |
| green | 6 | 4 |
| white / brown | 7 | 5 |
| brown | 8 | 6 |

JM VISTEC SYSTEM PTE LTD
 10 Kaki Bukit Ave 1 #07-06 Singapore 417942
 info@jm-vistec.com www.jm-vistec.com

JM VisTec System
 "Our Vision, Tomorrow's Innovation"
 - The Machine Vision Specialist

in f t i g y w