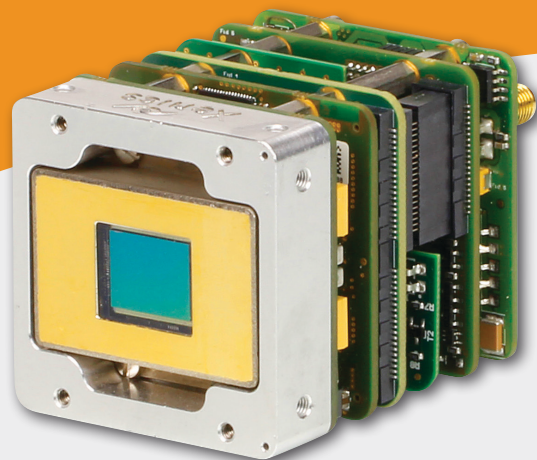


XSW 640 Series

Areascan SWIR Module

- SWIR cooled module with 640 x 512 resolution
- In-house developed InGaAs sensor



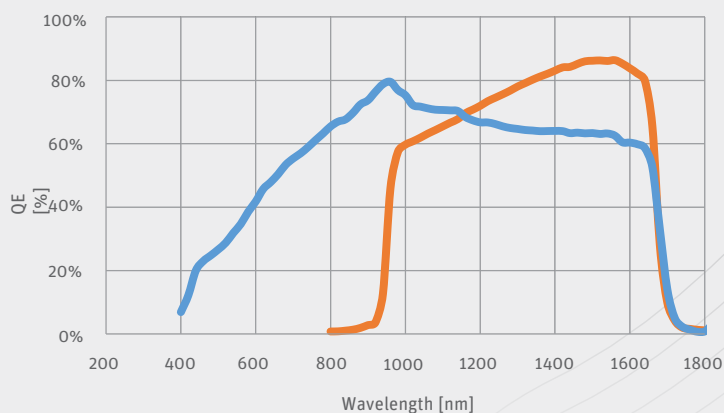
Small, high performance InGaAs module with high image resolution

The XSW 640 series is based on an in-house developed, temperature stabilised InGaAs detector with a 640 x 512 pixel resolution.

The XSW 640 modules are offered with frame rate of up to 100 Hz.

The module comes with either a CameraLink, GigE Vision or QTE Samtec interface and features low weight and power.

We offer a visible short-wave infrared (vSWIR) option for extended wavelength into the visible band.

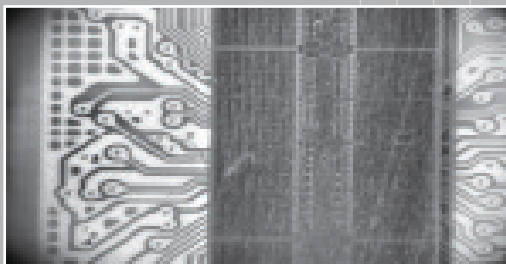


Designed for use in

- Machine Vision
- Safety & Security

Advantages

- vSWIR optional
- Low noise, low dark current
- CameraLink, GigE Vision or QTE Samtec interfacing options
- Versatility with gain modes



• Semiconductor inspection

• Night vision

• Fire detection

▶ Camera Specifications

Camera Specifications	XSW 640 CL XSW 640 CL vSWIR	XSW 640 GigE XSW 640 GigE vSWIR	XSW 640 PAL/NTSC XSW 640 PAL/NTSC vSWIR	XSW 640 16bitDV XSW 640 16bitDV vSWIR	XSW 640 BT.656 XSW 640 BT.656 vSWIR
Mechanical specifications					
Approximate Dimensions - excluding lens [width x height x length] [mm]	45 x 45 x 56	45 x 45 x 65	45 x 45 x 56	45 x 45 x 52	45 x 45 x 52
Weight [gr] - excluding lens	129	165	145	122	122
Optical interface [optional]	C-mount or M42				
Connector GigE	-	RJ-45	-	-	-
Connector CameraLink	Standard SDR	-	-	-	-
Connector power	Hirose HR10-7R-SA[73]	Hirose HR10-7R-SA[73]	Hirose HR10-7R-SA[73]	-	-
Connector trigger	SMA	SMA	SMA	-	-
Connector analog	-	-	BNC	-	-
Connector RS232	-	-	RJ-12	-	-
Connector general I/O	-	-	-	QTE-020-03-L-D-A Samtec	QTE-020-03-L-D-A Samtec
Environmental & power specifications					
Operating case temperature [°C]	From -40 to +70				
Storage temperature [°C]	From -45 to +85				
Power consumption [W]	2.8 [no TE cooler]	4 [no TE cooler]	3 [no TE cooler]	2.5 [no TE cooler]	2.5 [no TE cooler]
Power supply voltage	DC 12 V				
Shock	IE60068-2-27 Ed4.0; half-sine; terminal saw tooth; 50 g [11 ms]				
Vibration	Random: IEC60068-2-64 Ed2.0; 4.3 g [20 - 1000 Hz]. Sine: IEC60068-2-6 Ed7.0; 1 g [10 - 2000 Hz]				
Regulatory compliance	RoHS				
Electro-optical specifications					
Image format [pixels]	640 x 512				
Pixel pitch [µm]	20				
Detector type	InGaAs photodiode array with CTIA ROIC				
Sensor temperature stabilization	TE cooler				
Integration type	Snapshot - global shutter				
Active area and diagonal [mm]	12.8 x 10.24 [diagonal 16.4]				
Optical fill factor	100%				
Spectral range [nm]	900 - 1700 [SWIR], 500 - 1700 [vSWIR]				
Quantum efficiency	~80% [typical peak value]				
Gain modes	High Gain [HG] & High Dynamic Range [HDR]				
Full well capacities [electrons]	45k [HG] & 800k [HDR]				
Read noise [electrons]	120 [HG] & 500 [HDR]				
Dark current [electrons/second]	<100k [at 288K sensor temp and 150 mV reverse bias]; For vSWIR: <200k				
Read out mode	ITR & IWR				
Pixel operability	>99%				
Preconfigured exposure time range [ms]	0.1 to 40 in HG; 0.1 to 20 in HDR	0.1 to 10 in HG; 0.1 to 20 in HDR	0.1 to 40 in HG; 0.1 to 20 in HDR	0.1 to 40 in HG; 0.1 to 20 in HDR	0.1 to 40 in HG; 0.1 to 20 in HDR
Max frame rate [Hz] [full frame]	100	100	30 [NTSC] or 25 [PAL]	100	30 [NTSC] or 25 [PAL]
Region of interest	Yes	Yes	-	Yes	-
Min region size [pixels]	32 x 4 [step 16 x 4]	32 x 4 [step 16 x 4]	-	32 x 4 [step 16 x 4]	-
Max frame rate [Hz] [min region size]	>10000	>10000	-	>10000	-
Analog-to-Digital [ADC] [bits]	14				
Command and control	CameraLink	GigE Vision	RS232	QTE Samtec	QTE Samtec
Digital output format	CameraLink [16 bit]	GigE Vision [16 bit]	-	Digital Video [16 bit]	BT.656
Trigger	In or out via SMA or in via CL-CC1 [Configurable]	In or out via SMA [Configurable]	In or out via SMA [Configurable]	In or out via QTE Samtec [Configurable]	In or out via QTE Samtec [Configurable]
Product selector guide					
Part Number	XEN-000343 [SWIR] XEN-000344 [vSWIR]	XEN-000341 [SWIR] XEN-000342 [vSWIR]	XEN-000348 [NTSC] XEN-000347 [PAL] XEN-000350 [vSWIR]	XEN-000295 [SWIR] XEN-000098 [vSWIR]	XEN-000304 [SWIR] XEN-000305 [vSWIR]
	-	-	XEN-000349 [PAL] [vSWIR]	-	-

XDS.013-03 | Information furnished by Xenics is believed to be reliable. However, no responsibility is assumed for possible inaccuracies or omissions. Specifications are typical values and subject to change without notice. This information supersedes all previously supplied information.



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