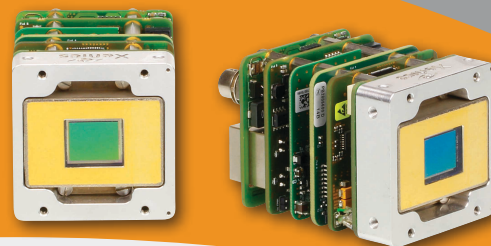
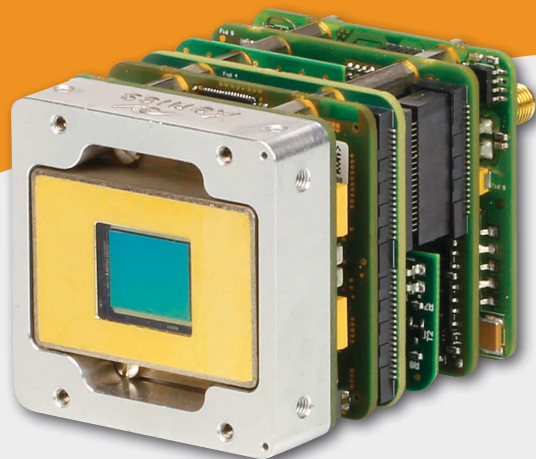


# XSW 320 Series

## Areascan SWIR Module

- SWIR cooled module with 320 x 256 resolution
- In-house developed InGaAs sensor

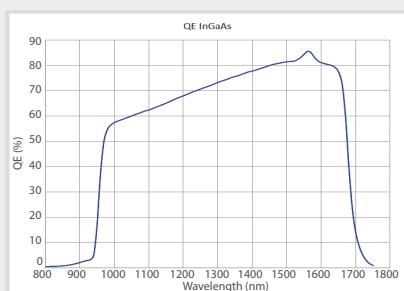


### Small, high performance InGaAs camera module

The XSW 320 series is based on an in-house developed, temperature stabilised InGaAs detector with a 320 x 256 pixel resolution.

The XSW 320 camera modules are offered with frame rates of up to 400 Hz.

The camera modules come with either a CameraLink, GigE Vision or QTE Samtec interface and features low weight and power.

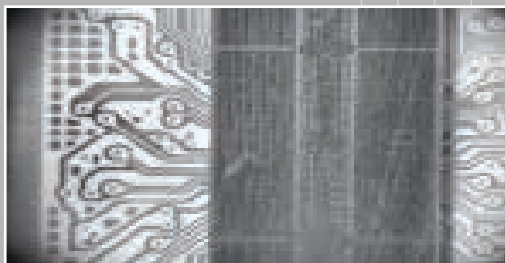


### Designed for use in

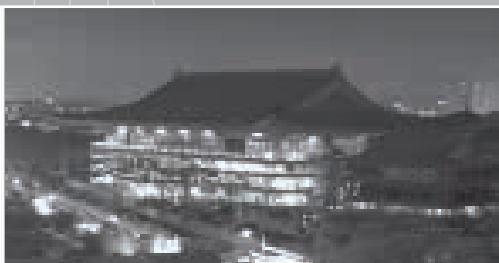
- Machine Vision
- Safety & Security

### Advantages

- Flexible and easy-to-use
- CameraLink, GigE Vision, QTE Samtec or RS232 interfacing options
- Low dark current
- Small SWIR areascan module



• Semiconductor inspection



• Night vision



• Fire detection

## ► Camera Specifications

Camera Specifications	XSW 320 CL 100 XSW 320 CL 400	XSW 320 GigE 100 XSW 320 GigE 400	XSW 320 NTSC XSW 320 PAL	XSW 320 16bitDV 100 XSW 320 16bitDV 400	XSW 320 BT.656
<b>Mechanical specifications</b>					
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
<b>Environmental &amp; power specifications</b>					
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				
<b>Electro-optical specifications</b>					
Image format [pixels]	320 x 256				
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]	6.4 x 5.12 [diagonal 8.2]				
Optical fill factor	100%				
Spectral range [nm]	900 - 1700				
Quantum efficiency	~80% [typical peak value]				
Gain modes	Single Gain				
Full well capacities [electrons]	70k				
Read noise [electrons]	110				
Dark current [electrons/second]	<100k [at 288K sensor temp and 150 mV reverse bias]				
Read out mode	ITR				
Pixel operability	>99%				
Preconfigured exposure time range [ms]	0.5 to 10 for 100 Hz; 0.01 to 40 for 400 Hz	0.5 to 10 for 100 Hz; 0.01 to 40 for 400 Hz	0.01 to 40	0.5 to 10 for 100 Hz; 0.01 to 40 for 400 Hz	0.01 to 40
Max frame rate [Hz] [full frame]	100 or 400	100 or 400	30 [NTSC] or 25 [PAL]	100 or 400	30 [NTSC] or 25 [PAL]
Region of interest	Yes [only for 400 Hz model]	Yes [only for 400 Hz model]	-	Yes [only for 400 Hz model]	-
Min region size [pixels]	32 x 4 [step 4 x 1] [only for 400 Hz model]	32 x 4 [step 4 x 1] [only for 400 Hz model]	-	32 x 4 [step 4 x 1] [only for 400 Hz model]	-
Max frame rate [Hz] [min region size]	>10000 [only for 400 Hz model]	>10000 [only for 400 Hz model]	-	>10000 [only for 400 Hz model]	-
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]
<b>Product selector guide</b>					
Part Number	XEN-000532 [100] XEN-000591 [400]	XEN-000531 [100] XEN-000592 [400]	XEN-000534 [NTSC] XEN-000533 [PAL]	XEN-000529 [100] XEN-000595 [400]	XEN-000530

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