

XSW 320 Gated Series

Areascan SWIR Module

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



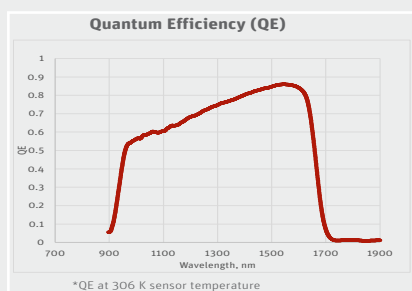
SWIR InGaAs module for short exposures

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

The XSW 320 Gated modules are able to provide maximum frame rates up to 400 Hz.

The exposure time of the sensor is configurable from 100 ns up to 1 ms in steps of 100 ns, or from 1 ms to 40 ms.

The module comes with either CameraLink, GigE Vision or QTE Samtec interface.



Designed for use in

- Machine Vision
- Safety & Security

Advantages

- Extremely short 100 ns integration time
- CameraLink, GigE Vision and QTE Samtec interfacing options
- Small SWIR areascan module

► Camera Specifications

Camera Specifications	XSW 320 CL Gated	XSW 320 GigE Gated	XSW 320 16bitDV Gated
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 52
Weight [gr] - excluding lens	129	165	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]	-
Connector trigger	SMA	SMA	-
Connector general I/O	-	-	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]	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]	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]	0.0001 to 40		
Max frame rate [Hz] [full frame]	400		
Region of interest	Yes		
Min region size [pixels]	32 x 4 [step 4 x 1]		
Max frame rate [Hz] [min region size]	>10000		
Analog-to-Digital [ADC] [bits]	14		
Command and control	CameraLink	GigE Vision	QTE Samtec
Digital output format	CameraLink [16 bit]	GigE Vision [16 bit]	Digital Video [16 bit]
Trigger	In or out via SMA or in via CL-CC1 [Configurable]	In or out via SMA [Configurable]	In or out via QTE Samtec [Configurable]
Product selector guide			
Part Number	XEN-000594	XEN-000593	XEN-000596

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