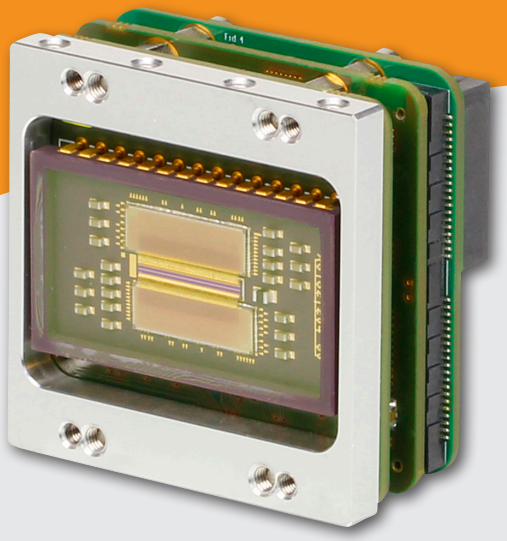
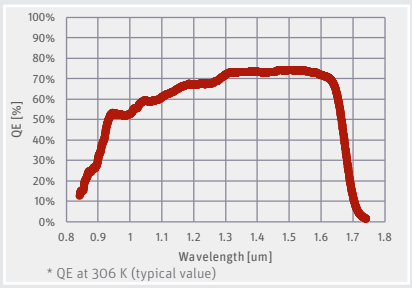
XSL SQ Series

Linescan SWIR Module with Square Pixels

- Linescan SWIR Module with 512, 1024 and 2048 resolution
- In-house developed InGaAs sensor





Small InGaAs linescan module with square pixels

The XSL square (SQ) series, based on an in-house developed linear detector, offer affordable short-wave infrared (SWIR) linescan images.

The XSL SQ camera modules are able to image line rates up to 40 kHz.

The modules come with an industry-standard CameraLink, GigE Vision or QTE Samtec interface.

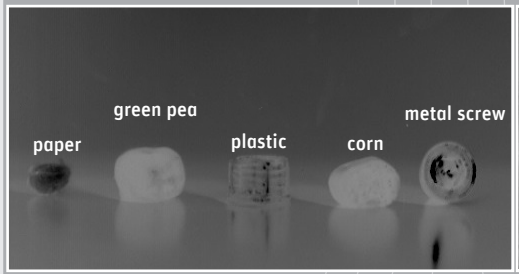
Depending on your imaging requirements, three resolutions of 512, 1024 or 2048 pixels are offered.

Designed for use in

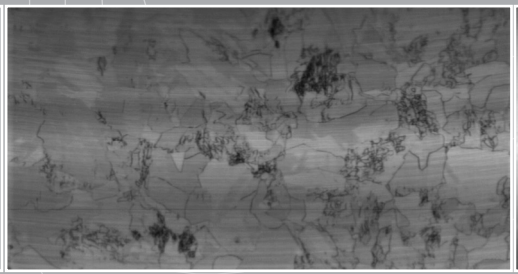
- Machine Vision
- Process Monitoring

Advantages

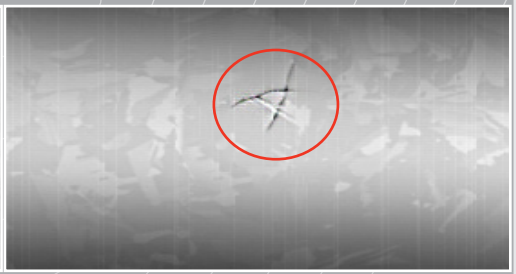
- High speed linescan imaging up to 40 kHz
- High resolution
- CameraLink, GigE Vision or QTE Samtec interfacing



Food sorting



Photoluminescence (solar wafer)



Crack inspection (solar wafer)

▶ Camera Specifications

Camera Specifications	XSL 512 SQ CL XSL 512 SQ GigE	XSL 512 SQ 16bitDV	XSL 1024 SQ CL XSL 1024 SQ GigE	XSL 1024 SQ 16bitDV	XSL 2048 SQ CL XSL 2048 SQ GigE	XSL 2048 SQ 16bitDV
Mechanical specifications						
Approximate dimensions - excluding lens (width x height x length) [mm]	45 x 45 x 37 [CL] 45 x 45 x 55 [GigE]	45 x 45 x 28	45 x 45 x 37 [CL] 45 x 45 x 55 [GigE]	45 x 45 x 28	45 x 45 x 37 [CL] 45 x 45 x 55 [GigE]	45 x 45 x 28
Weight [gr] - excluding lens	55 [CL], 96 [GigE]	43	55 [CL], 96 [GigE]	43	55 [CL], 96 [GigE]	43
Optical interface [optional]	M42, C-mount or F-mount					
Connector CameraLink	Standard SDR [CL]	-	Standard SDR [CL]	-	Standard SDR [CL]	-
Connector GigE	RJ-45 [GigE]	-	RJ-45 [GigE]	-	RJ-45 [GigE]	-
Connector power	Hirose HR10-7R-SA[73]	-	Hirose HR10-7R-SA[73]	-	Hirose HR10-7R-SA[73]	-
Connector trigger	SMA	-	SMA	-	SMA	-
Connector general I/O	-	QTE-20-02-L-D-A-Samtec	-	QTE-20-02-L-D-A-Samtec	-	QTE-20-02-L-D-A-Samtec
Environmental & power specifications						
Ambient operating temperature range [°C]	From -40 to +70					
Storage temperature [°C]	From -50 to +85					
Power consumption [W]	2.6 [CL], 4.6 [GigE]	2.3	2.6 [CL], 4.6 [GigE]	2.3	2.6 [CL], 4.6 [GigE]	2.3
Power supply voltage	DC 12 V	DC 3.3 V	DC 12 V	DC 3.3 V	DC 12 V	DC 3.3 V
Shock	IEC60068-2-27 Ed4.0; half-sine; terminal saw tooth; 50 g [11ms]					
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						
Sensor format [pixels]	512	512	1024	1024	2048	2048
Pixel pitch [µm]	25	25	12.5	12.5	12.5	12.5
Pixel height [µm]	25	25	12.5	12.5	12.5	12.5
Detector type	InGaAs photodiode array with CTIA ROIC					
Integration type	Snapshot - global shutter					
Spectral range [nm]	900 - 1700					
Quantum efficiency	~80% [typical peak value]					
Full well capacities [electrons]	450k to 32M	450k to 32M	450k to 32M	450k to 32M	450k to 10M	450k to 10M
Read out mode	ITR and IWR					
Pixel operability	>99.6%	>99.6%	>99%	>99%	>98%	>98%
Max line rate [kHz]	40	40	40	40	10	10
Analog-to-Digital (ADC) [bits]	14					
Command and control	CameraLink or GigE Vision	QTE Samtec	CameraLink or GigE Vision	QTE Samtec	CameraLink or GigE Vision	QTE Samtec
Digital output format	CameraLink or GigE Vision [16 bit]	Digital Video [16 bit]	CameraLink or GigE Vision [16 bit]	Digital Video [16 bit]	CameraLink or GigE Vision [16 bit]	Digital Video [16 bit]
Trigger	In or out via SMA [configurable]. For CL - additional trigger in available via CC1	In or out via QTE Samtec [configurable]	In or out via SMA [configurable]. For CL - additional trigger in available via CC1	In or out via QTE Samtec [configurable]	In or out via SMA [configurable]. For CL - additional trigger in available via CC1	In or out via QTE Samtec [configurable]
Product selector guide						
Part number	XEN-000393 [CL]	XEN-000145	XEN-000395 [CL]	XEN-000392	XEN-000396 [CL]	XEN-000394
	XEN-000397 [GigE]	-	XEN-000398 [GigE]	-	XEN-000399 [GigE]	-