

# Xeva 320 Series

## Areascan SWIR Camera

- SWIR cooled camera with 320 x 256 resolution
- In-house manufactured InGaAs sensor



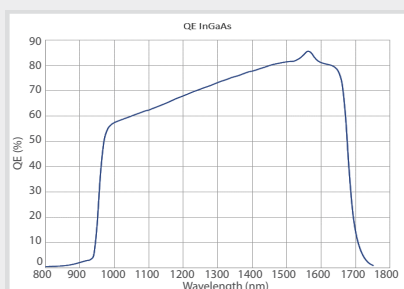
### Versatile InGaAs camera with various cooling options

The Xeva 320 series is based on an in-house manufactured InGaAs detector with a 320 x 256 pixel resolution.

The Xeva 320 cameras offer frame rates of more than 340 Hz.

The camera comes with a CameraLink or USB interface.

A visible enhanced short-wave infrared (vSWIR) option for extended wavelength response into the visible band is available.



### Designed for use in

- Machine Vision
- Safety & Security
- Scientific & Advanced research
- Medical

### Advantages

- vSWIR optional
- Sensor cooling available for increased exposure time range
- Low dark current
- USB and/or CameraLink interfacing options
- Versatility with gain modes



• Semiconductor inspection



• Semiconductor inspection



• Art inspection

## ► Camera Specifications

Camera Specifications	Xeva 1.7 320 TE1 USB 100	Xeva 1.7 320 TE1 USB 100 vSWIR	Xeva 1.7 320 TE3 USB 100	Xeva 1.7 320 TE1 CL 60/100/350	Xeva 1.7 320 TE1 CL 60/100/350 vSWIR	Xeva 1.7 320 TE3 CL 60/100/350
<b>Mechanical specifications</b>						
Approximate Dimensions - excluding lens [width x height x length] [mm]	88 X 111 X 107	88 X 111 X 107	88 X 111 X 114	88 X 111 X 107	88 X 111 X 107	88 X 111 X 114
Weight [gr] - excluding lens	1300					
Camera cooling	Forced convection [fan]					
Optical interface	C-mount or M42					
Connector USB	4-pin TRIAD 01	4-pin TRIAD 01	4-pin TRIAD 01	Mini-USB	Mini-USB	Mini-USB
Connector CameraLink	-	-	-	Standard MDR	Standard MDR	Standard MDR
Connector power	4-pin TRIAD 01					
Connector trigger	5-pin TRIAD 01					
<b>Environmental &amp; power specifications</b>						
Ambient operating temperature range [°C]	From 0 to +50					
Storage temperature [°C]	From -40 to +80					
Power consumption [W]	Up to 30					
Power supply voltage	DC 12 V					
Regulatory compliance	CE, RoHS					
<b>Electro-optical specifications</b>						
Image format [pixels]	320 x 256					
Pixel pitch [µm]	30					
Detector type	InGaAs photodiode array with CTIA ROIC					
Sensorcooling	TE cooler	TE cooler	3-stage TE cooler	TE cooler	TE cooler	3-stage TE cooler
Integration type	Snapshot - global shutter					
Active area and diagonal [mm]	9.6 x 7.68 [diagonal 12.3]					
Optical fill factor	100%					
Spectral range [nm]	900 - 1700	500 - 1700	900 - 1700	900 - 1700	500 - 1700	900 - 1700
Quantum efficiency	~80% [typical peak value]					
Gain modes	High Gain [HG] and High Dynamic Range [HDR]					
Full well capacities [electrons]	170k [HG] and 3.5M [HDR]					
Read noise [electrons]	150 [HG] and 1000 [HDR]					
Dark current [electrons/second]	<200k at 280K sensor temperature	<200k at 280K sensor temperature	<10k at 223K sensor temperature	<200k at 280K sensor temperature	<200k at 280K sensor temperature	<10k at 223K sensor temperature
Read out mode	ITR					
Pixel operability	>99%					
Preconfigured exposure time range [ms]	1 - 20	1 - 20	1 - 200; max exposure time >10 seconds in HG	1 - 20	1 - 20	1 - 200; max exposure time >10 seconds in HG
Max frame rate [Hz] [full frame]	100	100	100	60, 100 or 344	60, 100 or 344	60, 100 or 344
Region of interest	Yes	Yes	Yes	Yes [not for 60 and 100 model]	Yes [not for 60 and 100 model]	Yes [not for 60 and 100 model]
Min region size [pixels]	32 x 8	32 x 8	32 x 8	128 x 8 [not for 60 and 100 model]	28 x 8 [not for 60 and 100 model]	28 x 8 [not for 60 and 100 model]
Max frame rate [Hz] [min region size]	>10000	>10000	>10000	>10000 [not for 60 and 100 model]	>10000 [not for 60 and 100 model]	>10000 [not for 60 and 100 model]
Analog-to-Digital [ADC] [bits]	12	12	12	14	14	14
Command and control	USB 2.0					
Digital output format	USB 2.0	USB 2.0	USB 2.0	CameraLink [14 bit] [max 100 Hz frame rate with USB 2.0]		
Trigger	In or out via trigger connector [Configurable]	In or out via trigger connector [Configurable]	In or out via trigger connector [Configurable]	In or out via trigger connector [Configurable] - only recommended with CameraLink data interface	In or out via trigger connector [Configurable] - only recommended with CameraLink data interface	In or out via trigger connector [Configurable] - only recommended with CameraLink data interface
<b>Product selector guide</b>						
Part number	XEN-000100	XEN-000147	XEN-000101	XEN-000104 [60]	XEN-000165 [60]	XEN-000108 [60]
	-	-	-	XEN-000105 [100]	XEN-000106 [100]	XEN-000109 [100]
	-	-	-	XEN-000107 [350]	XEN-000148 [350]	XEN-000110 [350]



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