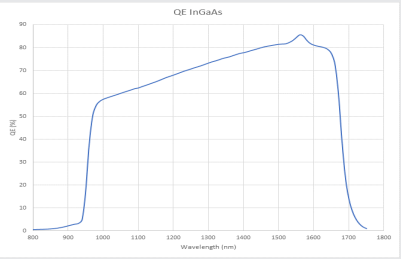
Bobcat 320 Gated Series

Areascan SWIR Camera

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



Small InGaAs camera for short exposures

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

The Bobcat 320 Gated cameras 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 camera comes with either CameraLink or GigE Vision interface.

Designed for use in

- Machine Vision
- Safety & Security
- Scientific & Advanced research
- Process Monitoring

Advantages

- Extremely short 100 ns integration time
- Programmable trigger-out
- CameraLink or GigE Vision interfacing options
- Small SWIR areascan camera

▶ Camera Specifications

Camera Specifications	Bobcat 320 CL Gated	Bobcat 320 GigE Gated
Mechanical specifications		
Approximate dimensions - excluding lens [width x height x length] [mm]	55 x 55 x 72	55 x 55 x 82
Weight [gr] - excluding lens	285	334
Optical interface	C-mount or M42	
Connector GigE	-	RJ-45
Connector CameraLink	Standard SDR	-
Connector power	Hirose HR10-7R-SA[73]	
Connector trigger	SMA	
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]
Power supply voltage	DC 12 V	
Shock	IEC60068-2-27 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]	
IP rating	IP40	
Regulatory compliance	CE, 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
Digital output format	CameraLink [16 bit]	GigE Vision [16 bit]
Trigger	In or out via SMA or in via CL-CC1 [Configurable]	In or out via SMA [Configurable]
Product selector guide		
Part number	XEN-000585	XEN-000525

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