Xenics
Infrared Solutions

BOBCAT+ 320 SERIES

Area-scan SWIR Camera

- SWIR cooled camera with 320 x 256 resolution
- Improved version of Industry-proven Bobcat 320 series
- In-house developed InGaAs sensor with response in SWIR or vSWIR

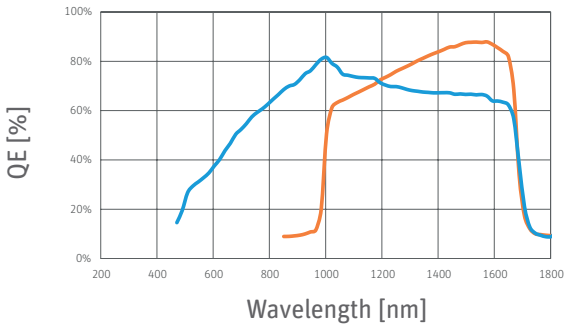
SMALL, HIGH PERFORMANCE InGaAs CAMERA WITH GigE INTERFACE

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

The Bobcat+ 320 cameras come with GigE Vision interface and offer high frame rates up to 400 Hz.

The new and improved Bobcat+ 320 now comes with two gain modes (high gain and high dynamic range) and two read out modes (IWR or ITR). Moreover, a vSWIR version is also available.

The cameras have standard on-board image correction featuring non-uniformity correction (NUC), bad pixel replacement (BPR) and automatic gain control (AGC). For more info on other image enhancement features, contact our sales department.



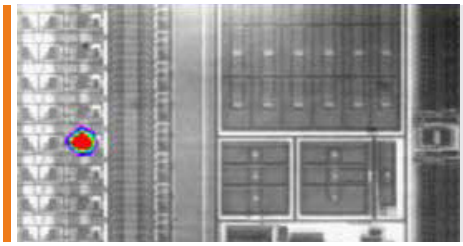
DESIGNED FOR USE IN

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

ADVANTAGES

- Flexible and easy-to-use
- GigE Vision interface
- Low dark current
- SWIR or vSWIR
- High frame rate of 400 Hz
- IWR or ITR read out

Crack inspection



Semiconductor inspection

Art inspection

SPECIFICATIONS

Camera Specifications	Bobcat+ 320 GigE 400	Bobcat+ 320 GigE vSWIR 400
Mechanical specifications		
Approximate dimensions - excluding lens [width x height x length] [mm]	55 x 55 x 82	
Weight [gr] - excluding lens	334	
Optical interface	C-mount or M42	
Connector GigE	RJ-45	
Connector power	Hirose HR10-7R-SA[73]	
Connector trigger	SMA	
Environmental & power specifications		
Operating case temperature [°C]	From -40 to +70 Also available in temperature range 0 - 50	
Storage temperature [°C]	From -45 to +85	
Power consumption [W]	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	500 - 1700
Quantum efficiency	~80% [typical peak value]	
Gain modes	High Gain [HG] & High Dynamic Range mode [HDR]	
Full well capacities [electrons]	45k [HG] & 500k [HDR]	
Read noise [electrons]	120 [HD] & 500 [HDR]	
Dark current [electrons/second]	<1E5 [at 288K sensor temp and 150 mV reverse bias]	<2E5 [at 288K sensor temp and 150 mV reverse bias]
Read out mode	ITR & IWR	
Pixel operability	>99.5%	
Preconfigured exposure time range [ms]	0.1 to 40 [HG]; 0.1 to 20 [HDR]	
Max frame rate [Hz] [full frame]	400	
Region of interest	Yes	
Min region size [pixels]	32 x 4 [step 16 x 4]	
Max frame rate [Hz] [min region size]	>10000	
Analog-to-Digital [ADC] [bits]	14	
Command and control	GigE Vision	
Digital output format	GigE Vision [16 bit]	
Trigger	In or out via SMA [Configurable]	
Product selector guide		
Part number	XEN-000732	XEN-000738