# Bobcat 320 Series

## Areascan SWIR Camera

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

Xenics
Infrared Solutions

## Small, high performance InGaAs camera

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

The Bobcat 320 cameras are offered with frame rates of either 100 Hz or 400 Hz.

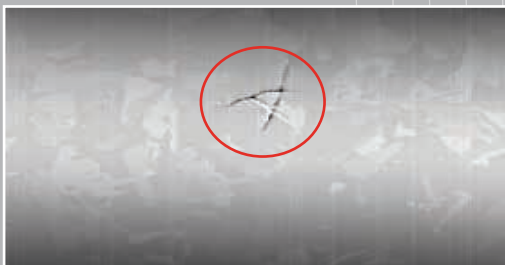The camera comes with a CameraLink or GigE Vision interface and features low weight and power.
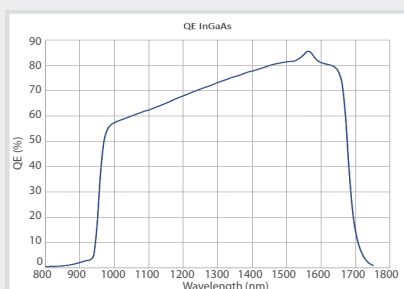
**Designed for use in**

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

**Advantages**

- Flexible and easy-to-use
- CameraLink or GigE Vision interfacing options
- Low dark current
- Small SWIR areascan camera

Semiconductor inspection

Semiconductor inspection

Art inspection

| Camera Specifications | Bobcat 320 CL 100 | Bobcat 320 CL 400 | Bobcat 320 GigE 100 | Bobcat 320 GigE 400 |
|---|---|---|---|---|
| **Mechanical specifications** | | | | |
| Approximate dimensions - excluding lens [width x height x length] [mm] | 55 x 55 x 72 | 55 x 55 x 72 | 55 x 55 x 82 | 55 x 55 x 82 |
| Weight [gr] - excluding lens | 285 | 285 | 334 | 334 |
| Optical interface | C-mount or M42 | | | |
| Connector GigE | - | - | RJ-45 | RJ-45 |
| Connector CameraLink | Standard SDR | 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] | 2.8 [no TE cooler] | 4 [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] | 0.5 to 10 | 0.01 to 40 | 0.5 to 10 | 0.01 to 40 |
| Max frame rate [Hz] [full frame] | 100 | 400 | 100 | 400 |
| Region of interest | No | Yes | No | Yes |
| Min region size [pixels] | - | 32 x 4 [step 4 x 1] | - | 32 x 4 [step 4 x 1] |
| Max frame rate [Hz] [min region size] | - | >10000 | - | >10000 |
| Analog-to-Digital [ADC] [bits] | 14 | | | |
| Command and control | CameraLink | CameraLink | GigE Vision | GigE Vision |
| Digital output format | CameraLink [16 bit] | CameraLink [16 bit] | GigE Vision [16 bit] | GigE Vision [16 bit] |
| Trigger | In or out via SMA or in via CL-CC1 [Configurable] | In or out via SMA or in via CL-CC1 [Configurable] | In or out via SMA [Configurable] | In or out via SMA [Configurable] |
| **Product selector guide** | | | | |
| Part number | XEN-000584 | XEN-000526 | XEN-000583 | XEN-000524 |

For more information on our products please scan the QR code.

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