

BOBCAT 320 SERIES

Area-scan SWIR Camera

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



SMALL, HIGH PERFORMANCE InGaAs CAMERA

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 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.

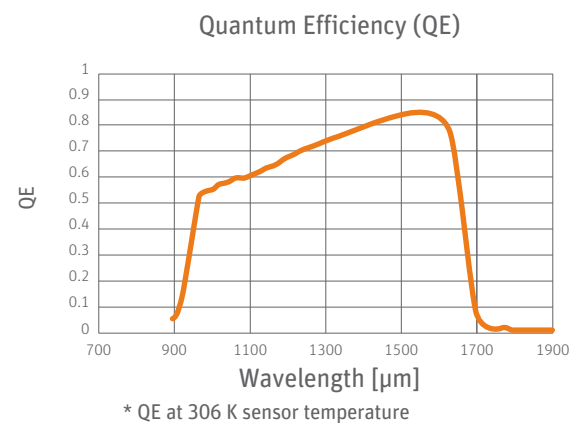
The cameras have standard on-board image correction featuring non-uniformity correction (NUC), bad pixel replacement (BPR) and automatic gain control (AGC). For more info on other image enhancement features, contact our sales department.

DESIGNED FOR USE IN

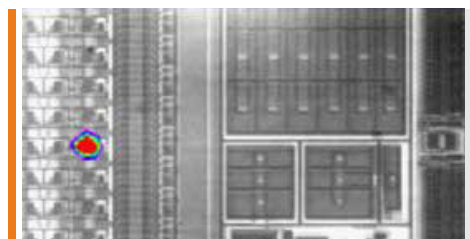
- Machine Vision
- Safety & Security
- Scientific & Advanced research
- Process Monitoring

ADVANTAGES

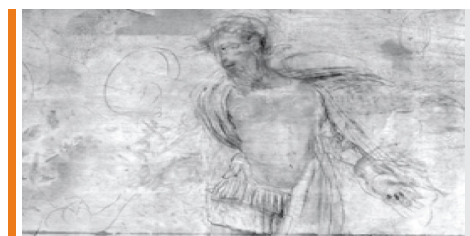
- Flexible and easy-to-use
- CameraLink or GigE Vision interfacing options
- Low dark current
- Small SWIR area-scan camera



Crack inspection



Semiconductor inspection



Art inspection

SPECIFICATIONS

| 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 Also available in temperature range 0 - 50 | | | |
| 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 | >99.5% | | | |
| 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 |

XDS-006.05 | Information furnished by Xenics is believed to be reliable. However, no responsibility is assumed for possible inaccuracies or omissions. Specifications are typical values and subject to change without notice. This information supersedes all previously supplied information.

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