

WILDCAT 640 SERIES

Area-scan SWIR Camera

- SWIR cooled camera with 640 x 512 resolution
- In-house developed InGaAs sensor



SMALL, HIGH PERFORMANCE InGaAs CAMERA WITH LOW NOISE AND HIGH DYNAMIC RANGE

The Wildcat 640 series is based on an in-house developed, temperature stabilized InGaAs detector with a 640 x 512 pixel resolution.

The Wildcat 640 cameras are offered with high frame rate of 220 Hz (or 110 Hz).

The camera comes with a CameraLink or USB3 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.

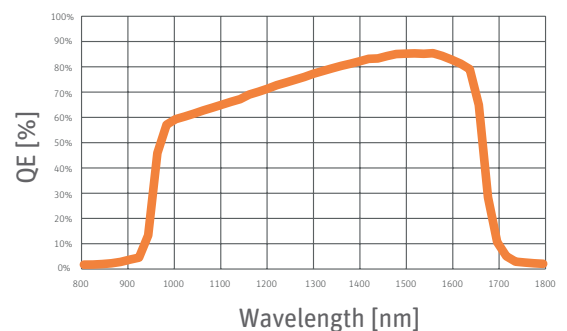
DESIGNED FOR USE IN

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

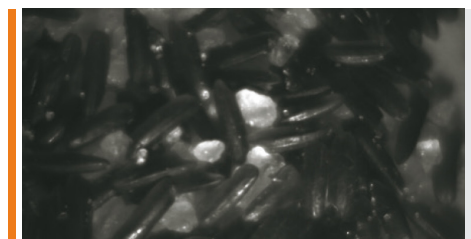
ADVANTAGES

- Frame rate up to 220 Hz or (110 Hz)
- Low noise and high dynamic range
- CameraLink or USB3 Vision interfacing options
- Small SWIR area-scan camera

QE (288K sensor temp)



Semiconductor inspection



Food inspection



Art inspection

SPECIFICATIONS

| Camera Specifications | Wildcat 640 CL 100 | Wildcat 640 U3V 100 | Wildcat 640 CL 200 | Wildcat 640 U3V 200 |
|--|--|----------------------|--------------------|----------------------|
| Mechanical specifications | | | | |
| Approximate dimensions - excluding lens [width x height x length] [mm] | 55 x 55 x 72 | 55 x 55 x 91.5 | 55 x 55 x 72 | 55 x 55 x 91.5 |
| Weight [gr] - excluding lens | 316 | 358 | 316 | 358 |
| Optical interface | C-mount or M42 | | | |
| Connector USB | - | USB 3.0 type micro-B | - | USB 3.0 type micro-B |
| Connector CameraLink | Standard SDR | - | Standard SDR | - |
| Connector trigger | Lemo 1B.310 [unified connector] | | | |
| Environmental & power specifications | | | | |
| Operating case temperature [°C] | From -40 to +70 | | | |
| Storage temperature [°C] | From -40 to +85 | | | |
| Power consumption [W] | <6 | | | |
| Power supply voltage | DC 12 V | | | |
| Shock | 40 g, 11 ms, according to MIL-STD810G | | | |
| Vibration | 5 g [20 to 2000 Hz], according to MIL-STD810G | | | |
| IP rating | IP40 | | | |
| Regulatory compliance | CE | | | |
| Electro-optical specifications | | | | |
| Image format [pixels] | 640 x 512 | | | |
| 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] | 12.8 x 10.24 [diagonal 16.4] | | | |
| Optical fill factor | 100% | | | |
| Spectral range [nm] | 900 - 1700 | | | |
| Quantum efficiency | ~80% [typical peak value] | | | |
| Gain modes | High Gain [HG] & High Dynamic Range [HDR] | | | |
| Full well capacities [electrons] | 110k [HG] & 600k [HDR] | | | |
| Read noise [electrons] | 80 [HG] & 250 [HDR] | | | |
| Dark current [electrons/second] | <100k [at 288K sensor temp] | | | |
| Read out mode | ITR | | | |
| Pixel operability | >99% | | | |
| Preconfigured exposure time range [ms] | HG: 0.5 ms & 5 ms; HDR: 0.5 ms & 5 ms | | | |
| Max frame rate [Hz] [full frame] | 110 | | 220 | |
| Region of interest | Yes | | | |
| Min region size [pixels] | min 1032 | | | |
| Max frame rate [Hz] [min region size] | >1 kHz | | | |
| Command and control | CameraLink | USB3 Vision | CameraLink | USB3 Vision |
| Digital output format | CameraLink | USB3 Vision | CameraLink | USB3 Vision |
| Trigger | Trigger connector: 2 trigger in & 2 trigger out - LVCMOS 3.3 V | | | |
| Product selector guide | | | | |
| Part number | XEN-000676 | XEN-000662 | XEN-000680 | XEN-000679 |

XDS-020.05 | 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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