

Specifications

Interface	Camera Link Base
Resolution	320 (H) × 256 (V)
Spectral range	1200 nm to 2200 nm
Sensor	FPA 320 × 256 30 μm Extended Range InGaAs
Sensor type	InGaAs
Sensor size	No standard size
Pixel size	30 μm × 30 μm
Lens mounts (available)	C-Mount
Max. frame rate at full resolution	344 fps
ADC	14 Bit
Image buffer (RAM)	256 MByte
Cooling temperature	-30 °C (default and calibrated) -20 °C, -10 °C, 0 °C (uncalibrated) User configurable
Dark current	15.3 Me ⁻ /s (at -30 °C FPA temperature)
Temporal dark noise	2.5 ke ⁻ (Gain0), 200 e ⁻ (Gain1)
Saturation capacity	5.0 Me ⁻ (Gain0), 110 ke ⁻ (Gain1)
Dynamic range	68 dB (Gain0), 57 dB (Gain1)

Output

Bit depth	8 - 14 Bit
Monochrome pixel formats	Tap Geometry 1X 1Y: Mono8, Mono10, Mono12, Mono14 Tap Geometry 1X2 1Y: Mono8, Mono10, Mono12

General purpose inputs/outputs (GPIOs)

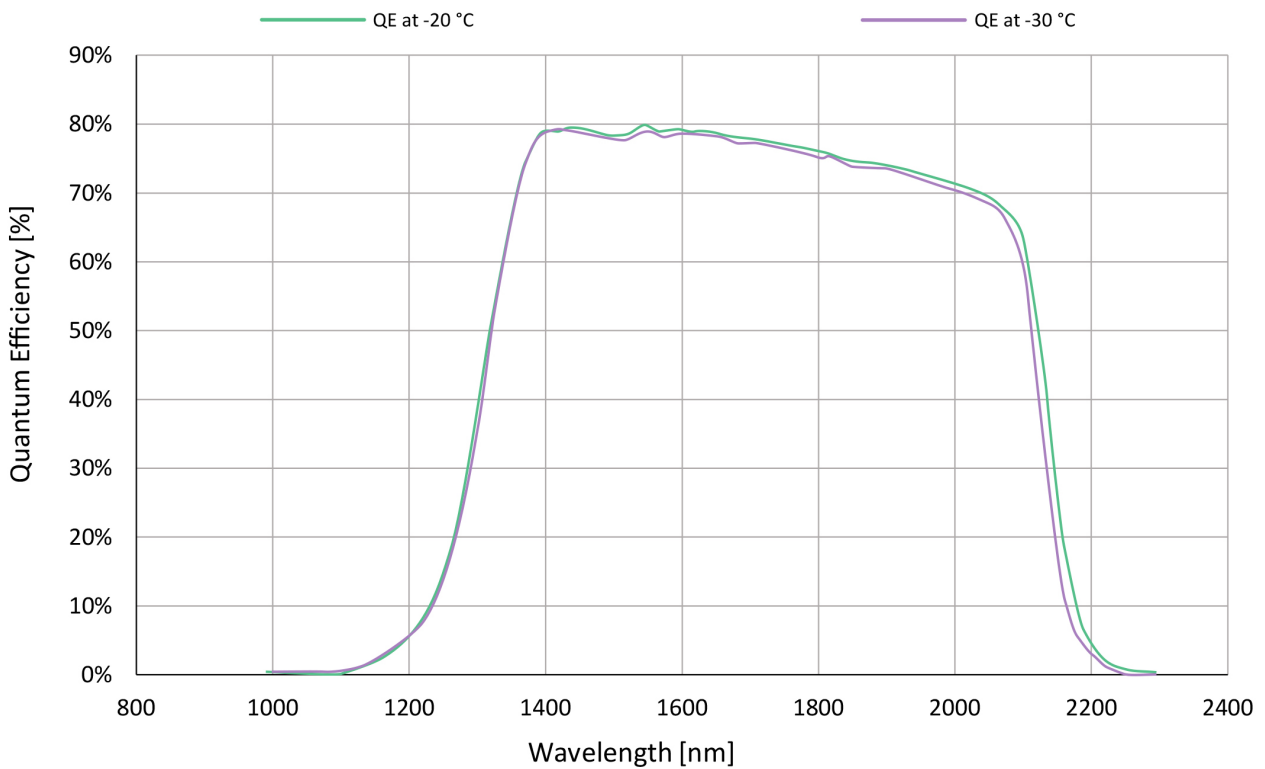
TTL I/Os	LVTTL I/Os: 1 input, 1 output
Opto-isolated I/Os	1 input, 2 outputs
RS232	115 200 Baud, 8N1 (adjustable)

Operating conditions/dimensions

Operating temperature	-20 °C to +55 °C (housing)
Power requirements (DC)	10.8 V to 30.0 V

Power consumption	20 W (at 12 VDC)
Mass	730 g (with C-Mount adapter)
Body dimensions (L × W × H in mm)	90 × 80 × 80

Quantum efficiency



Features

Image control: Auto

- Auto contrast
- Auto exposure

Image control: Other

- Background correction
- Binning
- DPC (defect pixel correction)
- LUT (look up table)
- Multiple ROIs (regions of interest)
- NUC (non-uniformity correction)

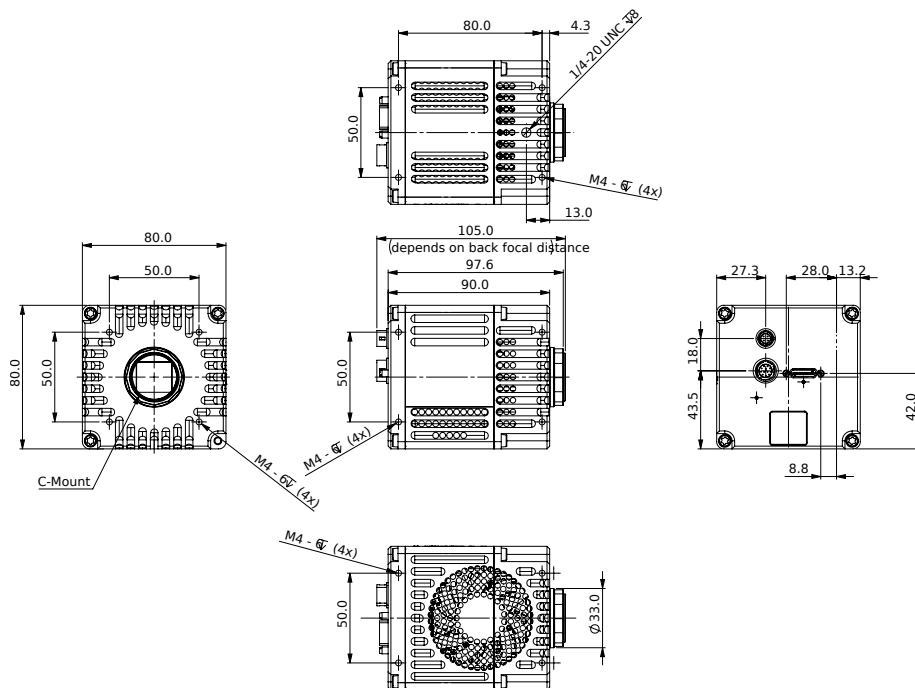
Camera control

- Acquisition frame rate
- Event channel
- Firmware update in the field
- I/O and trigger control
- Image chunk data
- Stream hold
- User sets

Sensor temperature control

- Temperature management by TEC
- Temperature status indicator

Technical drawing



Applications

Goldeye cameras are very sensitive in the SWIR spectrum. They can be used in an extended operating temperature range. Thanks to temperature stabilization and integrated image correction, Goldeye cameras achieve an outstanding image quality with little noise and a high dynamic range. They are well-suited for many typical SWIR applications in various industry branches:

- Semiconductor industry: Solar cell and chip inspection
- Recycling industry: Plastics sorting
- Medical imaging, sciences: Hyper- and multi-spectral imaging, microscopy, optical coherence tomography (OCT)
- Metal and glass industry: Thermal imaging of hot objects (250 °C to 800 °C)
- Agriculture industry: Airborne remote sensing
- Printing industry: Banknote inspection
- Electronics industry: Laser beam profiling
- Surveillance and security: Vision enhancement (for example, seeing through fog)

White Paper To learn more about typical application fields for SWIR cameras, download our White Paper: [Seeing beyond the visible – short-wave infrared \(SWIR\) cameras offer new application fields in machine vision](#)