



Bigeye

G-629 Cool

- 6 Megapixels resolution
- Exposure time up to more than 4200 s

For demanding applications for both the visible spectrum and the NIR spectrum

Low noise cooled CCD cameras, up to 11 MP, prime quality

Bigeye G-629 Cool with ON Semi KAF-6303E runs 0.7 frames per second at 6.3 MP resolution.

The Bigeye is a Peltier cooled camera series for demanding applications. It is equipped with highly sensitive CCD sensors from Sony and OnSemi. Bigeye cameras are designed for low-noise image acquisition even at long exposure times. The compact, robust metal housing of all Bigeye cameras has a hermetically sealed vacuum section, ensuring maintenance-free operation for many years even under rough conditions. Moreover, two NIR enhanced camera versions are available (with ICX285 and KAF-6303E).

- Dual level Peltier cooling with 5 years warranty against condensation
- Low dark current even at very long exposure times
- Superior signal/noise ratio
- Robust alloy metal housing for industrial use
- Secure operation due to screw locks at all connectors
- Multi-functional, user-configurable I/O interface
- Support of AVT's GigE software development kits (SDKs)

Specifications

Interface	IEEE 802.3 1000baseT
Resolution	3072 (H) × 2048 (V)
Sensor	ON Semi KAF-6303E
Sensor type	CCD Progressive
Sensor size	Type 35 mm
Pixel size	9 μm × 9 μm
Lens mount (default)	F-Mount
Max. frame rate at full resolution	0.67 fps
ADC	14 Bit
Image buffer (RAM)	32 MByte
Cooling temperature	+5 °C
Dark current	0.008 e-/pixel/s
Temporal dark noise	21 e-
Saturation capacity	56000 e-
Dynamic range	69 dB

Output

Bit depth	14-bit
Monochrome pixel formats	Mono8, Mono12, Mono12Packed, Mono14

General purpose inputs/outputs (GPIOs)

TTL I/Os	1/1
Opto-isolated I/Os	3/3
RS232	2

Operating conditions/dimensions

Operating temperature	0 °C to 35 °C
Power consumption	max. <37.2 W at 12 VDC, typ. <18 W at 12 VDC
Mass	1390 g
Body dimensions (L × W × H in mm)	131.55 × 90 × 109 (including connectors)

Quantum efficiency



Features

- Gain (6 dB)
- Exposure time 50688 μ s to \approx 71 minutes
- Binning (2x1, 2x2)
- Gamma (0.45, 0.5, 0.7)
- Three look-up tables (LUTs)
- Five storable user sets

Easy integration The Bigeye G-629B Cool can be easily integrated into your application, since it is GigE Vision compliant and compatible with Allied Vision's GigE SDKs. Additionally, this camera can be used with numerous third-party software solutions.

Applications

The Bigeye G-629B Cool is a low-noise CCD camera with a very high dynamic range. It is best suited for applications with the highest demands on image quality. Due to the Peltier cooling, the camera is ideal for image acquisition with long exposure times. Typical applications:

- Low-noise imaging (industrial and scientific imaging)
- Image acquisition with long exposure times
- Microscopy with high resolution
- Fluorescence microscopy
- Gel electrophoresis, DNA documentation
- Non-destructive evaluation of photosensitive objects
- Astronomy