

Prosilica GC

1600H



- Sony ICX274 CCD sensor
- 25 fps at full resolution
- Rugged housing
- Video-type auto iris

GigE Vision, Sony ICX274 EXview CCD sensor, auto iris, 25 fps

Prosilica GC1600H is a 2.0 Megapixel camera with a GigE Vision compliant Gigabit Ethernet interface and Hirose port. Prosilica GC1600H is offered in both monochrome and color models. This camera incorporates the high quality Type 1/1.8 (8.923 mm diagonal) Sony ICX274 CCD sensor with Super HAD CCD technology that provides superior image quality, excellent sensitivity, and low noise. At full resolution, this camera has a frame rate of 25 frames per second. With a smaller region of interest higher frame rates are possible. By default monochrome models ship with no optical filter and color models ship with an IRC30 IR cut filter.

Benefits and features:

- Monochrome (GC1600H) and color (GC1600CH) models
- GigE Vision interface
- Screw mount RJ45 Ethernet connector for secure operation in industrial environments
- Supports cable lengths up to 100 meters (CAT-5e or CAT-6)
- Popular C-Mount lens mount
- Easy camera mounting via standard M3 threads or optional tripod adapter
- Easy software integration with Allied Vision's [Vimba SDK](#) and compatibility to the most popular [third party image-processing libraries](#).

Options:

- CS-Mount
- Optical filters (IR cut filter/Protection glass)

See the [Modular Concept](#) for lens mount and optical filter options.

Specifications

Prosilica GC	1600H
Interface	IEEE 802.3 1000baseT
Resolution	1620 (H) × 1220 (V)
Sensor	Sony ICX274
Sensor type	CCD Progressive
Sensor size	Type 1/1.8
Pixel size	4.4 μm × 4.4 μm
Lens mount (default)	C-Mount
Max. frame rate at full resolution	25 fps
ADC	12 bit
Image buffer (RAM)	64 MByte

Imaging performance

Imaging performance data is based on the evaluation methods in the EMVA 1288 Release 3.1 standard for characterization of image sensors and cameras. Measurements are typical values for monochrome models measured at full resolution without optical filter. Contact Sales or AE for more information.

Quantum efficiency at 529 nm	70 %
Temporal dark noise	10.7 e ⁻
Saturation capacity	3300 e ⁻
Dynamic range	49.3 dB
Absolute sensitivity threshold	11.2 e ⁻

Output

Bit depth	8/12 Bit
Monochrome pixel formats	Mono8, Mono12, Mono12Packed
RGB color pixel formats	RGB8Packed, BGR8Packed
Raw pixel formats	BayerRG8, BayerRG12, BayerRG12Packed

General purpose inputs/outputs (GPIOs)

TTL I/Os	1 input, 1 output
Opto-isolated I/Os	1 input, 1 output
RS232	1

Operating conditions/dimensions

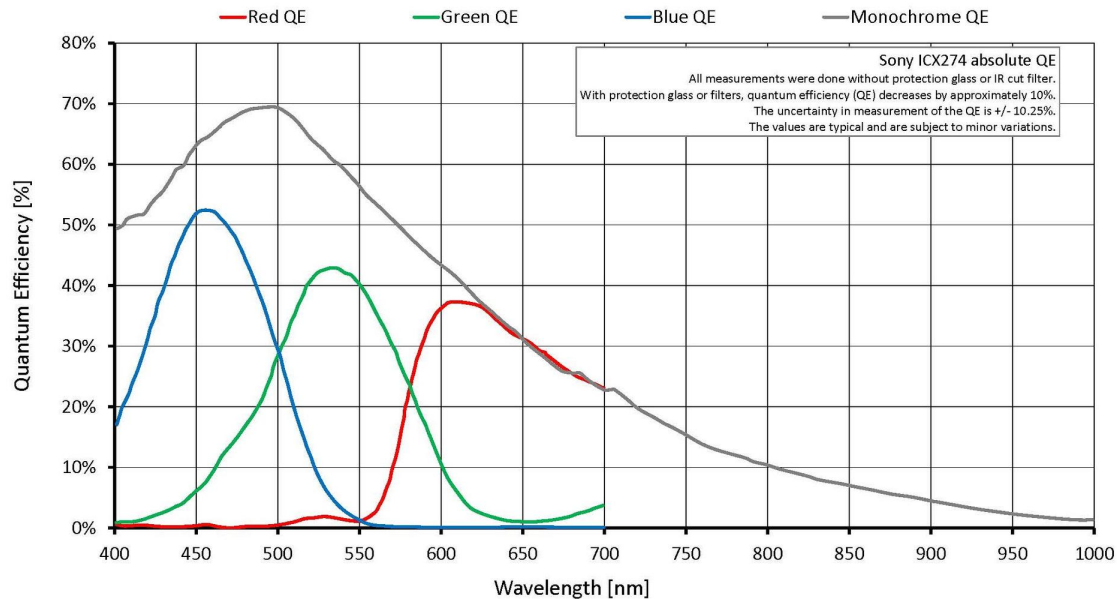
Operating temperature	0 °C to +50 °C ambient (without condensation)
Power requirements (DC)	5 to 25 VDC
Power consumption	3.3 W at 12 VDC
Mass	105 g
Body dimensions (L × W × H in mm)	59 × 46 × 33 (including connectors)

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Regulations

1600H

CE: 2014/30/EU (EMC), 2011/65/EU, including amendment 2015/863/EU (RoHS); FCC Class A; CAN ICES-003



Features

Image optimization features:

- Auto gain (manual gain control: 0 to 30 dB; 1 dB increments)
- Auto exposure (manual exposure control: 10 μ s to 68.7 s; 1 μ s increments)
- Auto white balance (GC1600CH only)
- Binning (horizontal and vertical) (sum)
- Black level (Offset)
- Gamma correction
- Hue, saturation, color transformation (GC1600CH only)
- Three look-up tables (LUTs)
- Region of interest (ROI), DSP subregion (selectable ROI for auto features)

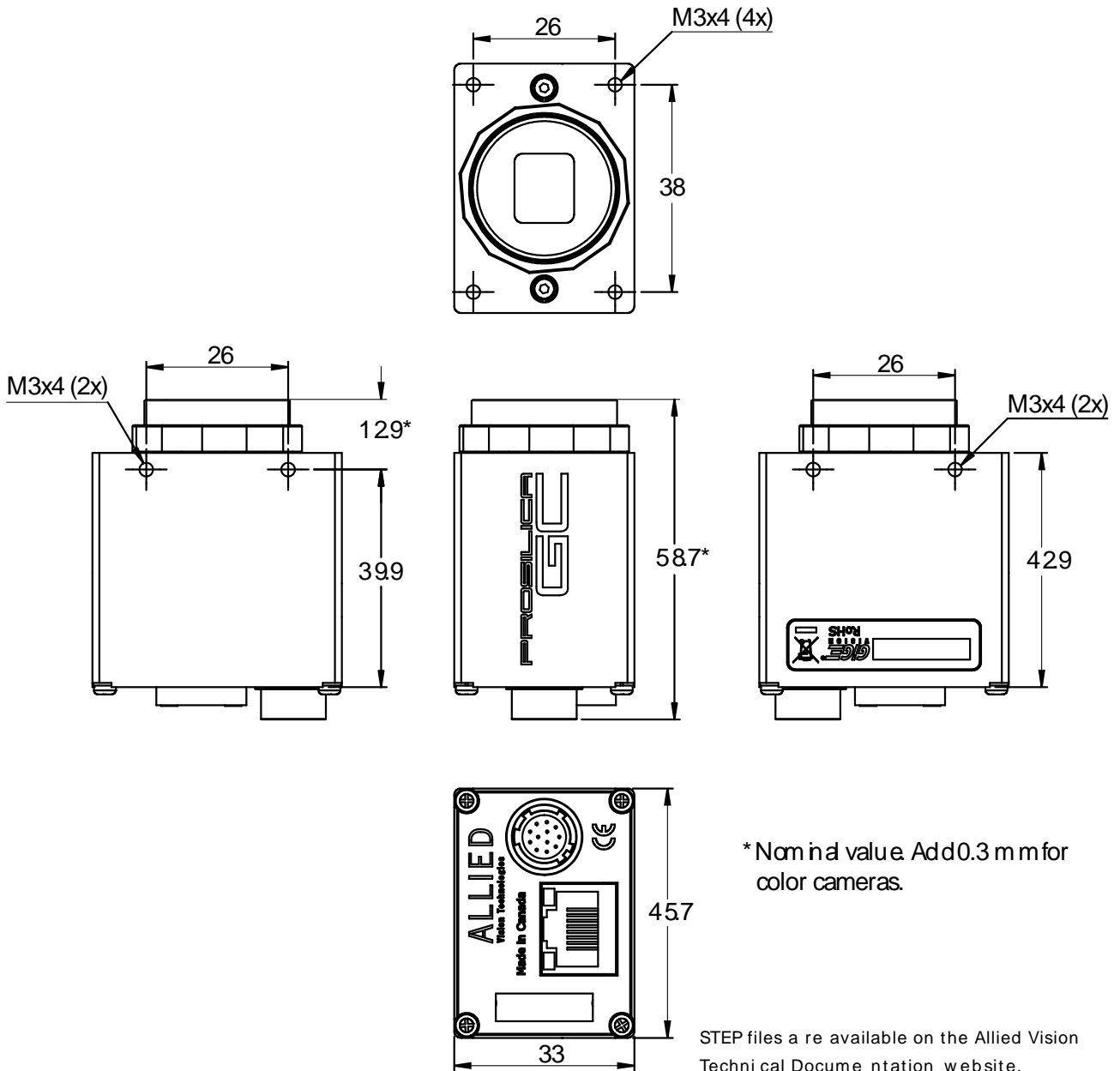
Camera control features:

- Auto-iris (video type)
- Event channel
- Global shutter (digital shutter)



- IEEE 1588 Precision Time Protocol
- Image chunk data
- Recorder and Multiframe acquisition modes
- RS232
- Three storable user sets
- StreamBytesPerSecond (bandwidth control)
- StreamHoldCapacity (Up to 33 frames at full resolution)
- Sync out modes: Trigger ready, input, exposing, readout, imaging, strobe, GPO
- Temperature monitoring (mainboard only)

Technical drawing





Applications

Prosilica GC1600H is ideal for a wide range of applications including:

- Industrial inspection
- Machine vision
- Ophthalmology
- LCD panel inspection
- Aeronautical and aerospace
- Biometrics
- Public security
- Surveillance
- Traffic imaging
- OEM applications