

# Prosilica GT

## 4090



- Type 4/3 CMOS sensor
- IEEE 1588 PTP
- Power over Ethernet
- 9.58 fps at full resolution

### Engineered for every environment

High-resolution cameras for demanding applications

Prosilica GT 4090 with ON Semi PYTHON 12K runs 9.6 frames per second at 12.5 MP resolution.

The rugged housing optimized for heat dissipation makes Prosilica GT the ideal solution for harsh environments. The various lens control options allow constant adjustment of the image brightness to changing light conditions. Offering resolutions of up to 31 megapixels, they are ideal for high-definition imaging applications with demanding requirements of robustness and design-in flexibility.

Easy software integration with Allied Vision's [Vimba Suite](#) and compatibility to the most popular [third party image-processing libraries](#).

See the [Modular Concept](#) for lens mount, housing variants, optical filters, case design, and other modular options. See the [Customization and OEM Solutions](#) webpage for additional options.

## Specifications

Interface	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE)
Resolution	4096 (H) × 3072 (V)
Sensor	ON Semi PYTHON 12K
Sensor type	CMOS
Shutter mode	GS (Global shutter)
Sensor size	Type 4/3
Pixel size	4.5 μm × 4.5 μm
Lens mount (default)	F-Mount
Max. frame rate at full resolution	9.58 fps
ADC	10 Bit
Image buffer (RAM)	128 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 without optical filter.

Quantum efficiency at 529 nm	54 %
Temporal dark noise	28.0 e <sup>-</sup>
Saturation capacity	8400 e <sup>-</sup>
Dynamic range	49.5 dB
Absolute sensitivity threshold	28.6 e <sup>-</sup>

### Output

Bit depth	10-bit
Monochrome pixel formats	Mono8, Mono10

### General purpose inputs/outputs (GPIOs)

TTL I/Os	1 input, 2 outputs
Opto-isolated I/Os	1 input, 2 outputs
RS232	1

### Operating conditions/dimensions

Operating temperature -20 °C to +50 °C ambient (without condensation)

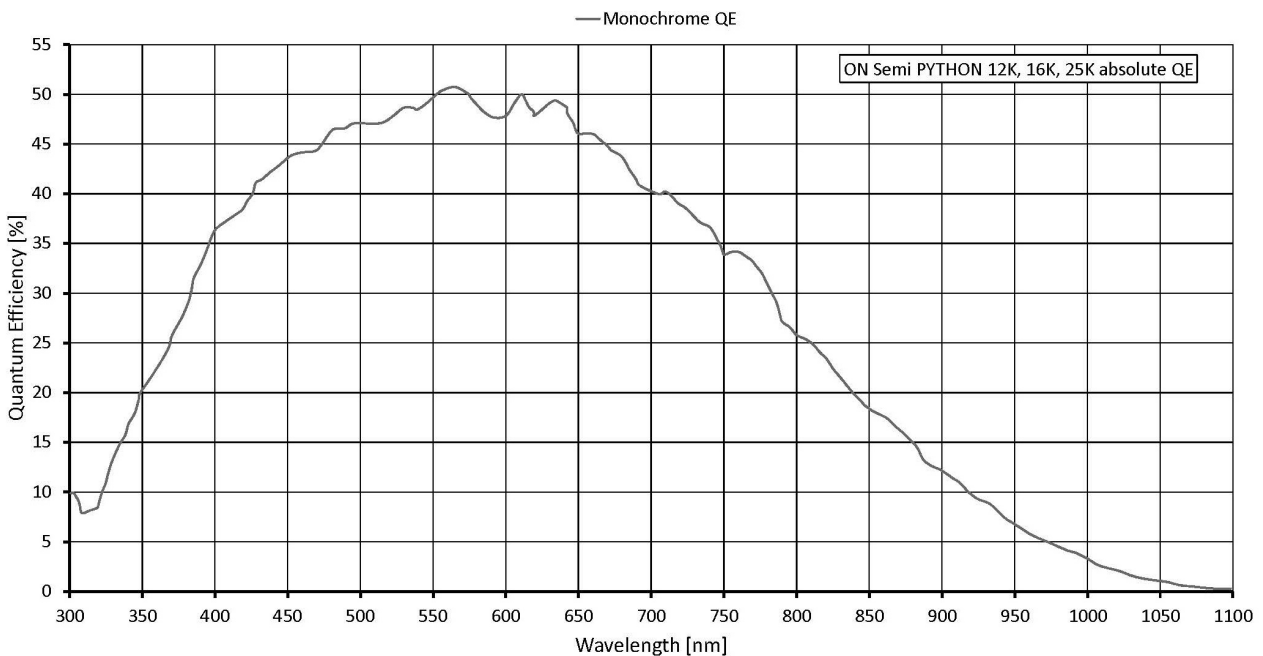
Power requirements (DC) 7 to 25 VDC AUX or 802.3at Type 1 PoE

Power consumption 4.96 W at 12 VDC; 6.7 W PoE

Mass 372 g

Body dimensions (L × W × H in mm) 96 × 66 × 53.3 (including connectors)

### Quantum efficiency



## Features

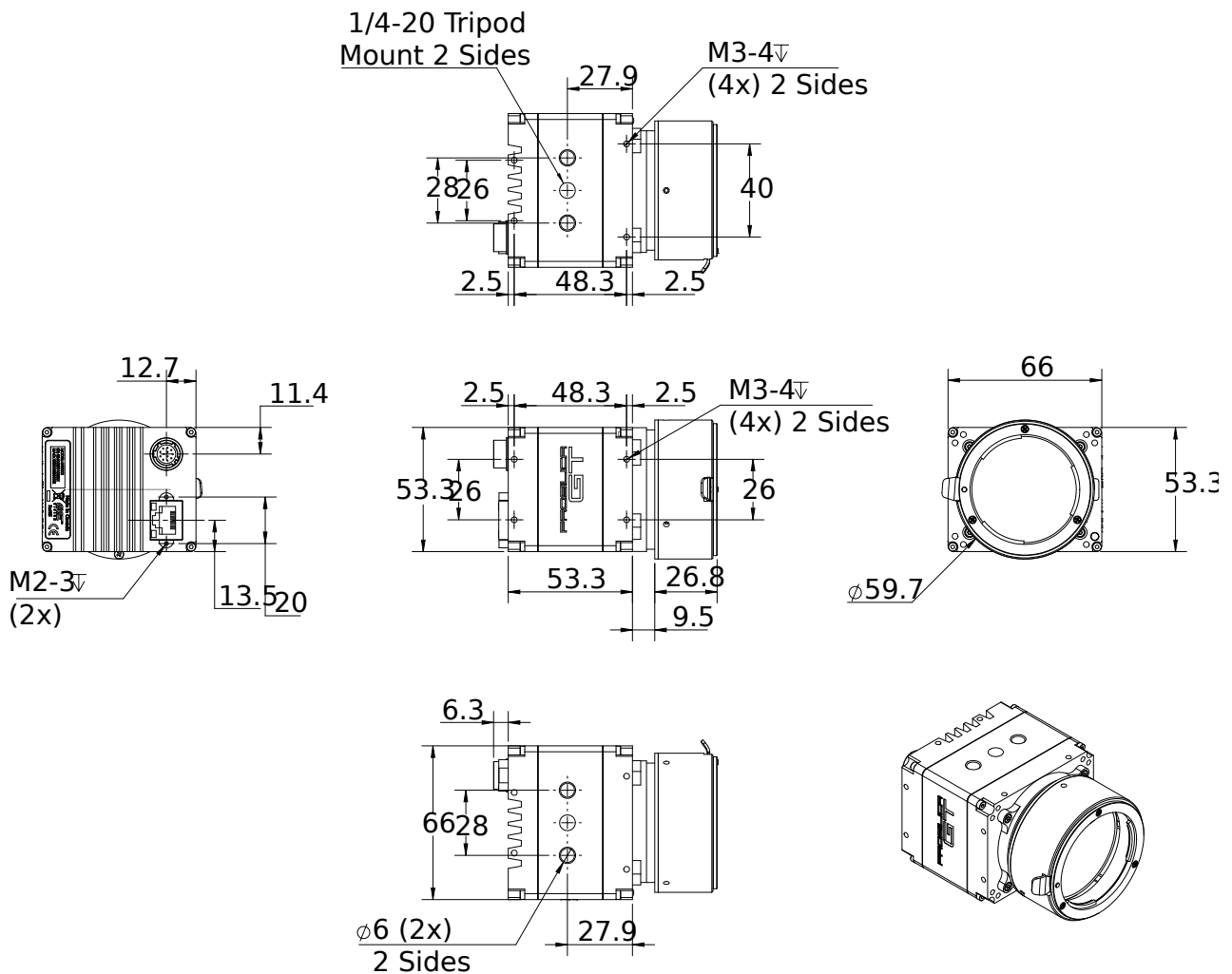
### Image optimization features:

- Auto gain (manual gain control: 0 to 22 dB)
- Auto exposure (manual exposure control: 1  $\mu$ s to 1 s, 1  $\mu$ s increments)
- Binning (horizontal and vertical) (sum)
- Decimation X/Y
- Enhanced Defect Pixel Correction
- Fixed Pattern Noise Correction
- Gamma correction
- Three look-up tables
- Region of interest

### Camera control features:

- EF lens control (order option -18)
- Event channel
- Image chunk data
- IEEE 1588 Precision Time Protocol
- RS232
- Storable user sets
- StreamBytesPerSecond (bandwidth control)
- Stream hold
- Sync out modes: Trigger ready, input, exposing, readout, imaging, strobe, GPO
- Temperature monitoring (main board and sensor board)
- Trigger over Ethernet Action Commands

## Technical drawing



## Applications

Prosilica GT4090 is ideal for a wide range of applications including:

- Outdoor imaging
- Intelligent Traffic Systems
- Public security and surveillance
- Industrial inspection (for example food, bottles, recycling, labels)
- Microscopy
- Military and space applications
- Medical and healthcare
- Other machine vision applications