Allied Vision

Prosilica GT

5120

- Type APS-H CMOS sensor
- IEEE 1588 PTP
- Power over Ethernet
- 4.59 fps at full resolution

26.2 megapixel industrial camera for extended temperature ranges

Prosilica GT5120 is a 26.2 megapixel camera with a GigE Vision compliant Gigabit Ethernet interface and Hirose port. Prosilica GT5120 is a monochrome model. This camera incorporates the high quality ON Semi PYTHON 25K (NOIP1SN025KA) CMOS sensor with In-pixel Correlated Double Sampling global shutter technology. At full resolution, this camera runs 4.59 frames per second. With a smaller region of interest, higher frame rates are possible. Prosilica GT5120 is a rugged camera with a robust thermal housing that is designed to operate in extended temperature ranges and fluctuating lighting conditions. It is a large format housing camera with a standard F-Mount lens mount. By default monochrome models ship with no optical filter.

Benefits and features

- Monochrome (GT5120) model
- GigE Vision interface with Power over Ethernet
- Screw mount RJ45 Ethernet connector for secure operation in industrial environments
- Supports cable lengths up to 100 meters (CAT-6 recommended)
- Trigger over Ethernet Action Commands allow for a single cable solution to reduce system costs
- Comprehensive I/O functionality for simplified system integration
- Planarity adjusted (PA) EF Lens Mount (option -18) for electronic control of aperture and autofocus
- Easy camera mounting via standard M3 threads at all sides and 1/4-20 tripod mounting hole
- Easy software integration with Allied Vision's Vimba Suite and compatibility to the most popular third party image-processing libraries.
- Enhanced Defect Pixel Correction feature with a new Defective Pixel List Manager tool that allows you to load different user defined defective pixel lists to match your application and optimize the life cycle of the camera

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Hardware options

- Various lens mounts: Select between F-Mount, F-Mount PA, EF-Mount PA, M42-Mount, M42-Mount PA, M58-Mount, or M58-Mount PA
- Various optical filters: Select between B 270 ASG protection glass and filter types: IRC30 IR cut filter, Schneider 486 IR cut filter

See the Modular Concept for lens mount and optical filters options. See the Customization and OEM Solutions webpage for additional options.

Specifications

Prosilica GT	**5120**
Interface	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE)
Resolution	5120 (H) × 5120 (V)
Sensor	ON Semi PYTHON 25K
Sensor type	CMOS
Shutter mode	Global shutter
Sensor size	Type APS-H
Pixel size	4.5 µm × 4.5 µm
Lens mounts (available)	F-Mount, F-Mount PA, M58-Mount, M58-Mount PA, M42-Mount, M42-Mount PA
Max. frame rate at full resolution	4.59 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	53 %
Temporal dark noise	22.1 e^-
Saturation capacity	7800 e^-
Dynamic range	50.7 dB
Absolute sensitivity threshold	22.7 e^-
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

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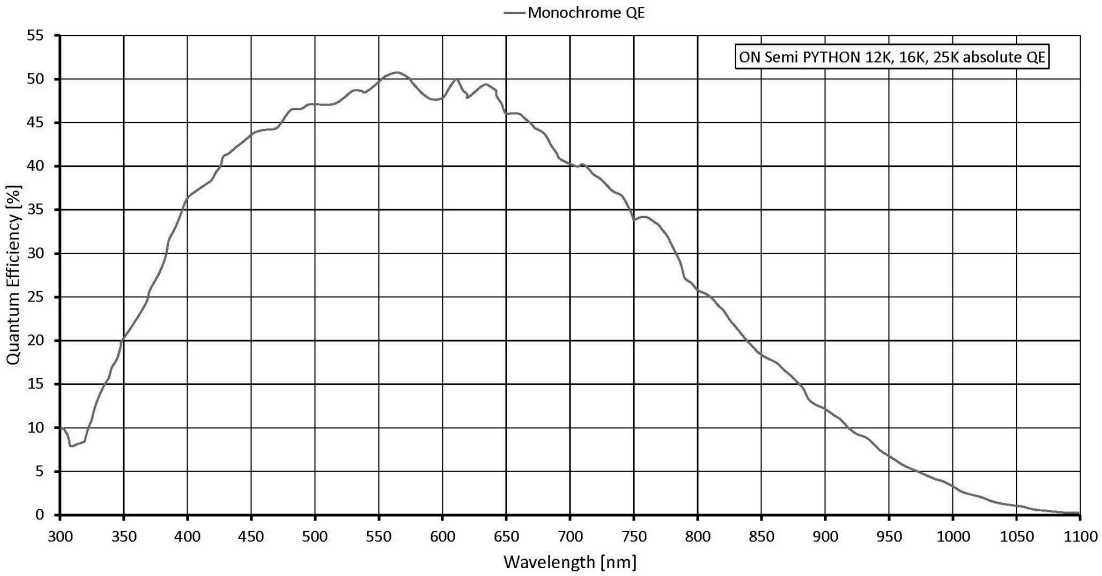
RS232	1
Operating conditions/dimensions	
Operating temperature	-20 °C to +50 °C ambient (without condensation)
Power requirements (DC)	7 to 25 VDC AUX or IEEE 802.3at Type 1 PoE
Power consumption	External power: 5.02 W at 12 VDC | Power over Ethernet: 6.3 W
Mass	372 g
Body dimensions (L × W × H in mm)	96 × 66 × 53.3 (including connectors)
Regulations	CE: 2014/30/EU (EMC), 2011/65/EU, including amendment 2015/863/EU (RoHS); FCC Class A; CAN ICES-003 Issue 4/5

Quantum efficiency



Features

Image optimization features:

- Auto gain (manual gain control: 0 to 22 dB)
- Auto exposure (manual exposure control: 1 µs to 1 s, 1 µs 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

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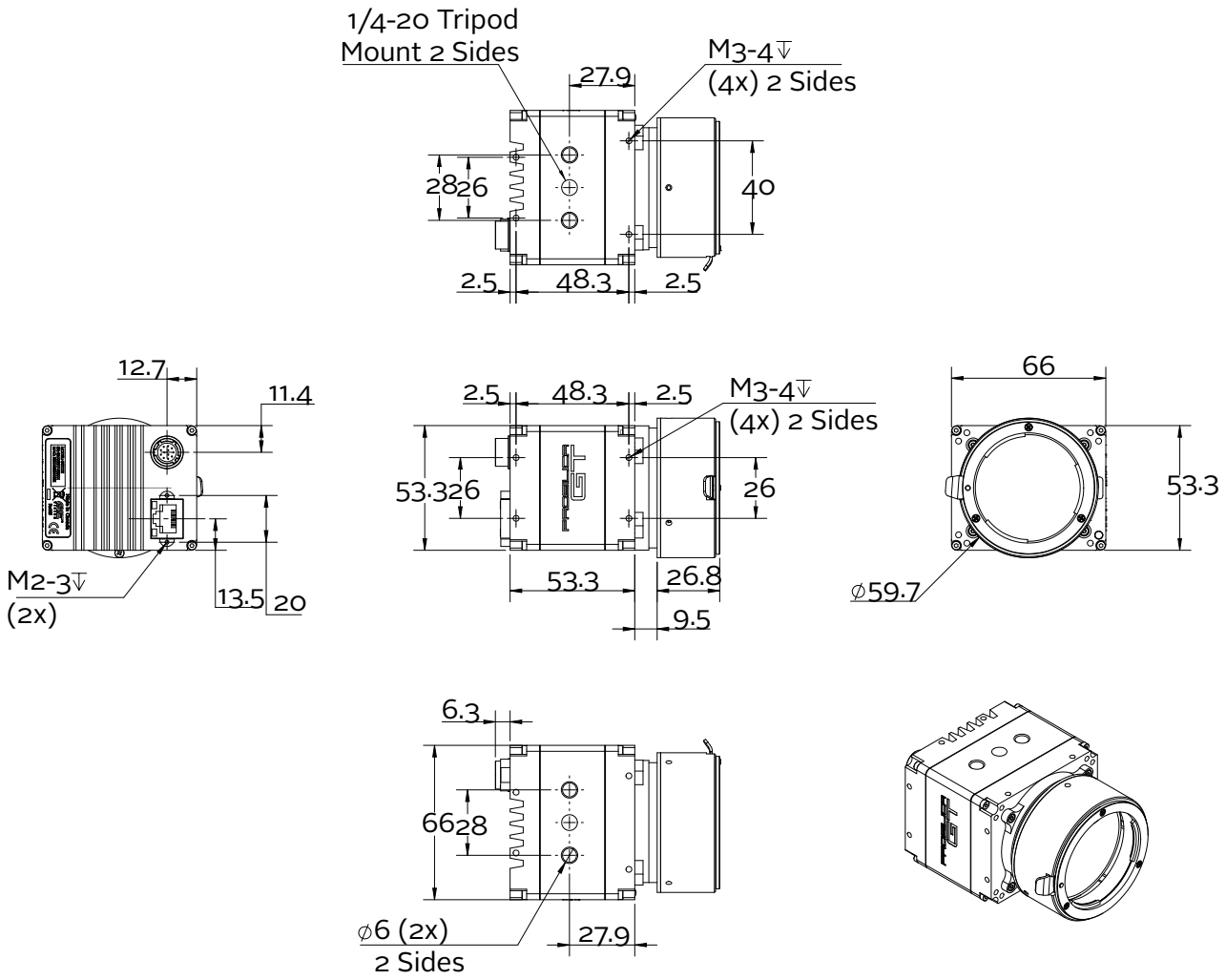
Technical drawing



Applications

Prosilica GT5120 camera series 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