Allied Vision

Prosilica GT

4090

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

12.5 Megapixel machine vision camera for extended temperature ranges

Prosilica GT4090 is a 12.5 Megapixel camera with a GigE Vision compliant Gigabit Ethernet port and Hirose I/O port. Prosilica GT4090 is offered as monochrome and extended near-infrared (NIR) models. This camera incorporates the high quality ON Semiconductor PYTHON 12K CMOS sensor with In-pixel Correlated Double Sampling (IP-CDS) global shutter technology. At full resolution, this camera runs 9.58 frames per second. With a smaller region of interest, higher frame rates are possible. Prosilica GT4090 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 and NIR models ship with no optical filter.

Benefits and features:

- Monochrome (GT4090) and extended near-infrared (GT4090NIR) models
- 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-5e or CAT-6)
- The ON Semiconductor PYTHON 12K is a high sensitivity CMOS sensor
- Trigger over Ethernet (ToE) Action Commands allow for a single cable solution to reduce system costs
- Comprehensive I/O functionality for simplified system integration
- Planarity adjustable (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 SDK 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.

性能参数

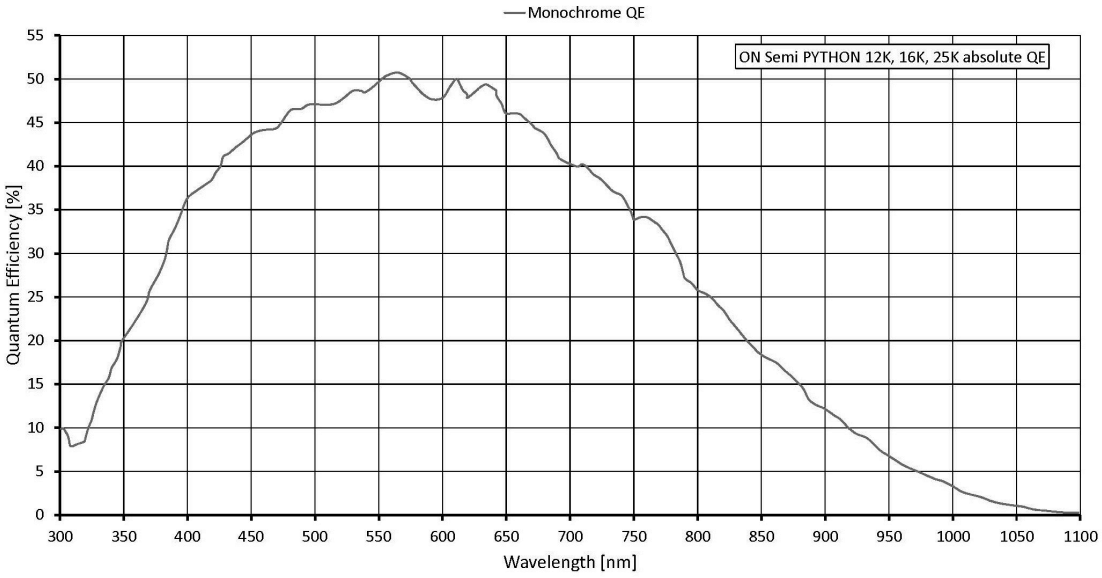
Prosilica GT	4090
接口	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE)
分辨率	4096 (H) × 3072 (V)
传感器	ON Semi PYTHON 12K
传感器类型	CMOS
Shutter mode	Global shutter
传感器尺寸	Type 4/3
像元尺寸	4.5 µm × 4.5 µm
Lens mount (default)	F-Mount
最大满帧帧率	9.58 fps
ADC	10 Bit
缓存 (RAM)	128 MByte
非易失性内存 (Flash)	1024 KByte (for selected models only)
成像性能	

成像成像性能数据是基于欧洲机器视觉协会（EMVA）1288发布的3.1版图像传感器和像机特征描述标准中的评估方法。测量值是在没有光学滤波片的，测量单色模型的典型值。

在波长为529nm下，量子转换效率	54 %
暗噪声	28.0 e^-
饱和电子数	8400 e^-
动态范围	49.5 dB
绝对灵敏度阈值	28.6 e^-
输出	
Bit位数	10 Bit
黑白像素格式	Mono8, Mono10
通用输入输出口(GPIOs)	
TTL I/Os	1 input, 2 outputs
光耦 I/Os	1 input, 2 outputs
RS232	1
工作条件/尺寸	
工作温度	-20 °C to +50 °C ambient (without condensation)

Prosilica GT	4090
电源要求 (DC)	7 to 25 VDC AUX or 802.3at Type 1 PoE
功耗	4.96 W at 12 VDC; 6.7 W PoE
重量	372 g
尺寸 (L × W × H in mm)	96 × 66 × 56.3 (including connectors)
符合规范	CE: 2014/30/EU (EMC), 2011/65/EU, including amendment 2015/863/EU (RoHS); FCC Class A; CAN ICES-003 Issue 4/5

量子转换效率



特性

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 (DPC)
- Fixed Pattern Noise Correction (FPNC)
- Gamma correction
- Four look-up tables (LUTs)
- Region of interest (ROI)

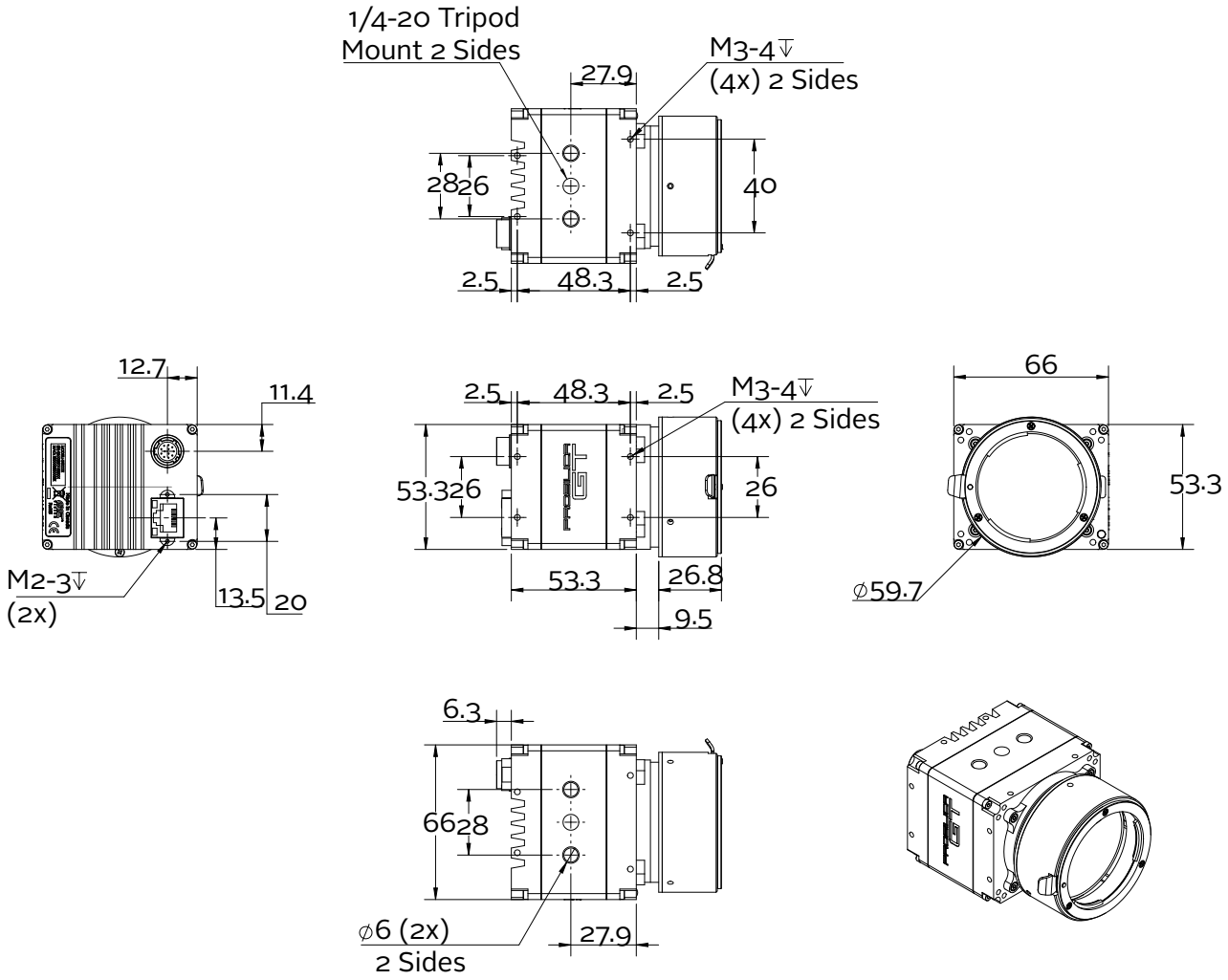
Allied Vision

Camera control features:

- EF lens control (order option -18)
- Event channel
- Image chunk data
- IEEE 1588 Precision Time Protocol (PTP)
- 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 (ToE) Action Commands
- Non-volatile memory 1024 KByte (for selected models only)

Allied Vision

外形尺寸



应用场景

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

- Outdoor imaging
- Intelligent Traffic Systems (ITS)
- Public security and surveillance
- Industrial inspection (food, bottles, recycling, lables, etc.)
- Microscopy
- Military and space applications
- Medical and healthcare
- Other machine vision applications