

Prosilica GT 4090NIR



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

12.5 megapixel machine vision camera for extended temperature ranges

Prosilica GT4090NIR is a 12.5 megapixel camera with a GigE Vision compliant Gigabit Ethernet port and Hirose I/O port. Prosilica GT4090NIR is an extended near-infrared model. This camera incorporates the high quality ON Semi PYTHON 12K NIR (NOIP1FN012KA) CMOS sensor with In-pixel Correlated Double Sampling 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 GT4090NIR 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 NIR models ship with no optical filter.

Benefits and features

- Extended near-infrared (GT4090NIR) 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)
- The ON Semiconductor PYTHON 12K NIR is a high sensitivity CMOS sensor
- Trigger over Ethernet 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 Suite](#) and compatibility to the most popular [third party image-processing libraries](#).

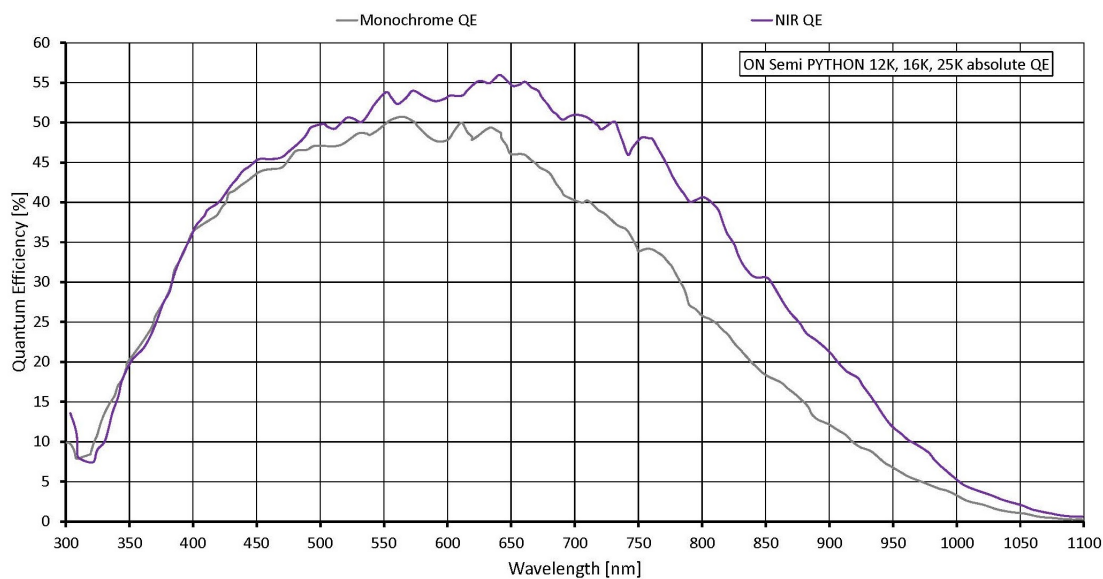
- Enhanced Defect Pixel Correction feature with a new Defective Pixel List Manager tool that allows you to load different user defined defective pixel lists to match your application and optimize the life cycle of the camera

性能参数

Prosilica GT	4090NIR
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 NIR
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
成像性能	
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 NIR models measured without optical filter.	
在波长为529nm下, 量子转换效率	53 %
在波长为850nm下, 量子转换效率	32 %
暗噪声	31.0 e ⁻
饱和电子数	7700 e ⁻
动态范围	47.7 dB
绝对灵敏度阈值	31.6 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)
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

Prosilica GT	4090NIR
重量	372 g
尺寸 (L × W × H in mm)	96 × 66 × 53.3 (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:

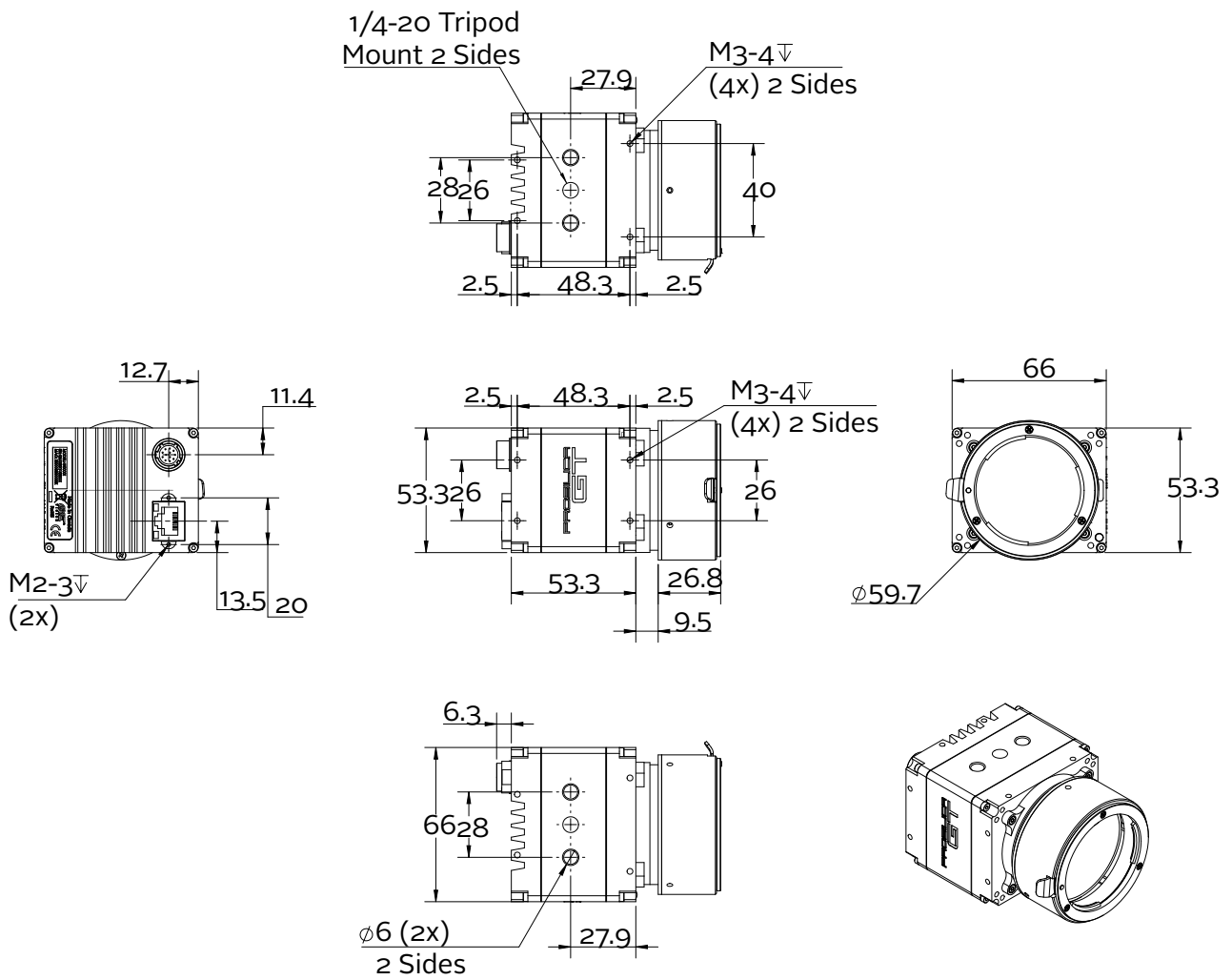
- Auto gain (manual gain control: 0 to 22 dB)
- Auto exposure (manual exposure control: 1 μ s to 1 s, 1 μ s increments)
- Binning (horizontal and vertical) (sum)
- Decimation X/Y
- Enhanced Defect Pixel Correction
- Fixed Pattern Noise Correction
- Gamma correction
- Three look-up tables
- Region of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

外形尺寸





应用场景

Prosilica GT4090NIR 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