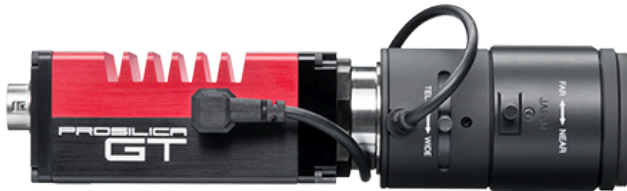


# Prosilica GT 2050NIR



- Versatile temperature range for extreme environments
- IEEE 1588 PTP
- PoE
- P-Iris and DC-Iris lens control

## 4.2 Megapixel NIR enhanced camera for extreme environments

Prosilica GT2050NIR is a 4.2 Megapixel camera with a GigE Vision compliant Gigabit Ethernet port and Hirose I/O port. This camera incorporates a NIR-optimized variant of the high-quality CMOSIS/ams CMV4000 CMOS sensor. At 900 nm this sensor offers double the quantum efficiency, an increase from 8% to 16% absolute. At full resolution, this camera runs 28.6 frames per second. With a smaller region of interest, higher frame rates are possible. It is a rugged camera designed to operate in extreme environments and fluctuating lighting conditions. This camera offers Precise iris lens control allowing users to fix the aperture size to optimize depth of field, exposure, and gain without the need for additional control elements. By default NIR models ship with no protection glass or filter.

### Benefits and features:

- Near-Infrared (GT2050NIR) 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-5e or CAT-6)
- Trigger over Ethernet (ToE) Action Commands allow for a single cable solution to reduce system costs
- Comprehensive I/O functionality for simplified system integration
- 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:

- Available with CS-Mount, F-Mount, M42-Mount
- Available with IR cut filter or protection glass

See the [Modular Concept](#) for lens mount and optical filters options. See the [Customization and OEM Solutions](#) page for additional options.

## 性能参数

Prosilica GT	2050NIR
接口	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE)
分辨率	2048 (H) × 2048 (V)
传感器	CMOSIS/ams CMV4000 NIR
传感器类型	CMOS
Shutter mode	Global shutter
传感器尺寸	Type 1
像元尺寸	5.5 μm × 5.5 μm
Lens mounts (available)	C-Mount, CS-Mount, F-Mount, M42-Mount
最大满帧帧率	28.6 fps
ADC	12 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全分辨率下，测量的近红外模型的典型值。请联系销售或工程师了解更多信息。

在波长为529nm下，量子转换效率	79 %
在波长为850nm下，量子转换效率	42 %
暗噪声	13.0 e <sup>-</sup>
饱和电子数	9200 e <sup>-</sup>
动态范围	56.7 dB
绝对灵敏度阈值	13.5 e <sup>-</sup>

### 输出

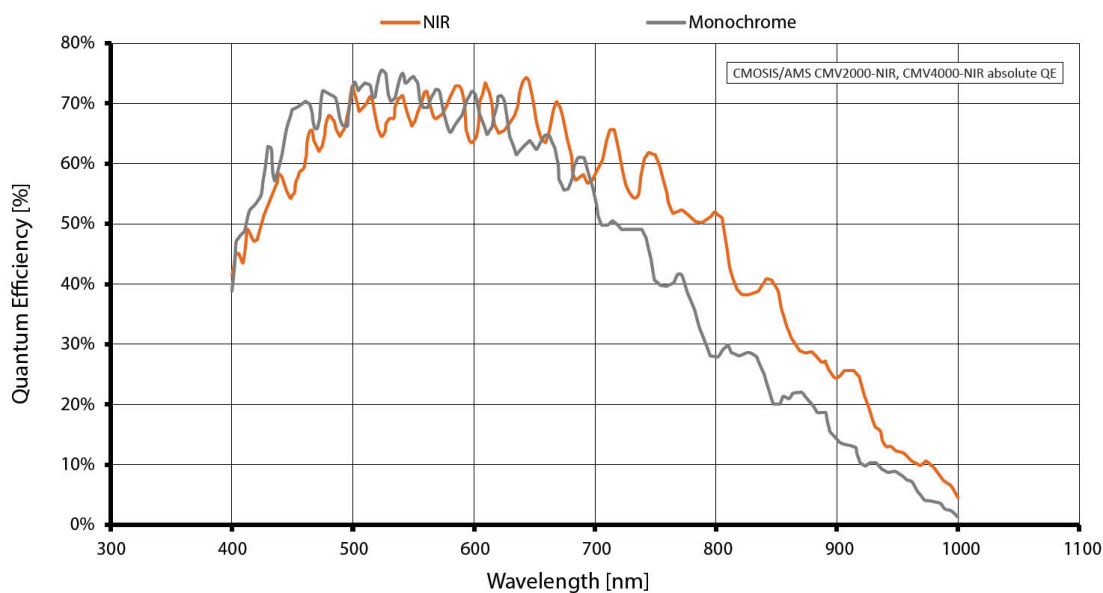
Bit位数	8/12 Bit
黑白像素格式	Mono8, Mono12, Mono12Packed

### 通用输入输出(GPIOs)

TTL I/Os	1 input, 2 outputs
光耦 I/Os	1 input, 2 outputs

Prosilica GT	2050NIR
RS232	1
工作条件/尺寸	
工作温度	-20 °C to +65 °C ambient (without condensation)
电源要求 (DC)	7 to 25 VDC AUX or 802.3at Type 1 PoE
功耗	3.5 W at 12 VDC; 4.3 W PoE
重量	210 g
尺寸 (L × W × H in mm)	86 × 53.3 × 33 mm (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 26 dB)
- Auto exposure (manual exposure control: 34  $\mu$ s to 126.2 s)
- BlackLevel (offset)
- Gamma correction
- Three look-up tables (LUTs)
- Piecewise Linear HDR mode

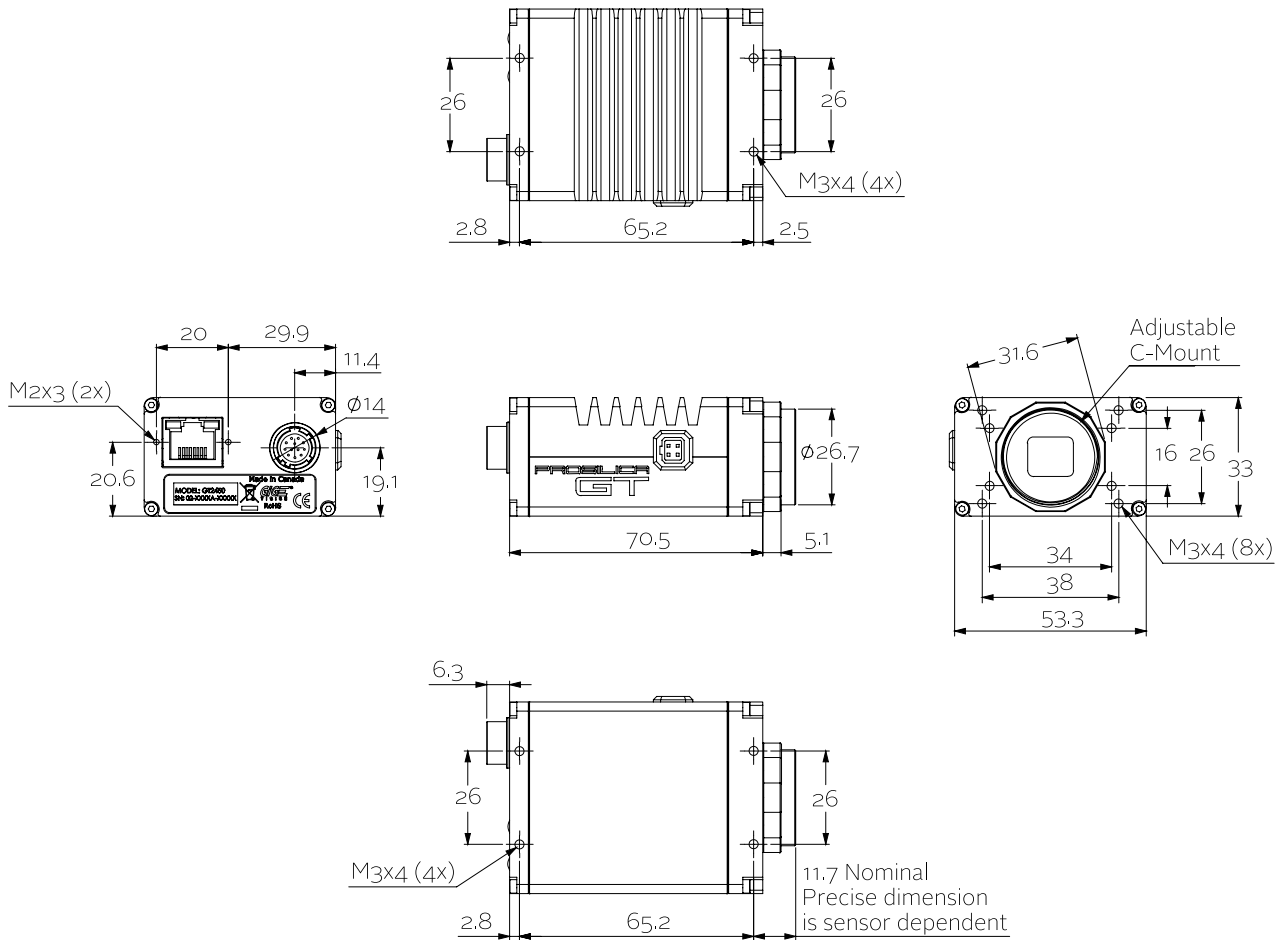


- Region of interest (ROI), separate ROI for auto features

#### Camera control features:

- P-Iris and DC-Iris lens control
- 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 only)
- Trigger over Ethernet (ToE) Action Commands
- Non-volatile memory 1024 KByte (for selected models only)

## 外形尺寸





## 应用场景

Prosilica GT2050NIR is ideal for a wide range of applications including:

- Outdoor imaging
- Traffic imaging and ITS
- Public security and surveillance
- Industrial inspection
- Machine vision
- Microscopy
- Medical and healthcare
- ... and many more