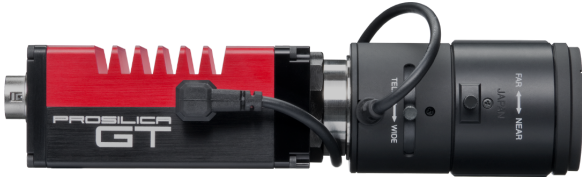


Prosilica GT

2050NIR



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

Engineered for every environment

High-resolution cameras for demanding applications

Prosilica GT 2050NIR with CMOSIS/ams CMV4000 NIR runs 28.6 frames per second at 4.2 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.

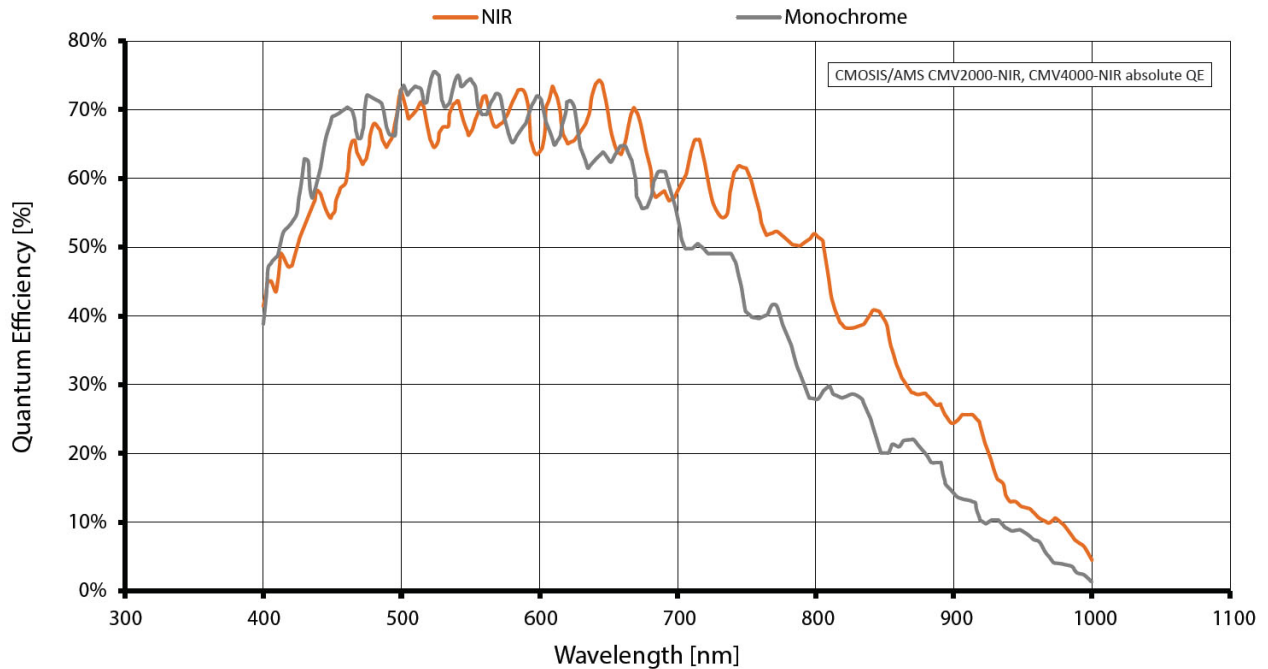
Specifications

Prosilica GT 2050NIR	
Interface	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE)
Resolution	2048 (H) × 2048 (V)
Sensor	CMOSIS/ams CMV4000 NIR
Sensor type	CMOS
Shutter mode	Global shutter
Sensor size	Type 1

Prosilica GT 2050NIR

Pixel size	5.5 μm \times 5.5 μm
Lens mounts (available)	C-Mount, CS-Mount, F-Mount, M42-Mount
Max. frame rate at full resolution	28.6 fps
ADC	12 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 NIR models measured at full resolution without optical filter.	
Quantum efficiency at 529 nm	79 %
Quantum efficiency at 850 nm	42 %
Temporal dark noise	13.0 e^-
Saturation capacity	9200 e^-
Dynamic range	56.7 dB
Absolute sensitivity threshold	13.5 e^-
Output	
Bit depth	8/12 Bit
Monochrome pixel formats	Mono8, Mono12, Mono12Packed
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 $^{\circ}\text{C}$ to +65 $^{\circ}\text{C}$ ambient (without condensation)
Power requirements (DC)	7 to 25 VDC AUX or 802.3at Type 1 PoE
Power consumption	3.5 W at 12 VDC; 4.3 W PoE
Mass	210 g
Body dimensions (L \times W \times H in mm)	86 \times 53.3 \times 33 (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:

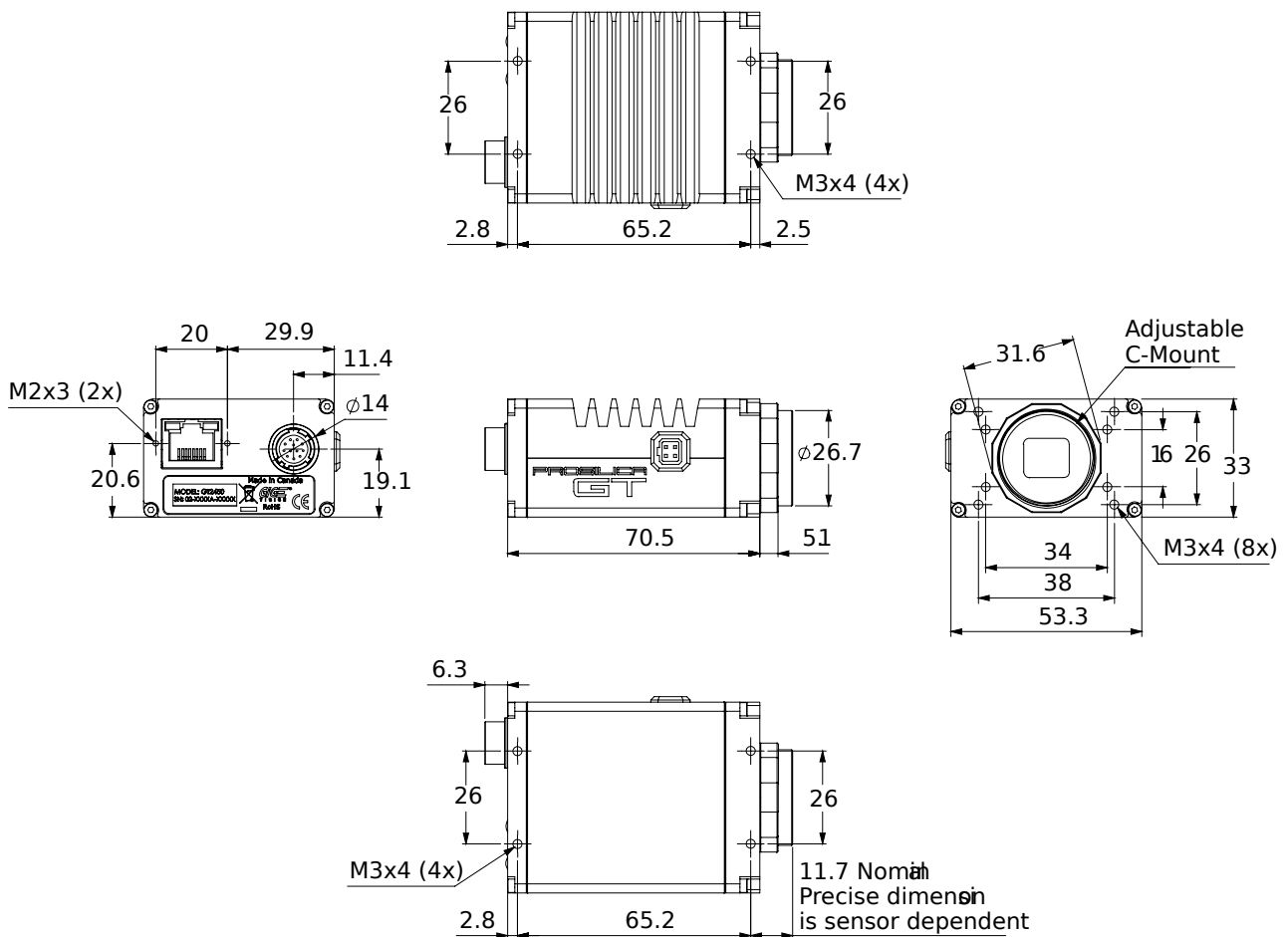
- Auto gain (manual gain control: 0 to 26 dB)
- Auto exposure (manual exposure control: 34 μ s to 126.2 s)
- BlackLevel (offset)
- Defect pixel masking (user defined with Defect Mask Loader tool)
- Gamma correction
- Three look-up tables
- Piecewise Linear HDR mode
- Region of interest, separate region for auto features

Camera control features:

- P-Iris and DC-Iris lens control
- 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 only)
- Trigger over Ethernet Action Commands

Technical drawing





Applications

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

- Outdoor imaging
- Traffic imaging and Intelligent Traffic Systems
- Public security and surveillance
- Industrial inspection
- Machine vision
- Microscopy
- Medical and healthcare