5-megapixel CMOS global shutter





- Large format 5 MP CMOS imager (global shutter)
- Up to 62 fps at full resolution
- 5.0 μm square pixels in a 5:4 aspect ratio
- Small size (29 x 29 x 41.5 mm, excluding lens mount)
- 8/10/12-bit output in choice of monochrome or raw Bayer color models
- 60 dB linear dynamic range with built-in HDR modes up to 84 dB (monochrome only)
- Analog and digital gain control for less quantized noise in low-light situations
- Exposure control from 10 μs to 8 seconds in 1 μs steps
- 2X and 4X binning for increased sensitivity (monochrome only)
- Single and Multi-ROI modes for flexible windowing and use of 2/3" or smaller optics
- Accepts power over USB3 Vision interface or separate 6-pin connector
- C-mount lens mount
- Automatic Level Control (ALC) for dynamic lighting conditions

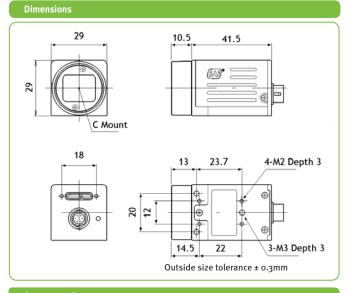


White balance (GO-5000C) Manual, one-push auto, or continuous (3000K to 9000K) Gamma 0.45, 0.6, 1.0 or 32-point LUT (16-pt. color) Synchronization Internal Trigger input Opto In, Pulse Generators, Software, User Output (NAND gates) Trigger modes EPS, Trigger Width, Timed RCT (with ALC), Sequence Electronic shutter 10 μs to 8 sec in 1 μs steps 1/62 to 1/100,000 sec. Auto Level Control (ALC) Shutter range from 1/62 to 1/100,000, gain range from 0 dB to +24 dB. Tracking speeds and max values adjustable. High Dynamic Range function 4 built-in HDR slopes. Selectable up to ~84 dB (monochrome only). Pre-processing functions Flat field correction, color shading correction (GO-5000C), blemish compensation (256 pixels) Operating temperature -5°C to +45°C Storage temperature -25°C to +60°C Humidity 20 – 80% non-condensing	Specifications	GO-5000-USB	
System clock 48 MHz (for pulse generator)	Sensor	1" CMOS global shutter (LincesM)	
Frame rate, full frame Active area 12.8 mm (h) x 10.2 mm (v), 16.39 mm diagonal Cell size 5.0 µm (h) x 5.0 µm (v) Active pixels Read-out modes Full Read-out modes Full Rol (mono) ROl (color) Binning EMVA 1288 Parameters Absolute sensitivity (mono) Absolute sensitivity (color) Maximum SNR (mono) Maximum SNR (color) Traditional SNR* mono color (raw) Gain (digital) Gain (analog) White balance (GO-5000C) Synchronization Trigger input Trigger modes Electronic shutter Timed exposure Auto Level Control (ALC) Pre-processing functions Filt field correction, color shading correction (GO-5000C), blemish compensation C95 (To +65°C Humidity Operating temperature -5°C to +45°C Storage temperature -5°C to +45°C Spind (Active Jone Milagonal (12.8 mm (N) x 10.2 mm (N) x 10.39 mm diagonal (12.8 mm (N) x 10.2 mm (N) x 10.39 mm diagonal (12.8 mm (N) x 10.2 mm (N) x 10.39 mm diagonal (12.8 mm (N) x 10.2 mm (N) x 10.39 mm diagonal (12.8 mm (N) x 10.3 mm (N) x 10.4 mm (N			
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Humidity 20 – 80% non-condensing	· · · · · · · · · · · · · · · · · · ·		
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VIDIGUOII 10 U 12007 IO 20007 AY/ I	Vibration	10 G (20Hz to 200Hz XYZ)	
Shock 80 G			
Regulations CE (EN61000-6-2, EN61000-6-3), FCC Part 15 class B, RoHS/WEEE		CE (EN61000-6-2, EN61000-6-3),	
Power	Power		
6-pin connector 12V to 24V DC ± 10%. 2.8W typical @ 12V 720mA, 3.6W typical @ 5V	6-pin connector		
Lens mount C-mount	Lens mount	C-mount	
Dimensions (H x W x L) 29 mm x 29 mm x 41.5 mm (excl. lens mount)	Dimensions (H x W x L)	29 mm x 29 mm x 41.5 mm (excl. lens mount)	
Weight 46 g	Weight		

Ordering Information

1	GO-5000M-USB	Monochrome camera with USB3 Vision
l	GO-5000C-USB	Color camera with USB3 Vision

*Traditional SNR is based on random noise in a single frame, where EMVA SNR measurements consider more comprehensive noise sources and variance over time. For a more complete description, see the manual.



Connector pin-out

DC In / Trigger



HIROSE HR10A-7R-6PB(73)

Pin	Signal
1	+12V to +24V DC input
2	Opto In 1
3	Opto Out 1
4	Opto Out 2
5	Opto Common
6	GND

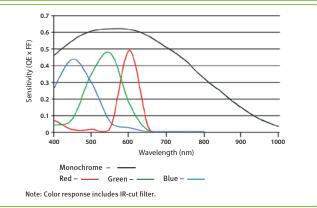
USB 3.0 Interface



Micro B type - ZX3600-B-10P or equiv.

No	I/O	Name	Note
1	I	VBUS IN	Power (VBUS)
2	I/O	DM	USB2.0 Differential pair (-)
3	I/O	DP	USB2.0 Differential pair (+)
4		OTG ID	USB OTG ID for identifying lines
5		GND	GND
6	0	FX ₃ SSTXM	USB3.o Signal Transmission line (-)
7	0	FX ₃ SSTXP	USB3.o Signal Transmission line (+)
8		GND	GND
9	I	FX ₃ SSRXP	USB3.0 Signal Receiving line (-)
10	I	FX ₃ SSRXM	USB3.0 Signal Receiving line (+)

Spectral Response



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