

➤ **GO-5101-PMCL**
5.1-megapixel CMOS global shutter



- *5.1-megapixel 2/3" CMOS imager (global shutter)*
- *Up to 35.6 fps at full resolution*
- *3.45 μm square pixels*
- *Small size (29 x 29 x 41.5 mm, excluding lens mount)*
- *8/10-bit output in choice of monochrome or raw Bayer models*
- *Exposure control from 14 μs to 8 seconds in 1 μs steps*
- *2X binning for increased sensitivity (monochrome only)*
- *ROI mode for increasing frame rate and use of smaller optics*
- *Automatic Level Control (ALC) for dynamic lighting conditions*
- *Accepts power over Camera Link interface or separate 4-pin connector*
- *C-mount lens mount*

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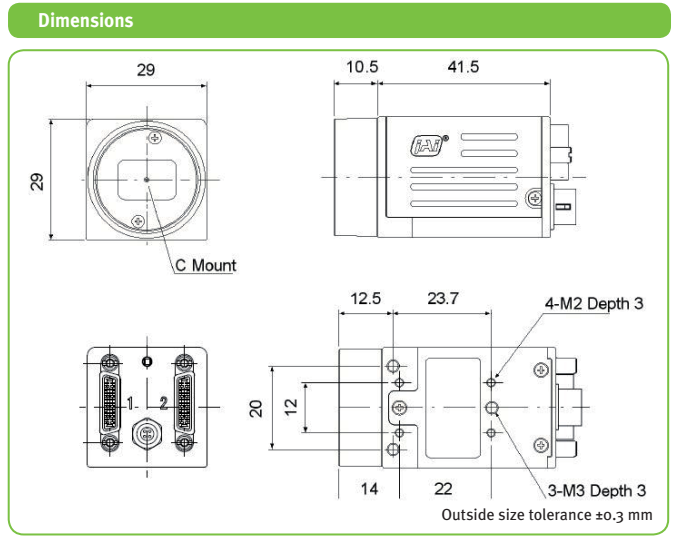
See the possibilities

Specifications		GO-5101-PMCL
Sensor		2/3" CMOS global shutter (IMX264)
System clock		74.25 MHz (for pulse generator)
Frame rate (Full frame)		35.6 frames/sec. @ 8-bit (continuous)
Active area		8.5 mm (h) x 7.09 mm (v), 11.1 mm diagonal
Cell size		3.45 μm (h) x 3.45 μm (v)
Active pixels		2464 (h) x 2056 (v)
Read-out modes	Full ROI	2464 (h) x 2056 (v) up to 35.6 fps 2 lines to 2056 lines in 2-line steps, 96 to 2464 pixels wide in 16-pixel steps
	Binning	1x2, 2x2, 2x1 (monochrome only)
EMVA 1288 Parameters		12-bit output format
	Absolute sensitivity (mono)	3.54 p (λ = 525 nm)
	Absolute sensitivity (color)	3.94 p (λ = 525 nm)
	Maximum SNR (mono)	40.26 dB
	Maximum SNR (color)	40.26 dB
Traditional SNR*	mono color	> 60 dB @ 10-bit (0 dB gain, non-linear)
	color	> 60 dB @ 10-bit (0 dB gain, green, non-linear)
Video signal output	mono color	8/10-bit monochrome 8/10-bit raw Bayer (12-bit available in Video Process Bypass mode)
Gain control		Manual/auto 0 dB to +24 dB
White balance (GO-5101C)		Manual, one-push auto, or continuous (3000K to 9000K)
Gamma		0.45, 0.6, 1.0 or 256-point LUT
Synchronization		Internal
Video modes		Normal ROI, Trigger Sequencer, Command Sequencer
Trigger input		TTL, Camera Link (CC1), NAND (2), Software, Pulse Generator, User Output (2)
Trigger modes		Timed (EPS), Trigger Width, Sequencer
Electronic shutter		Timed: 14 μs to 8 sec (1 μs/step) Auto: 100 μs to 8 sec
Auto level control (ALC)		Shutter range from 100 μs to 8 sec. gain range from 0 dB to +24 dB Tracking speeds and max values adjustable
Pre-processing functions		Flat shading/color shading correction, blemish compensation (512 pixels)
Operating temperature		-5°C to +45°C
Storage temperature		-25°C to +60°C
Humidity		20 - 80% non-condensing
Vibration		10G (20 Hz to 200 Hz XYZ)
Shock		80 G
Regulations		CE (EN-61000-6-2, EN-61000-6-3), FCC Part 15 class B, RoHS/WEEE
Power		12V to 24V DC ± 10%. 3.12W typical @ 12V (12V ± 1V DC via PoCL)
Lens mount		C-mount
Dimensions (H x W x L)		29 mm x 29 mm x 41.5 mm (excl. lens mount)
Weight		46 g

Ordering Information

GO-5101M-PMCL	Monochrome camera with Mini Camera Link
GO-5101C-PMCL	Color camera with Mini Camera Link

* 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

Mini-CL Interface Interface 1

Pin	Signal	Function
1	26	Power
13	14	GND
2	15	-/+ TxOUT 0
3	16	-/+ TxOUT 1
4	17	-/+ TxOUT 2
5	18	-/+ TxClk
6	19	-/+ TxOUT 3
7	20	+/- RXD
8	21	-/+ TXD
9	22	CC1-/CC1+
10	23	CC2-/CC2-
11	24	CC3-/CC3+
12	25	CC4-/CC4-

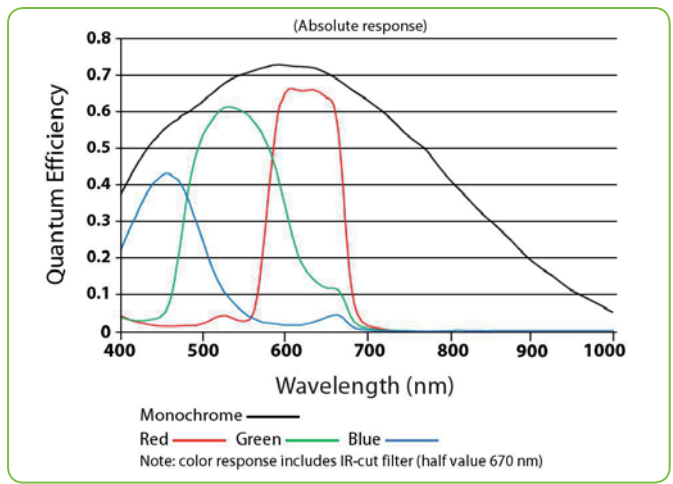
DC In / Trigger

09-3111-81-04 (Binder)

Pin	Signal
1	+12V to +24V DC Input
2	TTL In (Line 4)
3	TTL Out (Line 1)
4	GND

For Medium and Full implementations a second Mini-CL interface is provided. Video Channel 2 is on pin pairs (2,15), (3,16), (4,17), (5,18), and (6,19). Video Channel 3 is on pin pairs (8,21), (9,22), (10,23), (11,24), and (12,25). Consult manual for Specific bit depths and pin assignments.

Spectral Response



See the possibilities