

❖ **GO-5000M-PMCL**
5-megapixel CMOS global shutter



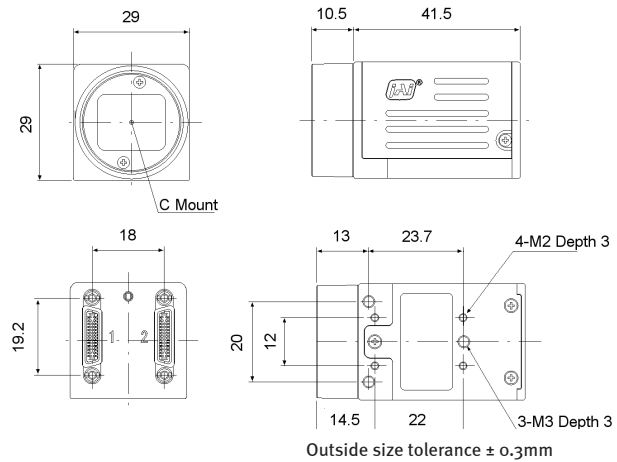
- **Large format 5 MP CMOS imager (global shutter)**
- **Up to 107 fps at full resolution**
- **5.0 μm square pixels**
- **Small size (29 x 29 x 41.5 mm, excluding lens mount)**
- **8/10/12-bit monochrome output**
- **60 dB linear dynamic range with built-in HDR modes up to 100 dB**
- **Analog and digital gain control for less quantized noise in low-light situations**
- **Exposure control from 10 μs (1/100,000) to 8 seconds in 1 μs steps**
- **2X and 4X binning for increased sensitivity**
- **Single and multi-ROI modes for flexible windowing and use of 2/3" or smaller optics**
- **Automatic Level Control (ALC) for dynamic lighting conditions**
- **Accepts power over Mini Camera Link connectors**
- **C-mount lens mount**

Specifications for GO-5000M-PMCL

Go Series

Specifications	GO-5000M-PMCL
Sensor	1" CMOS global shutter (Lince 5M)
Pixel clock	36/28.8/24 MHz
Frame rate, full frame	107 frames/sec. (8-bit, 8-tap, full CL)
Active area	12.8 mm (h) x 10.24 mm (v), 16.39 mm diagonal
Cell size	5.0 μm (h) x 5.0 μm (v)
Active pixels	2560 (h) x 2048 (v)
Read-out modes	Full ROI: 2560 (h) x 2048 (v) up to 105 fps Any start line, any height in 1 line steps, with X offset and width in 8 pixel steps
Binning	1x2, 2x1, 2x2, 2x4, 4x2, 4x4
EMVA 1288 Parameters	10-bit output format
Absolute sensitivity	20.17 p (λ = 525 nm)
Maximum SNR	41.30 dB
Traditional SNR*	>55 dB (0 dB gain, non-linear)
Video signal output	8/10/12-bit monochrome
Gain (digital)	Manual/automatic 0 dB to +24 dB
Gain (analog)	x1, x2, x4
Gamma	0.45, 0.6, 1.0 or 32-point LUT
Synchronization	Internal
Trigger input	TTL, CL, Pulse Generator, Software, NAND0, NAND1
Trigger modes	EPS, Trigger Width, Timed RCT (with ALC)
Electronic shutter	Timed exposure: 10 μs to 8 sec in 1 μs steps Auto shutter: 1/107 to 1/10,000 sec.
Auto Level Control (ALC)	Shutter range from 1/107 to 1/10,000, gain range from 0 dB to +24 dB Tracking speeds and max values adjustable.
Pre-processing functions	Flat field correction, blemish compensation (512 pixels)
High Dynamic Range mode (HDR)	4 user-selectable knee slopes – 70/80/90/100 dB
Operating temperature	-5°C to +45°C
Storage temperature	-25°C to +60°C
Humidity	20 - 80% non-condensing
Vibration	10 G (20Hz to 200Hz XYZ, 20 mins.)
Shock	80 G
Regulations	CE (EN61000-6-2, EN61000-6-3), FCC Part 15 class B, RoHS/WEEE
Power	Power over Mini-CL. 3.0W typical (full frame @ 12V)
Lens mount	C-mount
Dimensions (H x W x L)	29 mm x 29 mm x 41.5 mm (excluding lens mount)
Weight	46 g

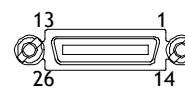
Dimensions



Connector pin-out

Mini-CL interface

Interface 1



Pin	Signal	Function
1	26	Power +12V to +24V DC in
13	14	GND Power return
2	15	-/+ TxOUT 0
3	16	-/+ TxOUT 1
4	17	-/+ TxOUT 2 CL Video Channel 1
5	18	-/+ TxClk
6	19	-/+ TxOUT 3
7	20	+/- RXD Serial in
8	21	-/+ TXD Serial out
9	22	CC1-/CC1+ Ext. trigger
10	23	CC2-/CC2- Reserved
11	24	CC3-/CC3+ Not used
12	25	CC4-/CC4- Not used

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.

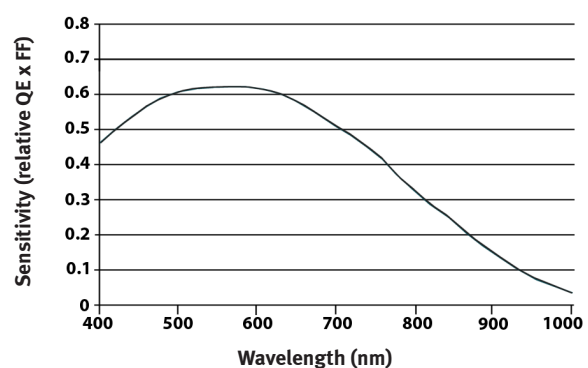
Ordering Information

GO-5000M-PMCL	Monochrome camera with Mini Camera Link
GO-5000M-PMCL-EP	Same as above, with 4-pin external power connector

Also available with:
GigE Vision (PoE) – 22 fps max. @ 8-bit
USB3 Vision – 62 fps max. @ 8-bit

*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.

Spectral Response



Europe, Middle East & Africa
Phone +45 4457 8888
Fax +45 4491 3252

Asia Pacific
Phone +81 45 440 0154
Fax +81 45 440 0166

Americas
Phone (Toll-Free) 1 800 445 5444
Phone +1 408 383 0300



Visit our web site on www.jai.com

See the possibilities