

❖ **GO-2400-PMCL**
2.35-megapixel CMOS global shutter



SMARTER IMAGING FOR BETTER LIVES

Perth: 08 9242 5411 Melbourne: 03 9384 1775
Sydney: 02 9905 5551

Email: sales@adeptturnkey.com.au
Web: www.adept.net.au



- *2.35-megapixel 1/1.2" CMOS imager (global shutter)*
- *Up to 165.5 fps at full resolution*
- *5.86 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 color models*
- *Exposure control from 15 μs to 8 seconds in 1 μs steps*
- *2X binning for increased sensitivity (monochrome only)*
- *Single and multi-ROI modes 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*

Specifications for GO-2400-PMCL

Go Series

Specifications	GO-2400-PMCL
Sensor	1/1.2" CMOS Global Shutter (IMX174)
System clock	74.25 MHz (for pulse generator)
Frame rate (Full frame)	165.5 frames/sec (8-bit, continuous)
Active area	11.3 mm (h) x 7.13 mm (v) – 13.4mm (diagonal)
Cell size	5.86 μm (h) x 5.86 μm (v)
Active pixels	1936 (h) x 1216 (v)
Read-out modes	Full ROI: 1936 (h) x 1216 (v) up to 165.5 fps 2 lines to 1216 lines (1 or 2 line steps), 96 to 1936 pixels wide (16 pixel steps)
Binning	1x2, 2x2, 2x1 (monochrome only)
EMVA 1288 Parameters	10-bit output format
Absolute sensitivity (mono)	6.82 p (λ = 525 nm)
Absolute sensitivity (color)	6.94 p (λ = 525 nm)
Maximum SNR (mono)	45.29 dB
Maximum SNR (color)	45.15 dB
Traditional SNR*	mono: > 60dB @10-bit (0 dB gain, non-linear) color: > 60dB @10-bit (0 dB gain, green, non-linear)
Video signal output	mono: 8/10-bit monochrome color: 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-2400C)	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, Single ROI, Multi ROI, Sequence (Trigger & Command)
Trigger input	TTL, Camera Link (CC1), NAND (2), Pulse Generator, Software
Trigger modes	Timed (EPS), Trigger Width, Sequence
Electronic shutter	Timed: 15 μs to 8 sec (1 μs/step) Auto: 1/165 to 1/10000
Auto level control (ALC)	Shutter range from 1/165 to 1/10000, gain range from 0 dB to +24 dB Tracking speeds and max values adjustable
Pre-processing functions	Shading correction, blemish comp. (256 pixels)
Lens control	P-Iris, video iris (optional configuration†)
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%. 2.76W typical @ 12V (via PoCL or 4-pin connector)
Lens mount	C-mount
Dimensions (H x W x L)	29 mm x 29 mm x 41.5 mm (excl. lens mount)
Weight	46g

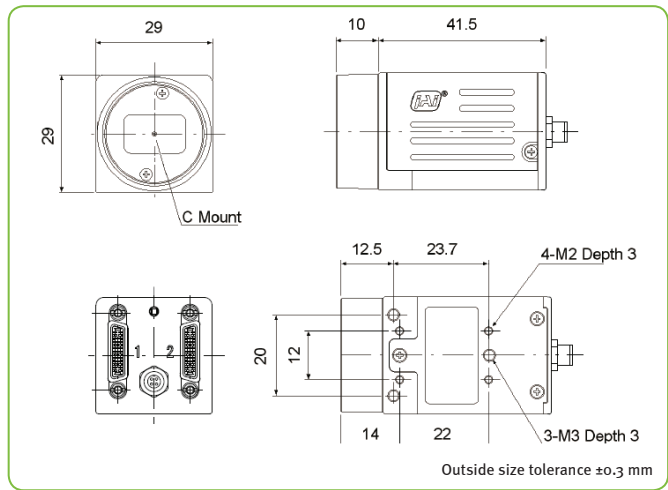
Ordering Information

GO-2400M-PMCL	Monochrome camera with Mini Camera Link
GO-2400C-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.

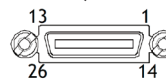
† Uses 4-pin connector for P-iris control. 4-pin cannot be used for power or TTL in/out in this configuration. Use ordering number GO-2400M-PMCL-AUX1 (monochrome only).

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
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.

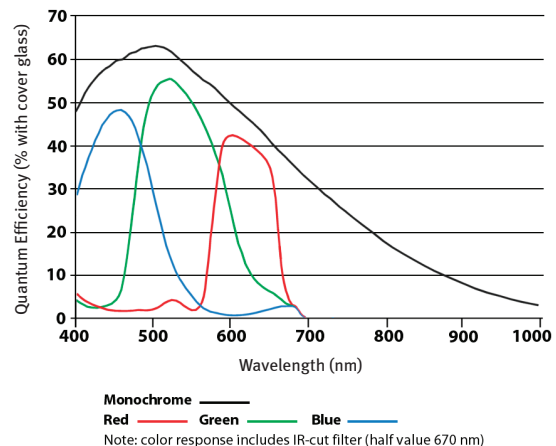
DC In / Trigger



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

Spectral Response



Company and product names mentioned in this datasheet are trademarks or registered trademarks of their respective owners. JAI AS cannot be held responsible for any technical or typographical errors and reserves the right to make changes to products and documentation without prior notification.

