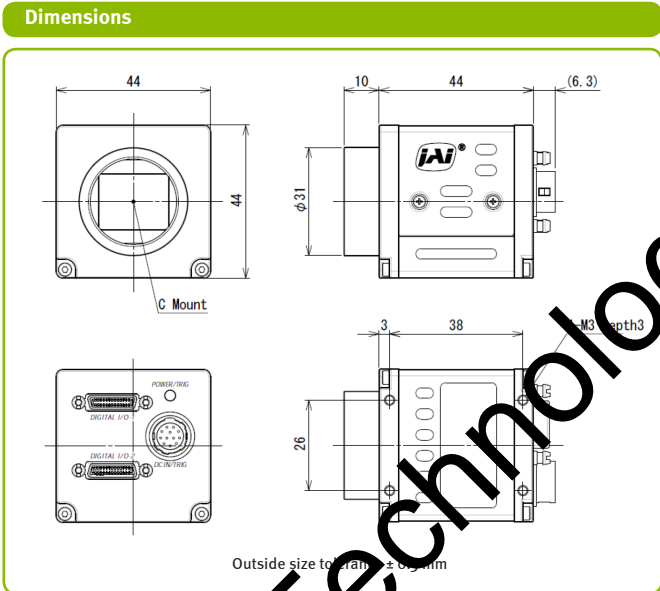


Specifications for SP-12400-PMCL

Spark Series

Specifications	SP-12400-PMCL
Sensor	1.1" CMOS global shutter (IMX253)
Active pixels	4112 x 3008 or 4080 x 3008, depending on tap geometry
Frame rate, full frame	64.6 frames/sec. @ 8-bit (1x10_1Y)
Active area	14.2 mm (h) x 10.4 mm (v) - 17.6 mm diagonal
Pixel size	3.45 μm x 3.45 μm
Camera Link clock	37.1 / 74.3 / 84.9 MHz
System clock	74.25 MHz (for pulse generator)
Read-out modes	Full ROI (single) 4112 (h) x 3008 (v) up to 64.6 fps H: 96 to 4112 pixels in 16 pixel steps V: 8 to 3008 lines in 4 line steps ROI (multi) Binning Up to 64 areas can be defined (non-overlapping). 1X2, 2X1, 2X2
EMVA 1288 Parameters	10-bit output format
Absolute sensitivity	Mono: 3.50 p Color: 4.00 p (λ = 525 nm)
Maximum SNR	Mono: 40.03 dB Color: 40.10 dB
Traditional SNR*	>60 dB (0 dB gain, 10-bit)
Video signal output	Monochrome: 8/10/12-bits† Color: 8/10/12-bit Bayer†
Video modes	Normal/ROI, Multi ROI, Sequencer (2)
Gain	Manual/auto 0 dB to +24 dB
White balance	Off, 4 presets (3200K, 5000K, 6500K, 7500K), or one-push/continuous AWB (3000K to 9000K)
Gamma/LUT	0.45 to 1.0 (9 steps) or 257-point programmable LUT
Shading correction	Flat shading, color shading
Trigger input	TTL, Camera Link (CC1), Opto In (2), Pulse Generators (4), Software, NAND Out (2), User Output (4)
Exposure modes	Timed/EPS, RCT, Trigger Width, Auto
Electronic shutter	Timed: 15.26 μs to 8 s Trigger width: 15.26 μs to ∞ s
Auto Level Control (ALC)	Shutter range from 100 μs to 1/frame rate, gain range from 0 dB to +24 dB Tracking speeds and max. value adjustable.
Pre-processing functions	Edge enhancer, blemish compensation (100 pixels)
Operating temp. (ambient)	-5°C to +45°C (20 to 80% non-condensing)
Storage temp. (ambient)	-25°C to +60°C (20 to 80% non-condensing)
Vibration	10G (20 Hz to 2000 Hz, XYZ directions)
Shock	80G
Regulations	CE, EN61000-6-2, EN61000-6-3 UL Part 15 Class B, RoHS/WEEE
Power	12-pin PoE: +12V to +24V DC ± 10%, 5.1 W typical @ +12 V PoCL: +10V to +13 V DC, 5.2 W typical @ +12 V
Lens mount	C-mount
Dimensions (H x W x D)	44 mm x 44 mm x 44 mm (excl. connectors)
Weight	135 g

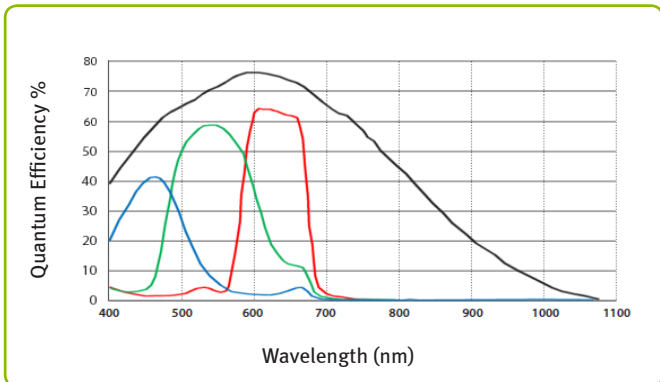


Connector pin-out

DC In / Trigger		Min-CL Interface	
<p>ROSE HR10A-10R-12PB(71)</p>			
Pin	Signal	Pin	Signal
1	Ground	13	X0-/X0+
2	DC in +12V to +24V	14	X1-/X1+
3	Opto In 2-		X2-/X2+
4	Opto In 2+		X3-/X3+
5	Opto In 1-		Xclk-/Xclk+
6	Opto In 1+		X3-/X3+
7	Opto Out 1-		SerTC-/SerTC-
8	Opto Out 1+		SerTFG-/SerTFG+
9	TTL out 1		CC1-/CC1+
10			CC2-/CC2+
11	DC in +12V to +24 V		CC3-/CC3+
12	Ground		CC4-/CC4+
			GND

*Via Camera Link or 12-pin/10-pin connectors
Note: Camera Link Base configuration shown. For other configurations, refer to Camera Link specifications or operation manual.

Spectral response



Ordering Information

SP-12400M-PMCL	Monochrome camera with Camera Link
SP-12400C-PMCL	Color camera with 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.

†12-bit output available in video processing bypass mode. See manual for details.

Europe, Middle East & Africa Phone +45 4457 8888 Fax +45 4491 8880	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 website on www.jai.com

See the possibilities



Company and product names mentioned in this datasheet are trademarks or registered trademarks of their respective owners. JAI A-S cannot be held responsible for any technical or typographical errors and reserves the right to make changes to products and documentation without prior notice. October 12, 2018