

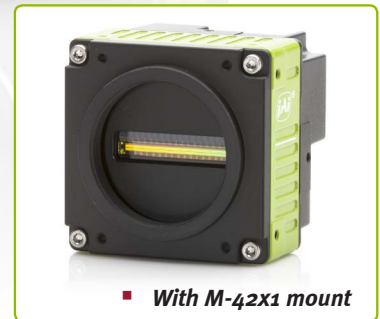
❖ SW-4000M-PMCL

❖ SW-8000M-PMCL

CMOS Monochrome Line Scan Cameras

- 4096 pixels
- 199.5 kHz
- 8192 pixels
- 99.9 kHz

Sweep Series



- **Monochrome CMOS Line Scan Camera**
- **Resolution:** 4096 pixels in a line (SW-4000M-PMCL)
8192 pixels in a line (SW-8000M-PMCL)
- **Scan rate:** 200,000 lines per second - 199.5 kHz (SW-4000M-PMCL)
100,000 lines per second - 99.9 kHz (SW-8000M-PMCL)
- **Sensor scanning width:** 30.72 mm
- **Video signal output:** 8-bit or 10-bit via Mini Camera Link
- **Interface:** Power over Mini Camera Link
- **JAI SDK and GenICam compliant**
- **F-mount and M-42x1 mount**

Specifications for Sweep SW-4000M-PMCL and SW-8000M-PMCL

Specifications

Scanning system	CMOS line scan sensor		
Sensors type	JAI custom made sensor (APS-C)		
Sensor resolution (effective pixels)	SW-4000M: 4096 pixels horizontal SW-8000M: 8192 pixels horizontal		
Scan rate (max)	SW-4000M: 199.5 kHz (Full Camera Link 8-bit config.) SW-8000M: 99.9 kHz (Full Camera Link 8-bit config.)		
Sensor scanning width	SW-4000M: 30.72 mm (Mode-A, Small well) 30.72 mm (Mode-B, Large well) SW-8000M: 30.72 mm		
Cell size	SW-4000M: 7.5 μm (H) x 7.5 μm (V) (Mode-A, Small well) 7.5 μm (H) x 10.5 μm (V) (Mode-B, Large well) SW-8000M: 3.75 μm (H) x 5.78 μm (V)		
Responsivity	SW-4000M: 58 DN/(n)/cm ² (Mode-A, Small well) (@10bits, gain= 1x, λ = 650nm) 53 DN/(n)/cm ² (Mode-B, Large well) (@10bits, gain= 1x, λ = 650nm) SW-8000M: 23 DN/(n)/cm ² (@10bits, gain= 1x, λ = 650nm)		
S/N ratio	60 dB @10bit (Typical)		
Pixel clock	31.875 to 85MHz adjustable		
Video signal output	8-bit or 10-bit via Mini Camera Link connector		
Inputs/Outputs	GPIO in/out via 12-pin connector		
Trigger mode	Line start		
Exposure mode (Exposure time)	Off: Line period minus 3.6 μs (SW-4000M) Line period minus 3.8 μs (SW-8000M) Timed: 1.8 μs to 15.148 ms Trigger Width: 3 μs ~		
Shading correction	Flat shading		
Gain	Manual/Auto (Digital All: odB ~ +24dB (x1~x16) 1-Step = x0.01)		
Gamma	9 Step 1.0 ~ 0.45		
LUT	256 point		
Interface	Power over Mini Camera Link NB: Running Power over Camera Link requires 2 cables		
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 direction)		
Shock	80G		
Regulations	CE (EN 61000-6-2, EN 61000-6-3), FCC part 15 class B		
Power and power consumption	PoCL or 12pin (12V to 24V DC ± 10%). 435 mA/ 5.22W typical (full frame @ 12V) NB: Running Power over Camera Link requires 2 lines		
Lens mount	Mount type:	F-Mount Bayonet	M-42X1 mount Metric screw thread
	Diameter:	44 mm	42 mm
	Flange Back Distance:	46.5 mm	16 mm
Dimensions (H x W x L)	62 x 62 x 84 mm (F-mount, excluding connectors) 62 x 62 x 53.5 (M42-mount, excluding connectors)		
Weight	320 g		

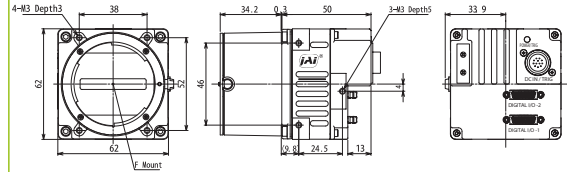
Ordering Information

SW-4000M-PMCL-F	CMOS Monochrome Line Scan Camera with F-mount (4096 pixels)
SW-4000M-PMCL-M42A	CMOS Monochrome Line Scan Camera with M42-mount* (4096 pixels)
SW-8000M-PMCL-F	CMOS Monochrome Line Scan Camera with F-mount (8192 pixels)
SW-8000M-PMCL-M42A	CMOS Monochrome Line Scan Camera with M42-mount* (8192 pixels)

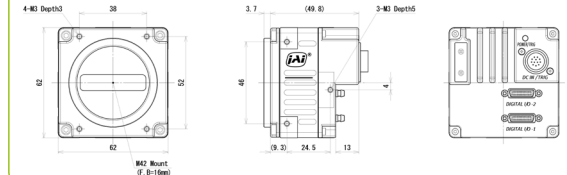
*Note: M42-mount is M42x1 with 16 mm flange back

Dimensions

F-mount

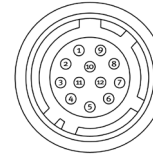


M-42x1 mount



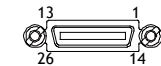
Connector pin-out

DC In / Trigger



12-pin connector

Mini-CL interface

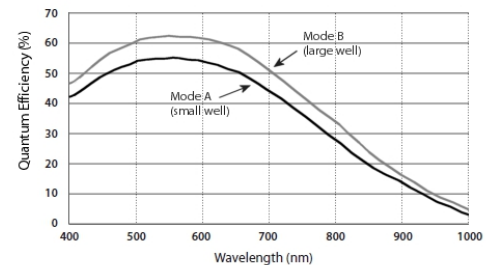


Pin no.	Attribute	Signal	Remarks
1		GND	
2	Power In	DC In	DC 12V I _c 24V+/- 10%
3		GND	
4		RESERVED	
5		GND	
6	I	RxD in	
7	O	TxD out	
8		GND	
9	O	TTL Outs	
10	I	TTL Ins	
11	Power In	DC In	DC 12V I _c 24V+/- 10%
12		GND	

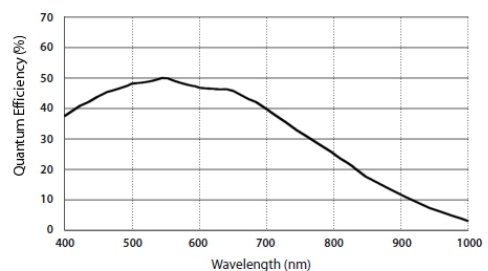
Pin no.	In/Out	Name	Note
1,26	Power	Power	DC In
2(-),15(+)	O	TxOUT ₀	Data output
3(-),16(+)	O	TxOUT ₁	
4(-),17(+)	O	TxOUT ₂	
5(-),18(+)	O	TxCLK	CL Clock
6(-),19(+)	O	TxOUT ₃	Data output
7(+),20(+)	I	SerTC (RxD)	LVD5 serial control (CC1 only)
8(-),21(+)	O	SerTfG (TxD)	Trigger input (CC1 only)
9(-),22(+)	I	CC1 (Trigger)	Trigger input (CC1 only)
10(-),23(+)	I	CC1 (Reserved)	(CC1 only)
11,24		NC	
12,25		NC	
13,14		Shield	GND

Spectral Response

SW-4000M-PMCL



SW-8000M-PMCL



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