

## ❖ SW-4000M-PMCL

## ❖ SW-8000M-PMCL

CMOS Monochrome Line Scan Cameras

- 4096 pixels
- 8192 pixels
- 200 kHz
- 100 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 - 200 kHz (SW-4000M-PMCL)  
100,000 lines per second - 100 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

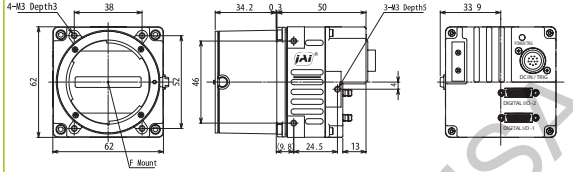
Specifications			
Scanning system	CMOS line scan sensor		
Sensors type	JAI custom made sensor (APS-C)		
Sensor resolution (effective pixels)	<b>SW-4000M:</b> 4096 pixels horizontal <b>SW-8000M:</b> 8192 pixels horizontal		
Scan rate (max)	<b>SW-4000M:</b> 200 kHz (Full Camera Link 8-bit config.) <b>SW-8000M:</b> 100 kHz (Full Camera Link 8-bit config.)		
Sensor scanning width	<b>SW-4000M:</b> 30.72 mm (Mode-A, Small well) 30.72 mm (Mode-B, Large well) <b>SW-8000M:</b> 30.72 mm		
Cell size	<b>SW-4000M:</b> 7.5 um (H) x 7.5 um (V) (Mode-A, Small well) 7.5 um (H) x 10.5 um (V) (Mode-B, Large well) <b>SW-8000M:</b> 3.75 um (H) x 5.78 um (V)		
Responsivity	<b>SW-4000M:</b> 58 DN/(n)/cm <sup>2</sup> (Mode-A, Small well) (@10bits, gain= 1x, λ = 650nm)  53 DN/(n)/cm <sup>2</sup> (Mode-B, Large well) (@10bits, gain= 1x, λ = 650nm) <b>SW-8000M:</b> 23 DN/(n)/cm <sup>2</sup> (@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 ~3.08μs Timed: 4μs to 15.148ms Trigger Width: 4μs~		
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		
Auto Level Control (ALC)	Exposure time (Exposure auto): 4μs~15 Digital All (Gain auto): odB ~ +24dB(x1~x16) 1STEP = x0.01		
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 max. (full frame @ 12V) NB: Running Power over Camera Link requires 2 lines		
Lens mounts	Mount type:	<b>F-Mount</b> Bayonet	<b>M-42x1 mount</b> 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 53 mm (w/o projection part)		
Weight	320 g		

## Ordering Information

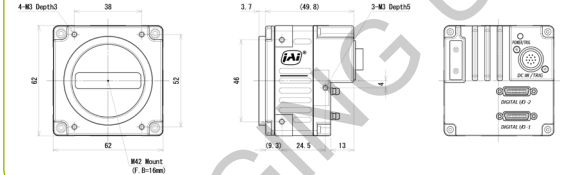
**SW-4000M-PMCL** CMOS Monochrome Line Scan Camera (4096 pixels)  
**SW-8000M-PMCL** CMOS Monochrome Line Scan Camera (8192 pixels)

## Dimensions

### F-mount

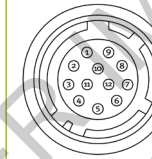


### M-42x1 mount



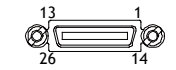
## Connector pin-out

### DC In / Trigger



12-pin connector

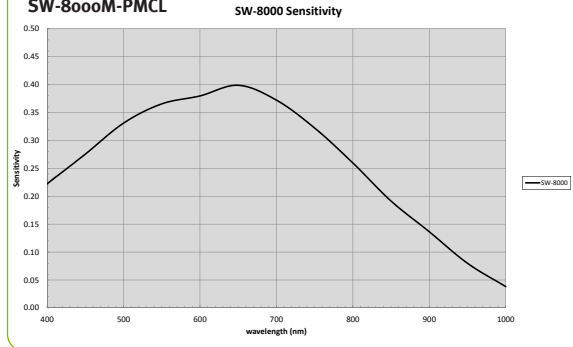
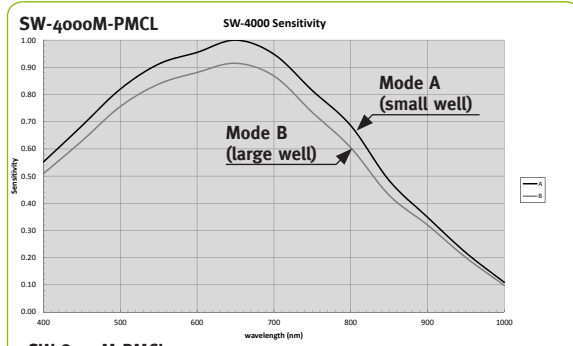
Mini-CL interface



Pin no.	Attribute	Signal	Remarks
1		GND	
2	Power In	DC(+12V) in	DC12V±4 V±10%
3		GND	
4		RESERVED	
5		GND	
6	I	RxD in	
7	O	TxD out	
8		GND	
9	O	TTL Out	
10	I	TTL In	
11	POo	DC(+12V) in	DC12V±4 V±10%
12		GND	

Pin no.	In/Out	Name	Note
1,4		Power	DC in
2(-),15(+)	O	TxDOUTo	Data output
3(-),16(+)	O	TxDOUT1	
4(-),17(+)	O	TxDOUT2	
5(-),18(+)	O	TxDOUT3	CL Clock
6(-),19(+)	O	TxDOUT3	Data output
7(+),20(-)	I	SerTC (RxD)	LVDS serial control (CC1 only)
8(-),21(+)	O	SerTIG (TxD)	LVDS serial control (CC1 only)
9(-),22(+)	I	CCs (Trigger)	Trigger input (CC1 only)
10(+),23(-)	I	CCs (Reserved)	(CC1 only)
11,24		NC	
12,25		NC	
13,26		Shield	GND

## Spectral Response



Spectral response without lens

**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



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