

MV-D1024E-3D01-160-CL

The CMOS camera MV-D1024E-3D01-160-CL was developed for laser triangulation of highly reflective materials

Features

- Detection of a laser line with sub-pixel accuracy
- Photonfocus A1024B CMOS image sensor
- 1024 x 1024 pixel resolution
- Exceptional SNR up to 447: 1
- Dynamic range up to 120dB via LinLog®
- Up to 3100fps @ 24x1024 pixels

- Global shutter
- Monochrome
- Extended sensor and camera features
- Reduction of ROI in x- and y-direction increases frame rate
- CameraLink® interface
- Free GUI available (PF 3D Suite)









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Quantum Efficiency Image Sensor

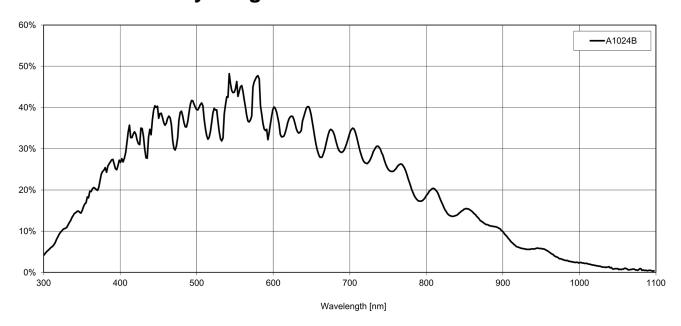


Image Sensor Specifications

Manufacturer / Type	Photonfocus / A10	024
Technology	CMOS	
Optical format	1"	
Optical diagonal	15.42mm	
Resolution	1024 x 1024	
Pixel size	10.6µm x 10.6µm	
Active optical area	10.9mm x 10.9mn	n
Dark current	107'000e ⁻ /s	
Read out noise	220e ⁻	
Full well capacity / SNR	200ke ⁻ / 447: 1	
Spectral range	Monochrome:	< 400 to 900nm (to 10% of peak responsivity)
Responsivity	Monochrome:	120 x 10 ³ DN / (J/m ²) @ 610nm / 8bit
Quantum Efficiency	Monochrome:	> 45%
Optical fill factor	35%	
Dynamic range	60dB in linear mode; 120dB with LinLog®	
Characteristic curve	Linear, LinLog®, Skimming	
Shutter mode	Global shutter	

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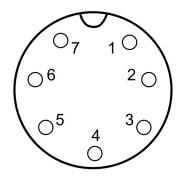
Camera Specifications

Frame rate 3100fps Pixel clock 80MHz Camera taps 2 Greyscale resolution 8Bit / 10Bit / 12Bit Fixed pattern noise (FPN) < 1DN RMS @ 8bit Exposure time range 10µs - 419ms Analog gain n/a Digital gain 0.1 to 15.99 (FineGain) Trigger Modes Free running (non triggered), external Trigger, SWTrigger Features Detection of a laser line (peak detector) with sub-pixel accuracy, Configurable region of interest (ROI), Dynamic range up to 120dB via LinLog®, Image correction, Constant frame rate independent of exposure time, Ultra low trigger delay and low trigger jitter, Extended trigger input and strobe output functionality, Camera informations readable over SDK, Free GUI available (PF 3D Suite) for an easy system set up and visualisation of 3D scans Operation temperature / moisture 0°C + 50°C / 20% 80% Storage temperature / moisture -25°C 60°C / 20% 95% Power supply +12VDC (-10%) +12VDC (+10%) Power consumption <3.2W Lens mount C-Mount (CS-Mount optional) I/O Outputs 1x Opto-isolated I/O Outputs 1x Opto-isolated Dimensions 55 x 55 x 40mm³ Mass 210g Connector I/O (Power) Binder 7-pole (mating plug 99-0421-00-07) Connector Interface CameraLink Base (MDR) Conformity CE / RoHS / WEEE	Interface	Camera Link
Camera taps 2 Greyscale resolution 8Bit / 10Bit / 12Bit Fixed pattern noise (FPN) < 1DN RMS @ 8bit Exposure time range 10µs - 419ms Analog gain n/a Digital gain 0.1 to 15.99 (FineGain) Trigger Modes Free running (non triggered), external Trigger, SWTrigger Features Detection of a laser line (peak detector) with sub-pixel accuracy, Configurable region of interest (ROI), Dynamic range up to 120dB via LinLog®, Image correction, Constant frame rate independent of exposure time, Ultra low trigger delay and low trigger jitter, Extended trigger input and strobe output functionality, Camera informations readable over SDK, Free GUI available (PF 3D Suite) for an easy system set up and visualisation of 3D scans Operation temperature / moisture 0°C + 50°C / 20% 80% Storage temperature / moisture -25°C 60°C / 20% 95% Power supply +12VDC (-10%) +12VDC (+10%) Power consumption < 3.2W Lens mount C-Mount (CS-Mount optional) I/O Inputs 1x Opto-isolated I/O Outputs 1x Opto-isolated I/O Outputs 1x Opto-isolated Dimensions 55 x 55 x 40mm³ Mass 210g Connector I/O (Power) Binder 7-pole (mating plug 99-0421-00-07) Connector Interface CameraLink Base (MDR) Cef / RoHS / WEEE	Frame rate	3100fps
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Digital gain O.1 to 15.99 (FineGain) Trigger Modes Free running (non triggered), external Trigger, SWTrigger Detection of a laser line (peak detector) with sub-pixel accuracy, Configurable region of interest (ROI), Dynamic range up to 120dB via LinLog®, Image correction, Constant frame rate independent of exposure time, Ultra low trigger delay and low trigger jitter, Extended trigger input and strobe output functionality, Camera informations readable over SDK, Free GUI available (PF 3D Suite) for an easy system set up and visualisation of 3D scans Operation temperature / moisture O°C + 50°C / 20% 80% Storage temperature / moisture -25°C 60°C / 20% 95% Power supply +12VDC (-10%) +12VDC (+10%)	Exposure time range	10μs - 419ms
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Power supply +12VDC (-10%) +12VDC (+10%) Power consumption < 3.2W Lens mount C-Mount (CS-Mount optional) I/O Inputs 1x Opto-isolated I/O Outputs 1x Opto-isolated Dimensions 55 x 55 x 40mm³ Mass 210g Connector I/O (Power) Binder 7-pole (mating plug 99-0421-00-07) Connector Interface CameraLink Base (MDR) Conformity CE / RoHS / WEEE	Operation temperature / moisture	0°C + 50°C / 20% 80%
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Connector Interface CameraLink Base (MDR) Conformity CE / RoHS / WEEE	Mass	210g
Conformity CE / RoHS / WEEE	Connector I/O (Power)	Binder 7-pole (mating plug 99-0421-00-07)
· ·	Connector Interface	CameraLink Base (MDR)
IP Code IP20	Conformity	CE / RoHS / WEEE
	IP Code	IP20

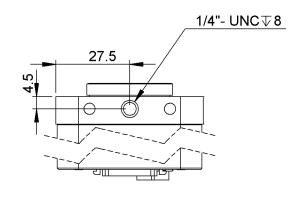
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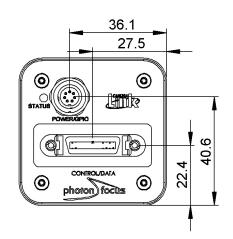
Connectors

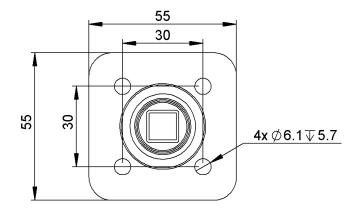
Pin	I/O Type	Name	Description
1	PWR	CAMERA_PWR	Camera Power 12VDC
2	PWR	CAMERA_GND	Camera GND 0V
3	0	RESERVED	Do not connect
4	PWR	STROBE-VDD	+5 +15 VDC
5	0	STROBE	Strobe control (opto-isolated)
6	1	TRIGGER	External trigger (opto-isolated), +5 +15VDC
7	PWR	GROUND	Signal ground (for opto-isolated strobe signal)

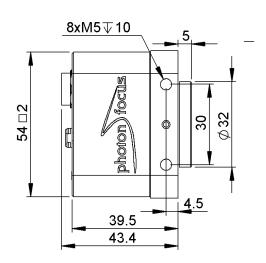


Dimensions









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MV-D1024E-3D01-160-CL

Explanation

DN	DigitalNumber (equals to LSB)
e ⁻	Electrons

Order Information

MV-D1024E-3D01-160-CL-12 CameraLink Model

Compatibility









Photonfocus AG

Bahnhofplatz 10 CH-8853 Lachen SZ Switzerland

Phone: +41 55 451 00 00 www.photonfocus.com info@photonfocus.com

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