

CMOS Cameras

MV-D1024E SERIES

High-Dynamic CMOS Cameras

Features

- 1024 x 1024 pixel resolution
- Global shutter
- LinLog[®] functionality
- Dynamic range up to 120 dB
- Up to 150 fps @ full resolution
- Multiple Regions of Interest (MROI)
- CameraLink[®] and USB 2.0 interfaces
- 12 bit greyscale
- Superior Signal-to-Noise Ratio (SNR)
- Look-up table (LUT)
- CE, UL, RoHS & WEEE compliant



Application Examples

Machine vision

- Standard vision applications
- Quality control
- PCB inspection
- Welding & soldering
- Laser triangulation
- Packaging inspection
- Keyhole analysis

Motion analysis

- Slow-motion sequences
- Biomedical applications

Accessories

- Suitable power supply 12 Volt
- Power & signal connector 7 pin, (included in the shipment)
- USB & CL cables
- A Selection of suitable lenses is available on our website www.photonfocus.com. Lenses are not included.

THE PERFECT EYE

	MV-D1024E-40	MV-D1024E-80	MV-D1024E-160
--	--------------	--------------	---------------

Image Sensor

Technology	CMOS active pixel		
Scanning system	Progressive scan		
Optical format / diagonal	1" / 15.42 mm		
Resolution	1024 x 1024 pixels		
Pixel size	10.6 x 10.6 μm^2		
Active optical area	10.9 x 10.9 mm ²		
Random noise	< 0.5 DN RMS @ 8 bit / gain = 1		
Fixed pattern noise (FPN)	< 1.0 DN RMS @ 8 bit / gain = 1 / offset correction on		
Dark current	2 fA/pixel @ 30 °C		
Full well capacity	200 ke ⁻		
Spectral range	400 nm ... 900 nm		
Responsivity	120 x 10 ³ DN / (J/m ²) @ 610 nm / 8 bit / gain = 1 (approximately 350 DN / (lux s) @ 610 nm / 8 bit / gain = 1)		
Optical fill factor	35%		
Dynamic range	Up to 120 dB with LinLog®		
Colour format	Monochrome		
Characteristic curve	Linear, LinLog®, Skimming		
Shutter mode	Global shutter		
Readout mode	Sequential readout	Sequential or simultaneous readout	

Camera

Exposure time	10 μs ... 0.41 s / 25 ns steps	10 μs ... 0.83 s / 50 ns steps	10 μs ... 0.41 s / 25 ns steps
Frame rate CL	37 fps	75 fps	150 fps
Frame rate USB2.0	Up to 37 fps (mode & bitdepth dependent)	-	-
Pixel clock	40 MHz	40 MHz	80 MHz
Camera taps	1	2	2
Greyscale resolution	12 bit / 10 bit / 8 bit		
Analogue gain	1		
Digital gain	1 or 2 or 4		
Configuration interface	CL SERIAL (9600 baud)	9600 baud or 57600 baud, user selectable	
Trigger modes	<ul style="list-style-type: none"> Free running (non triggered) Interface trigger I/O trigger 		
Features	<ul style="list-style-type: none"> (Multiple) Regions of interest (ROI/MROI) On camera shading correction Look-up table Image information Enhanced trigger features Skimming LinLog® Trigger input Strobe output 		
Decimation	x / y direction	y direction	
Interfaces	CameraLink® base or USB 2.0 configuration	CameraLink® base configuration	
Operating temperature	0 °C ... + 60 °C		
Power supply	+ 12 V DC +/- 10%		
Power consumption	1.6 W (CL) / 3.0 W (USB 2.0)	3.2 W	
Lens mount	C-Mount (CS-Mount optional)		
Dimensions (C-Mount)	55 x 55 x 39 mm 55 X 55 X 44 MM (usb 2.0)	55 x 55 x 40 mm	
Mass	200 g	210 g	
Conformity	CE / UL / RoHS / WEEE		
Special	Adjustable backfocus		

Software

Camera control	PFRremote™ graphical user interface (GUI) and PFLib (SDK); for USB 2.0: MicroDisplay GUI + SDK
----------------	--

For more information about our worldwide distributors please visit our website.
 Photonfocus cannot be held responsible for any technical or typographical errors.