Megapixel Cameras

MV-D1024 SERIES

High-Dynamic Megapixel 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® interface
– 10 or 8 bit greyscale
– Superior Signal-to-Noise Ratio (SNR)
– Look-up Table (LUT)
– CE, RoHS & WEEE compliant

Application Examples

Machine vision

– Standard vision applications
– Quality control
– PCB inspection
– Welding & soldering
– Laser triangulation
– Stereo vision systems
– Keyhole analysis

Motion analysis

– Slow-motion sequences
– Biomedical applicationsn

Accessories

– Suitable power supply 5 Volt
– Power & signal connector 3 pin
  (included in the shipment)
– CL cables
– A selection of suitable lenses is available
  on our website www.photonfocus.com.
  Lenses are not included.

	MV-D1024-28-CL-10	MV-D1024-80-CL-8	MV-D1024-160-CL-8

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 µm x 10.6 µm
Active optical area	10.9 mm x 10.9 mm
Random noise	< 0.5 DN RMS @ 8 bit / gain = 1
Fixed pattern noise (FPN)	< 2.5 DN RMS @ 8 bit / gain = 1
Dark current	2 fA/pixel @ 30 °C
Full well capacity	200 ke$^-$
Spectral range	400 nm ... 900 nm
Responsivity	120 x 10³ DN / (J/m²) @ 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
Read out mode	Sequential read out

Camera

	MV-D1024-28-CL-10	MV-D1024-80-CL-8	MV-D1024-160-CL-8
Exposure time	10 µs ... 0.5 s / 35 ns steps	10 µs ... 0.5 s / 50 ns steps	10 µs ... 0.5 s / 25 ns steps
Frame rate	27 fps	75 fps	150 fps
Pixel clock	28 MHz	40 MHz	80 MHz
Camera taps	1	2	
Greyscale resolution	10 bit / 8 bit	8 bit	
Analogue gain	1 or 4		
Configuration interface	CL SERIAL (9600 baud)		
Trigger modes	• Free running (non triggered) • External trigger • Start/stop trigger • Combined trigger		
Features	• Region of Interest (ROI) • Multiple Regions of Interest (MROI) • LinLog® • Line hopping • Skimming • External clock available		
	• Look-up Table (LUT)	–	
Interface	CameraLink® base configuration		
Operating temperature	0 °C ... +60 °C		
Power supply	+5 V DC (+10 % / -5 %)		
Power consumption	2.0 W		
Lens mount	C-Mount		
Dimensions	55 x 55 x 46 mm³		
Mass	200 g		
Conformity	CE / RoHS / WEEE		
Special	Microbench compatible mountings		

Software

Camera control	PFRemote™ graphical user interface (GUI) and PFLib (SDK)