

MV-D750E SERIES

Small and Smart

Features

- 750 x 400 pixel resolution
- Global shutter
- Dynamic range up to 120 dB via LinLog®
- Up to 60 fps @ full resolution
- Region of Interest (ROI)
- CameraLink® and USB 2.0 interfaces
- 10 bit greyscale
- Superior Signal-to-Noise Ratio (SNR)
- CE, RoHS & WEEE compliant



Application Examples

Machine vision

- Standard vision applications
- Quality control
- Welding & soldering
- Laser triangulation
- Pick and place applications
- Line scan applications
- Process control

Accessories

- Power & signal connector 7 pin, 3 pin (included in the shipment)
- Digipeater CameraLink® repeater enables extended cable lengths (CameraLink® cameras only).
- See section Accessories in this booklet for further details. Lenses are not included.

MV-D750E-20-CL-10

MV-D750E-20-U2-8

Image Sensor

Image sensor	Photonfocus D750 (2. generation)	
Technology	CMOS active pixel	
Scanning system	Progressive scan	
Optical format / diagonal	3/4" / 9.0 mm	
Resolution	750 x 400 pixel (active 748 x 400)	
Pixel size	10.6 µm x 10.6 µm	
Active optical area	7.95 mm x 4.3 mm	
Colour format	Monochrome	
Shutter mode	Global shutter	
Dynamic range	Up to 120 dB (with LinLog®)	
Responsivity	480 x 10 ³ DN / (J/m ²) @ 610 nm / 10 bit / gain= 1 (approx.1400 DN / (lux s) @ 610 nm / 10 bit / gain= 1)	120 x 10 ³ DN / (J/m ²) @ 610 nm / 8 bit / gain= 1 (approx.350 DN / (lux s) @ 610 nm / 8 bit / gain= 1)
Characteristic curve	Linear, LinLog®, Skimming	
Random noise	< 1.5 DN RMS @ 10 bit / gain = 1	< 0.5 DN RMS @ 8 bit / gain = 1
Fixed pattern noise (FPN)	< 15 DN RMS @ 10 bit / gain = 1	< 4 DN RMS @ 8 bit / gain = 1
Dark current	2 fA/pixel @ 30 °C	
Optical fill factor	35 %	
Full well capacity	200 ke ⁻	
Greyscale resolution	10 bit	8 bit
Min. Region of Interest (ROI)	6 x 1 pixel	W x H ≥ 1024 pixel
Spectral range	380 nm ... 950 nm	
Read out mode	Sequential read out	

Camera

Exposure time	10 µs ... 500 µs / 10 µs steps (linear response curve), 500 µs ... 52 ms / 500 µs steps (all modes)	
Frame rate	60 fps	
Pixel clock	20 MHz	
Camera taps	1	
Programmable gain	1 ... 8	
Configuration interface	CL SERIAL (9600 baud)	
Trigger modes	• Free running (non triggered) • Level controlled • Software controlled	
Features	• Region of Interest (ROI) • Skimming • LinLog®	
Interfaces	CameraLink® base configuration	USB 2.0
Operating temperature	0 °C ... +60 °C	
Power supply	+12 V DC (+/- 10%)	
Power consumption	0.8 W	2.2 W
Lens mount	C-Mount (CS-Mount optional)	
Dimensions (CS-Mount)	55 x 55 x 24 mm ³	55 x 55 x 48 mm ³
Mass	150 g	200 g
Conformity	CE / RoHS / WEEE	
Special	Adjustable backfocus	

Software

Camera control	PFRremote™ graphical user interface (GUI) and PFLib (SDK); for USB 2.0: MicroDisplay GUI + SDK
OS	win2k; winxp; winvista; other OS (Linux, QNX, etc.) on request