

MV2-D1280-640

Build for demanding applications in industrial image processing

Features

- 1280 x 1024 pixel resolution
- Global shutter
- Dynamic range up to 60 dB
- Up to 490 fps @ full resolution
- Faster frame rates with Multiple Regions of Interest (MROI)
- CameraLink® interface with full configuration
- 8 bit greyscale
- Superior Signal-to-Noise Ratio (SNR)
- 10 to 8 bit Look-up Table (LUT)
- y decimation for faster frame rates
- On-camera shading correction
- CE, RoHS & WEEE compliant

Application Examples

Machine vision

- Standard vision applications
- PCB inspection
- Laser triangulation

Motion analysis

- High-speed object tracking
- Slow-motion sequences
- Biomedical application



Accessories

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

MV2-D1280-640-CL-8

Image Sensor

Image sensor	MT9M413
Technology	CMOS active pixel (APS)
Scanning system	Progressive scan
Optical format / diagonal	1.3" / 19.67 mm
Resolution	1280 x 1024 pixels
Pixel size	12.0 µm x 12.0 µm
Active optical area	15.36 mm x 12.29 mm
Random noise	70e ⁻ or 0.3 DN rms @ 8 bit / gain = 1 / no signal
Fixed pattern noise (FPN)	<0.5% rms / 1.5 % p-p
Dark current	0.6 fA @ 25°C
Full well capacity	63 ke ⁻
Spectral range	400 nm ... 900 nm
Responsivity	400 DN / Lux sec @ 550 nm / 8 bit / gain = 1 (272'000 DN / J / m ² @ 550nm / 8bit / gain = 1)
Optical fill factor	40 %
Dynamic range	60 dB
Colour format	Monochrome
Characteristic curve	Linear
Shutter mode	Global shutter
Read out mode	Sequential or simultaneous read out

Camera

Exposure time	10 µs ... 100 ms / 2 ns steps
Frame rate	Up to 490 fps
Pixel clock	82.5 MHz (8-tap mode), 66 MHz (10-tap mode)
Camera taps	8 or 10
Greyscale resolution	10 bit (internal) / 8 bit (CameraLink® output)
Digital gain	1 or 2 or 4
Configuration interface	CL SERIAL (9600 baud or 57.6k baud user selectable)
Trigger modes	• Free running (non triggered) • Interface trigger • I/O Trigger
Features	• Multiple Regions of Interest (MROI) • Look-up Table (LUT) • On-camera shading correction
Interface	CameraLink® Full
Operating temperature	0 °C ... +60 °C
Power supply	+12 V DC (+/-10 %)
Power consumption	4.2 W
Lens mount	M42x1, C-Mount or F-Mount (CS-Mount optional)
Dimensions	78 x 78 x 46.2 mm ³
Mass	374 g
Conformity	CE / RoHS / WEEE and shock and vibration tests (IEC 68-2-6, IEC 68-2-27, IEC 68-2-29)
Special	Adjustable backfocus

Software

Camera control	PFRemote™ graphical user interface (GUI) and PFLib (SDK)
OS	win2k; winxp; winvista; other OS (Linux, QNX, etc.) on request