

CMOS Camera

DR1 SERIES WITH CMOSIS SENSOR

2.2 or 4.1 Megapixel resolution with CMOSIS sensor

Features

- CMOSIS CMV2000 or CMV4000 CMOS image sensor
- 2048 x 1088 or 2048 x 2048 pixel resolution
- Standard, NIR and colour versions
- SNR up to 110:1
- Up to 85 fps (1.4 Mp), 45 fps (4Mp), 709 fps (512 x 512 pixel), 570 fps (rot. VGA)
- Photonfocus Double Rate technology
- Global shutter
- Monochrome, enhanced NIR and Colour
- GigE interface (GigE Vision and GenICam compatible with standard single cable connection)
- 8 bit greyscale resolution
- Boardlevel or OEM solution available

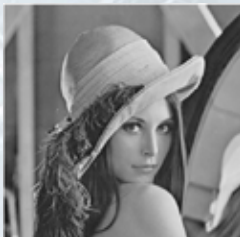


Advantages

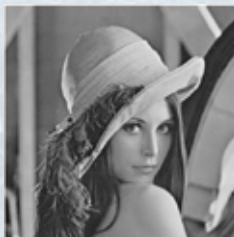
- ~100 % faster than standard GigE cameras
- Modulation can be disabled to transmit original image data
- No Link-Aggregation
- Single standard GigE cable



Colour version available



Original image



Modulated-demodulated image



Detailed view



DR1-D2048x1088(I/C)-192-G2-8	DR1-D2048(I/C)-192-G2-8*
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	Image Sensor	
	CMOSIS CMV2000	CMOSIS CMV4000
Image sensor	CMOS active pixel (APS)	
Technology	Progressive scan	
Scanning system	2/3" (12.76 mm diagonal)	1" (16 mm diagonal)
Optical format / diagonal	2048 x 1088 pixels	
Resolution	5.5 µm x 5.5 µm	
Pixel size	11.26 mm x 5.984 mm (maximum)	
Active optical area	125 e ⁻ /s @ 25°C	
Dark current	11 ke ⁻	
Full well capacity / SNR	< 350 to 900 nm (to 10% of peak responsivity)	
Spectral range	5.56 V / lux.s	
Responsivity	60% @ 550 nm with micro lenses	
Quantum Efficiency	42% without micro lenses	
Optical fill factor	60 dB in linear mode	
Dynamic range	Monochrome	
Colour format	Linear, Piecewise linear	
Characteristic curve	Global shutter	
Shutter mode	Simultaneous read out (read out during exposure)	
Read out mode		

	Camera	
Exposure time	12.56 µs ... 0.349 s / 20.8 ns steps	24.1 µs ... 0.349 s / 20.8 ns steps
Frame rate	85 fps (full resolution), 570 fps (rot. VGA)	45 fps (full resolution), 570 fps (rot. VGA)
Pixel clock	48 MHz	
Camera taps	1	
Greyscale resolution	8 bit / 10 bit ⁽¹⁾ /	
Fixed pattern noise (FPN)	< TBD DN @ 8 bit	
Analogue gain	1	
Digital gain	0.1 to 15.99 (Fine Gain)	
Configuration interface	GigE (Gigabit Ethernet)	
Trigger modes	<ul style="list-style-type: none"> • Free running (non triggered) • Interface trigger • External trigger input • Software trigger • Region of Interest (ROI) • • Constant frame rate • Temperature • Image information • Extended trigger input and strobe output functionality • Modulation can be disabled to transmit original image data 	
Features		
Interface	GigE (Gigabit Ethernet)	
Operating temperature	0°C ... +50°C	
Power supply	+12 V ... +24 V DC (±10%)	
Power consumption	< TBD W	
Lens mount	C-Mount (CS-Mount optional)	C-Mount (CS-Mount optional)
Dimensions (H x W x L)	55 x 55 x 51.5 mm ³	60 x 60 x 47 mm ³
Mass	260 g	
Conformity	CE / RoHS / WEEE	
Specials	Adjustable backfocus; Opto-isolated I/Os; Dual RS-422 Inputs Evaluation software for the Double Rate Technology	

	Software
Camera control	GUI (GEVPlayer) and Pleora SDK for image acquisition and development of applications Demodulator DLL for implementation in GigE Vision and GenCam compatible image processing platforms HALCON extension package with demodulator sample
OS	Windows and Linux (32 & 64 Bit); other OS (QNX, etc) on request

⁽¹⁾ If DR Mode active, 8 bit greyscale output only
* Model available upon request

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