pco.1300 oem cooled digital 12bit CCD camera system

- excellent resolution (1392 x 1040 pixel)
- superior quantum efficiency up to 65 %
- cooled 12 bit dynamic range
- superior low noise of 8 e⁻ rms @ 10 MHz
- no glow functionality at long exposure times
- excellent DSNU at long exposure times
- hot pixel correction integrated
- optimal offset stability and control (≤ 1 count)
- exposure time range 5 μs 1 h
- cooling of -∆ 30 °C vs. ambient
- standard IEEE1394a ("firewire") interface



pco.1300 oem

This versatile high performance 12 bit CCD camera system is specifically designed for OEM applications. The pco.1300 oem has an extraordinary quantum efficiency of up to 65 %. At the heart of the camera is an FPGA processor allowing for sophisticated control and accurate timing of the CCD and associated electronics. In addition, a proprietary offset control algorithm has been developed which provides very high offset stability, regardless of ambient temperature or signal changes ensuring accurate and repeatable quantitative data over long periods of time. The pco.1300 oem's most unique feature is its flexibility for customization to fit any OEM user application. ROI, binning, cooling, as well as other features of the camera can be selected and optimized to accommodate the user's application. Camera features excellent resolution (1392 x 1040 pixel), 12 bit dynamic range, exposure time 5 µs to 1 hour, internal frame buffer for continuous image capture (64 MB min), excellent low noise of 8 e rms @ 10 MHz, selectable regulated cooling to -30 °C vs. ambient, standard interface IEEE1394a, optimal offset stability and control (≤ 1 count).

technical data

technical data			
	unit	setpoint	pco.1300 oem
resolution (hor x ver)1	pixel	@ extended mode	1424 x 1060
		@ normal mode	1392 x 1040
pixel size (hor x ver)	µm²		6.45 x 6.45
sensor format/	inch/		2/3" / 11.14
diagonal	mm		
peak quantum	%	@ 500 nm typical	62
efficiency			
full well capacity,	e-		18 000
dark current	e ⁻ /pixel·s	@ 10 °C typical	0.05
image sensor			ICX285AL
maximum dynamic	dB	CCD + camera	66
range		@ 10 MHz	
dynamic range A/D ²	bit		12
readout noise	e ⁻ rms	@ 10 / 20 MHz	8 / 14
imaging frequency,	fps	@ full frame	5.9 / 11.7
frame rate		@ 10 / 20 MHz	
pixel scan rate	MHz	dual clock	10 / 20
A/D conversion factor	e ⁻ /count		3.9
spectral range	nm		290 1100
exposure time	S		5 μs 1 h
anti-blooming factor		@ stand. light mode /	> 400 / > 4
		@ low light mode	
		@ 100ms expos. time	
smear	%		< 0.002
optical input			c-mount
trigger, auxiliary		internal / external	software, TTL
signals			level
binning (hor x ver)			1x1, 1x2, 2x1
			2x2

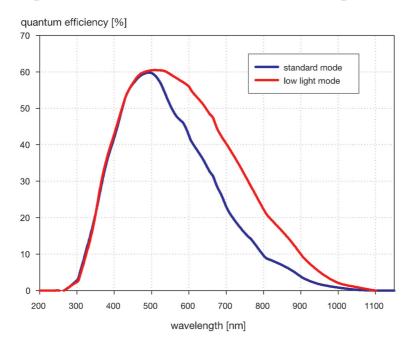


technical data

	unit	setpoint	pco.1300 oem
power supply	VDC		18 28 V
		typical	24 V
power consumption	W	max.	20
mechanical	mm ³		113 x 104 x 110
dimensions (w x h x l)			
weight	kg		1.1
ambient temperature	°C	range	+10 +40
operating humidity	%	range	10 80
storage temperature	°C	range	-20 +70
data interface			IEEE1394a
CE certified			yes

[1] horizontal versus vertical[2] Analog-to-Digital-converter

quantum efficiency



(measured by pco)



contact

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pco.1300 oem 09/2006 subject to changes without prior notice PCO AG, Kelheim

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