pco.panda 26

ultra compact global shutter
sCMOS camera

dust-protected housing

available in **mono and color**

65 mm

ultra compact design

pco. panda sCMOS

true charge domain **global shutter**

high resolution 5120 x 5120 pixel

1288 ✳ EMVA Standard Compliant

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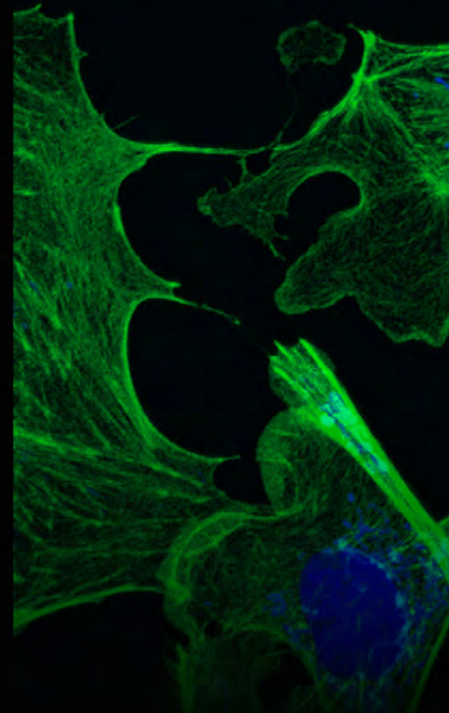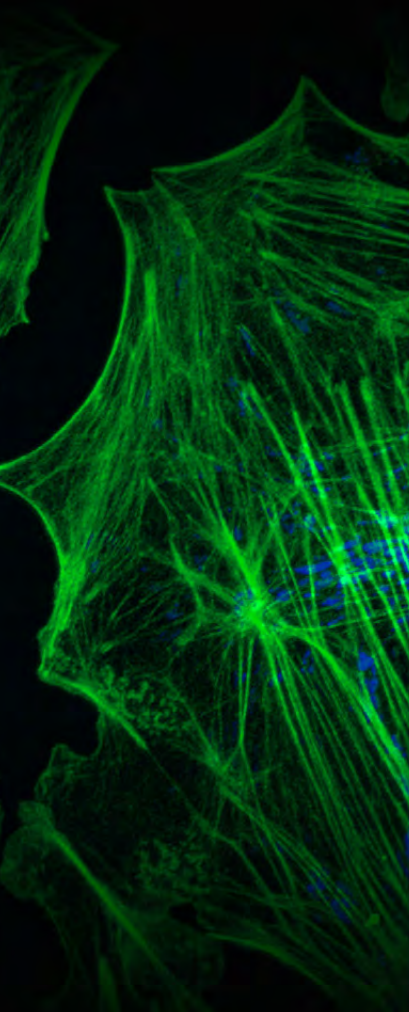
» **sCMOS image sensor**

type of sensor	global shutter scientific CMOS (sCMOS) monochrome
resolution (h x v)	5120 x 5120 active pixel
pixel size (h x v)	2.5 µm x 2.5 µm
sensor format / diagonal	12.8 mm x 12.8 mm / 18.1 mm
shutter mode	global/snapshot shutter (GS)
MTF	200 lp/mm (theoretical)
fullwell capacity	4 500 e⁻
readout noise (typ.)[1]	2.3 med e⁻ / 2.5 rms e⁻
dynamic range (typ.)	66 dB
quantum efficiency	65 %
spectral range	320 nm .. 1000 nm
dark current (typ.)	3 e⁻/pixel/s @ 21 °C ambient temperature
DSNU	< 1 e⁻ rms
PRNU	< 1.2 %
parasitic light sensitivity	1 / 10 000

» **camera system**

|	
frame rate	7.1 fps @ full resolution
exposure / shutter time	5 µs .. 20 s
dynamic range A/D	12 bit
A/D conversion factor	1.1 e⁻/DN
pixel data rate	267 Mpixel/s
binning horizontal	x1, x2, x4
binning vertical	x1, x2, x4
region of interest (ROI)	horizontal: steps of 32 pixel (min. 32) vertical: steps of 1 pixel (min. 8)
non linearity	< 0.6 %
cooling method	passive cooled
trigger input signals	frame trigger, sequence trigger, programmable input (SMA connectors)
trigger output signals	exposure, busy, programmable output (SMA connectors)
data interface	USB 3.1 Gen 1
time stamp	in image (1 µs resolution)

[1] The readout noise values are given as median (med) and root mean square (rms) values, due to the different noise models, which can be used for evaluation. All values are raw data without any filtering.

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» general

power delivery	power over USB 3.1 Gen 1
power consumption	typ. 4.5 W (max. 6.0 W)
weight	600 g
operating temperature	+ 10 °C .. + 40 °C
operating humidity range	10 % .. 80 % (non-condensing)
storage temperature range	- 10 °C .. + 60 °C
optical interface	F-mount, C-mount
CE / FCC certified	yes

» quantum efficiency
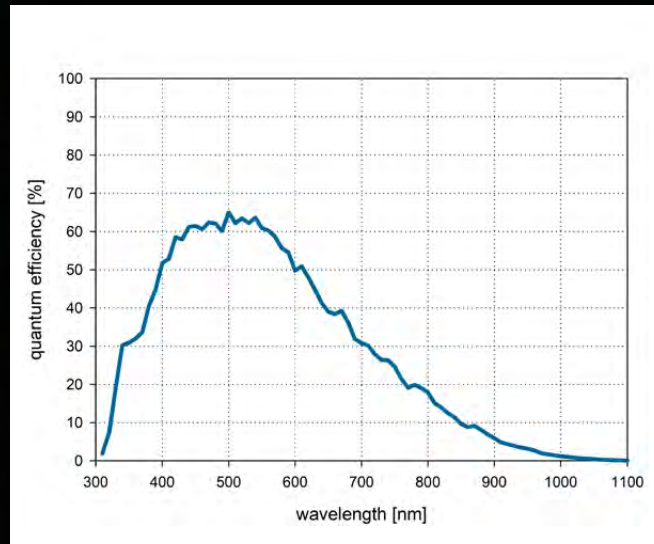
» frame rate table

5120 x 5120	7 fps
5120 x 1024	35 fps
5120 x 512	70 fps
5120 x 256	141 fps
5120 x 128	279 fps
1920 x 1080	33 fps
1600 x 1200	30 fps
1280 x 1024	35 fps
640 x 480	75 fps
320 x 240	150 fps

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》 **benefits**

ultra compact design
sealed electronics for dust & dirt protection
spider-less mounting with only 6.18 mm to image plane
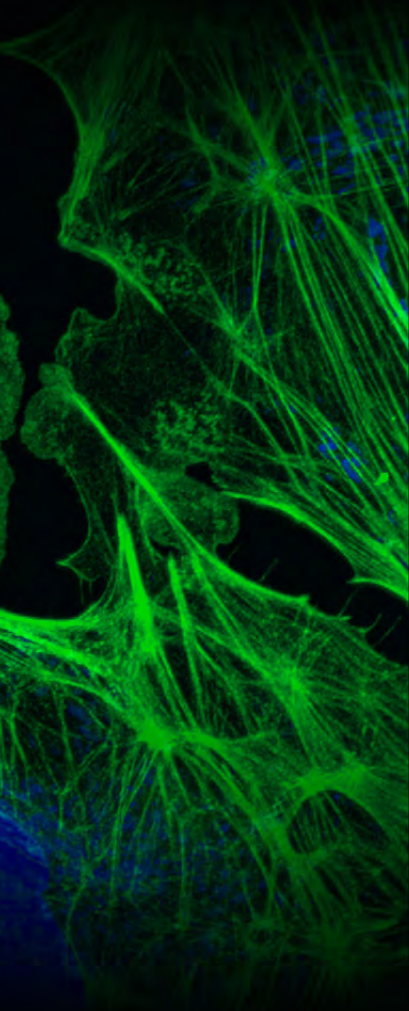
》 **dimensions**
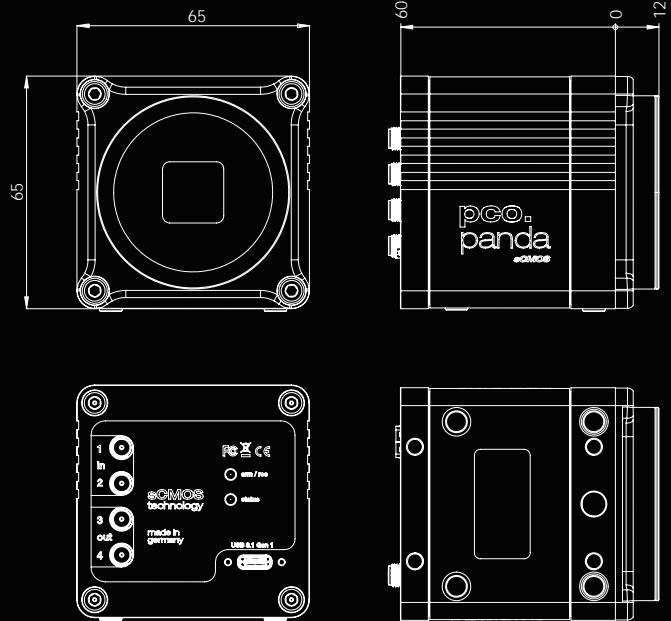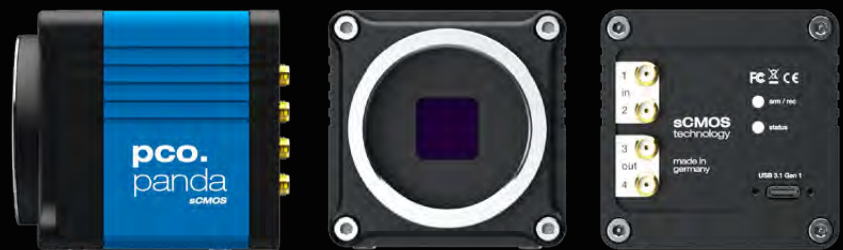

F-mount and C-mount lens adapter are changeable.
All dimensions are given in millimeter.

》 **camera view**

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» applications

brightfield microscopy | fluorescence microscopy | digital pathology | mesoscopy (low magnification microscopy) | high-speed bright field ratio imaging | high throughput screening | high content screening | biochip reading | spinning disk confocal microscopy | 3D metrology | industrial quality inspection

» software

With pco.camware you control all camera settings, the image acquisition and the storage of your image data. The pco.sdk is the complementary software development kit. It includes dynamic link libraries for user customization and integration on Windows-PC platforms. Drivers for popular third party software packages are also available for you.

All this items like pco.camware, pco.sdk and third party drivers, are free-to-download at www.pco.de.

» third party integrations

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Quality Management
ISO 9001

DEKRA
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ISO 9001:2015