

data sheet
pco. dimax 3.6 ST

advancement through high-speed streaming

ST high-speed
streaming

resolution

3.6 MPixel

pixel size

11.0 μm x 11.0 μm

interface

CLHS FOL



1288 
EMVA Standard Compliant

high-speed imaging
2166 fps @ 3.6 MPixel

real-time streaming
over 8x10G fiber

excellent sensitivity
11 μm pixel size

uncompressed 10-bit
data transfer

high fullwell capacity
up to 60,000 electrons

technical data

image sensor

sensor technology	scientific CMOS (sCMOS)
color type	monochrome
resolution (horizontal x vertical)	1984 pixel x 1808 pixel
pixel size (horizontal x vertical)	11.0 μm x 11.0 μm
sensor size (horizontal x vertical)	21.8 mm x 19.8 mm
sensor diagonal	29.5 mm
shutter type	global shutter
fullwell capacity	60,000 e ⁻
readout noise (typ.)	< 65 e ⁻
dynamic range (intra-scene)	60 dB
peak quantum efficiency	64 % @ 500 nm
spectral range	340 nm - 1100 nm
dark current	< 250 e ⁻ /pixel/s @ +25 °C sensor temperature

frame rate table

vertical resolution reduction	
1984 x 1808	2166 fps
1984 x 1024	3728 fps
1984 x 744	5020 fps
1984 x 512	7042 fps
1984 x 256	12,676 fps
1984 x 128	21,126 fps
1984 x 64	31,690 fps
1984 x 32	42,253 fps
1984 x 16	50,704 fps
1984 x 8	56,338 fps

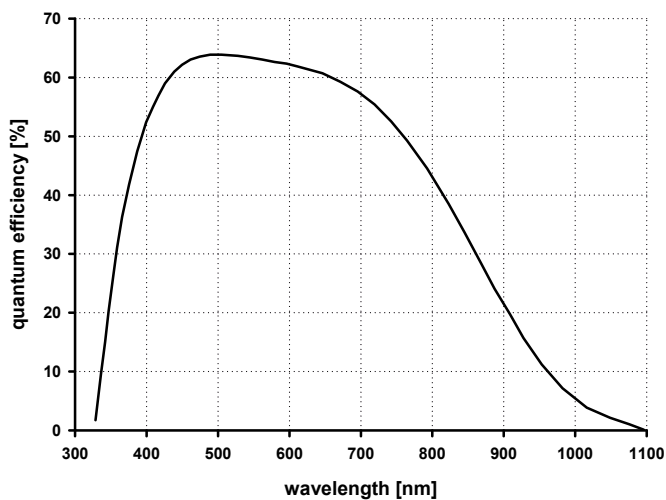
typical resolutions

1920 x 1080	3545 fps
1600 x 1200	3209 fps
1280 x 1024	3728 fps
640 x 512	7042 fps
640 x 480	7456 fps
320 x 256	12,676 fps
320 x 240	13,343 fps

camera

max. frame rate @ full resolution	2166 fps
exposure time range	10.0 μ s - 10 ms (step size 2.8 μ s)
dynamic range A/D	10 bit
conversion factor	70.5 e ⁻ /DN
pixel rate	7.8 GPixel/s
region of interest (ROI)	horizontal: step size 64 pixels vertical: step size 8 pixels (symmetrical)
binning	horizontal: x2, x4 vertical: x2, x4
non-linearity	< 0.4 %
dark signal non-uniformity (DSNU)	<60 e ⁻
photo response non-uniformity (PRNU)	<0.5 %
cooling temperature image sensor	+35 °C stabilized
cooling method	forced air (optional: water only)
trigger input signals	frame trigger, sequence trigger, programmable input
trigger output signals	exposure, busy, programmable output
input / output signal interface	SMA connectors
time stamp	in image (1 μ s resolution) and metadata
data interface	Camera Link HS FOL

quantum efficiency



general

power supply	24 VDC (±10 %)
power consumption	max. 120 W
weight	4.5 kg
dimensions (height x width x length ¹)	145 mm x 145 mm x 160 mm
operating temperature range	+10 °C to +30 °C
storage temperature range	-10 °C to +60 °C
humidity range (non-condensing)	10 % to 80 % (recommended < 65 %)
CE / FCC certified	yes

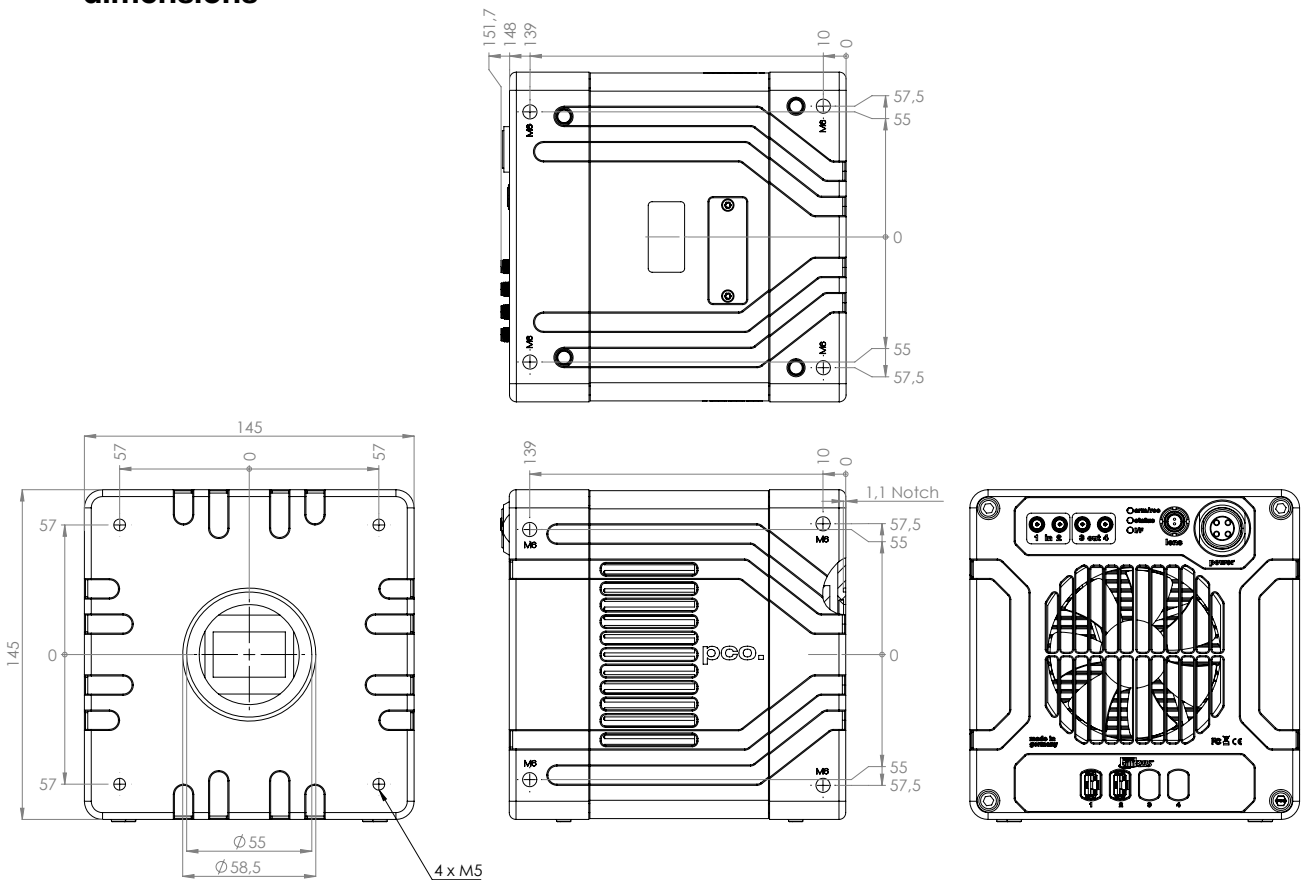
¹ This value refers to the length including the lens mount adapter.

optical interface

direct mounting	7.9 mm ±10 %
lens mounting	C-mount
optional lens mounting	F-mount, TFL-mount
optional lens remote controller	EF-mount, EF-S-mount (Canon)

Configure your optical setup with our **MachVis Lens Selector** online tool.

dimensions



Outlines of pco.dimax 3.6 ST without lens mount adapter (all dimensions given in mm).

software

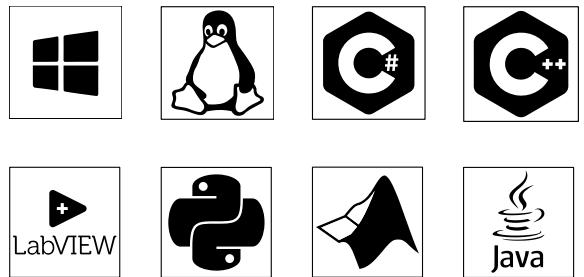
Your first choice is pco.camware:

Our main camera control software enables full control of all camera settings and facilitates image acquisition and storage. You can customize it exactly to your needs using different layouts, styles and features.



You want to create your own application:

We offer a wide range of Software Development Kits (SDK) for different programming languages, both for windows and linux. Our pco.sdk, pco.recorder and high-level SDK are designed for C/C++ apps. With pco.python, pco.matlab, pco.labview and pco.java you can control the camera in your C#, python, matlab, labview and java applications, respectively.



areas of application

industrial production control and analysis | industrial quality assurance | material development | welding technology | laser & inert gas welding | aerospace | astronomy | automotive airbag & component testing

ordering information

pco.dimax 3.6 ST AIR	85108025001	camera system, mono, 1984x1808 pixel, air cooled, CLHS, 8x10G fiber optics
pco.dimax 3.6 ST WAT	85108025003	camera system, mono, 1984x1808 pixel, water cooled, CLHS, 8x10G fiber optics

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