SAPPHIRE series
S-25A80-Gx/CXP
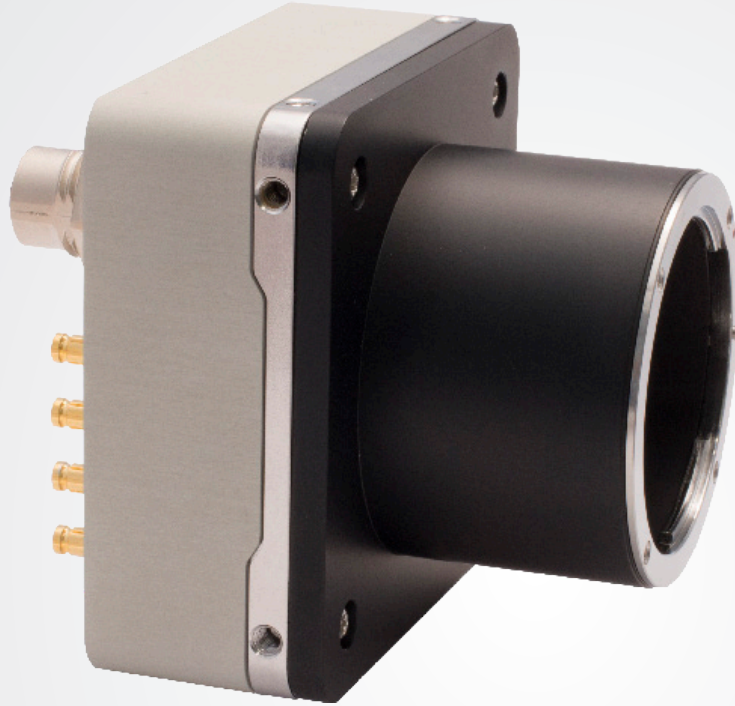
CoaXPress

Key characteristics

25 Mpx 4.5 µm²	5120 X 5120	84+fps
CMOS Global Shutter	35 mm	≤ 9.5 W
<80 mm²	<400 g	59 dB

- OnSemi PYTHON25k sensor
- True Global Shutter CMOS
- Monochrome and Color
- Dark and bright uniformity corrections
- Multiple Low Frequency Flat Field Correction sets
- CXP-3 DIN 2/4 and CXP-6 DIN 1/2/4 configurable
- M12 I/O connector
- CoaXPress V1.1.1 compliant
- CoaXPress V1.0 compatible

Description

The Sapphire S-25A80 CoaXPress camera delivers 5120 x 5120 pixel resolution at 84+ fps based on 4.5 micron square pixels. The S-25A80 camera supports OnSemi Python 25 Mpx sensor. The solution with the new Python sensor offers the best performance on sensitivity, dynamic range and global shutter performance.

Adimec offers the Sapphire S-25A80 CXP camera in a low power compact outline design, not requiring forced cooling through a fan. This provides optimal design freedom for integrating optics and placement in inspection tools with optimized uniformity and low noise performance. The Sapphire is based on Adimec's second generation CoaXPress V1.1.1 compliant 25 Gb/s CoaXPress Quad interface. This interface is fully backward compatible to existing V1.0 frame grabbers.

Adimec

Excellence in Imaging

Specifications S-25A80

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Sensor	ON Semiconductor PYTHON25K
Pixel size	4.5 µm x 4.5 µm with micro lenses
Resolution	5120 (H) x 5120 (V)
Optical sensor size	35 mm
Video Output	CoaXPress - V1.1.1 CXP-3 (2 or 4 lanes configurable) CXP-6 (1, 2 or 4 lanes configurable)
Max frame rate (8bit 4x CXP6)	84+ fps
Dynamic range	59 dB*
Full Well	12ke (max)*
Electronics shutter	Global shutter 7T (PLS <1/5000)*
Image acquisition	Continuous / Controlled
Output resolution	8 / 10 Bit
Monochrome / Color	Monochrome / Color
Power input	24 Vdc PoCXP
Power usage	<9.5 W @ 24 Vdc full continuous operation at maximal framespeed
Operating temperature	-10 ˚C to +30 ˚C or max housing temp +50 ˚C
Reliability	MTBF > 75,000 h @ 30˚C
Weight	< 400 g excluding lens mount
Lens mount	F-mount (Optional: TFL-II, M42, T2 or EF)
Compliance	CE, ROHS
Test methods	IEC60068-2-6 (Sinusoidal Vibration), IEC60068-2-27.(Shock)

* specification OnSemi

Functionality

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Flat Field Correction (FFC)	√	-
Sequential programmable FFC setup	√	-
Defect pixel correction	√	√
Manual white balance	-	√
One push AWB	-	√
ROI (single, multi band)	√	√
Frame counter	√	√
LUT	√	√
Digital fine gain (1x to 32x)	√	√
Automatic black level control	√	√
Dark and bright uniformity corrections	√	√
Non-volatile calibration data storage	√	√
Programmable I/O	√	√

√: Standard -: Not available

Dimensions

29 mm 80 mm 80 mm

ASP I/O ID-label
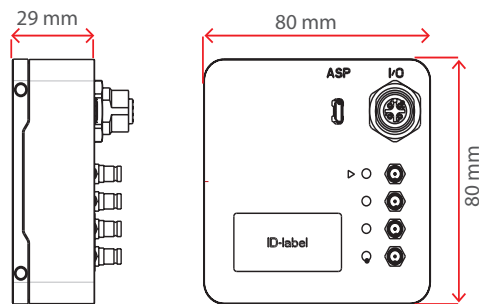
Adimec support

Adimec Sapphire cameras are designed, optimized and calibrated for demanding inspection and metrology applications.

Additionally the Adimec application experts support our customers in integrating the Sapphire camera and tuning the images to fit their measurement.

Please contact your Adimec representative for further assistance.

For maximum image quality, performance, and reliability in demanding applications - Choose Adimec

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www.adimec.com