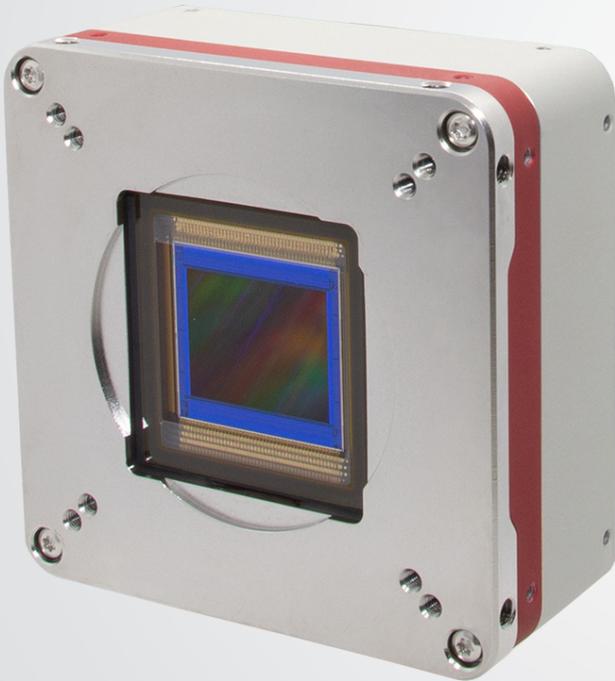


# QUARTZ series

## Q-21A230x/CXP-PA

**Adimec**  
*Excellence in Imaging*



The QUARTZ Q-21A230x/CXP-PA camera, or in short the Q-21 Performance, brings 5120 by 4096 high quality pixels to the image for real time metrology tasks with a reliable high speed CoaXpress data interface. With 21 megapixel resolution and 228.8 frames per second of measurement speed, the Q-21A230 can greatly improve the precision and throughput of your system. All image information is preserved by Adimec's True Accurate Imaging technique and state of the art global shutter sensor technology.

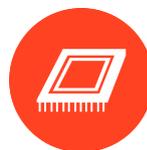
The Q-21 Performance delivers the best image quality combined with optimal heat management, which makes it the perfect fit for Semiconductor Back End applications. Different operating modes which optimize for maximum dynamic range, high full well or high sensitivity, provide easy system integration with ideal performance under various demanding conditions. The camera offers Adimec Connect & Grab™ allowing engineers to start system development at camera arrival.

Typical application examples: Semiconductor metrology tools; Wafer inspection; Bump inspection; RDL inspection; Digital pathology.

**CoaXPress**®



5120 x 4096 at 228.8 fps



Active sensor alignment



High full well and low read noise



Device-to-device repeatability



Low frequency flat field correction in bright



CXP-12 interface for 4 x 12.5 Gb/s

# High Speed Metrology Camera

## 21 Megapixel @ 228.8 fps

### Target Specifications

Q-21A230/CXP-PA	
Sensor	GPIXEL GSPRINT4521
Pixel size	4.5 μm x 4.5 μm
Resolution	5120 (H) x 4096 (V)
Electronic shutter	CMOS progressive scan Global Shutter (PLS < 1/20000, angular dependent)
Video Output	CoaxPress V1.1.1 CXP3/6/10/12 - 2 and 4 lanes configurable
Image acquisition	Timed, TriggerWidth, SyncControl, TimedTriggerControl
Output resolution	8 / 10 / 12 bit
Power input	2 x 24 Vdc nominal, range: 18.5 Vdc to 26 Vdc PoCXP
Power usage	Typical 16 W @ 24 Vdc full continuous operation at full ROI at maximum framespeed
Operating sensor temperature	+5°C to +60°C
Reliability	> 75,000h @ 30°C calculated according to the part stress analysis of MIL-HDBK-217F for ground fixed, uncontrolled environment.
Weight	600 g +/- 5% excl. lensmount, heatsink and fan
Lens mount (optional)	4 x M3 at 60mm pitch - 4 x M3 at 54mm pitch - 50mm G7 reference (on request: F, TFL-II, T2, M42)
Compliance	CE, ROHS

### Performance Modes

Mode	Max full well	High full well	Max dynamic range	High sensitivity
Analog gain	1	1.5	2.2	4.8
Full well	33.6 ke-	22.4 ke-	15.3 ke-	7.0 ke-
Dynamic range	66.7 dB	67.3 dB	68.7 dB	66.5 dB
Dark noise	15.5 e-	9.7 e-	5.6 e-	3.3 e-

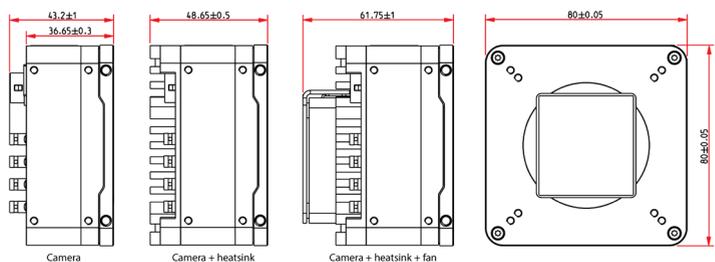
Typical values @ 12 bit

### Functionality Highlights

		
Defect pixel correction	√	√
Manual and one push white balance	-	√
Programmable look-up table & gamma curve	√	√
Digital fine gain (1x to 32x)	√	√
Mirroring	√	√
Low Frequency Flat Field Correction (LF FFC)	√	√
Uniformity correction	√	√
Sensitivity matching between cameras	√	√
User data storage	√	√
Programmable I/O	√	√
Binning	*	*
Band ROI	*	*

√: standard - : Not available \*: Available on request

### Dimensions



### Adimec support

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

All models of the QUARTZ series are customizable to fit specific system outline, functionality or performance requirements.

Please contact us about your possibilities.

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

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LFL Q-21A230/CXP-PA rev.0.8 - Detailed information on request - Subject to change without notice - Actual products may differ from photos

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