Imagista corporation

X-ray CMOS Camera
X-Point Super Zero

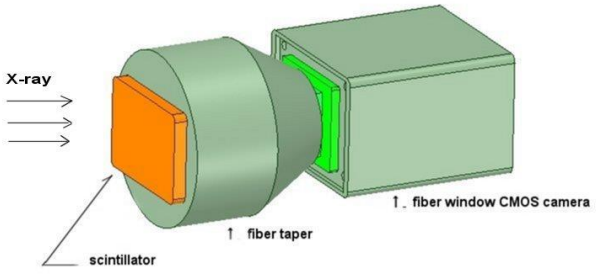
Overview

X-Point Super Zero is industrial purpose X-ray CMOS TV camera for inspection e.g. PCB, electronic parts. Robust small housing and high spec camera could be introduced easily to table top X-ray inspection machine and could be replaced obsolete X-ray TV cameras. Employing latest CMOS camera technology, high definition X-ray image can be captured with standard mini focus tube. Comparatively large format FOV expand the possibility of new application and research.

General specification

Model name	X-Point SUPER ZERO-U3	X-Point SUPER ZERO-GE
interface	USB 3.0	GigE
Frame rate	47 fps at full resolution	47 fps at full resolution
Scintillator	CsI (Tl) on fiber optic plate	
X-ray power range	10 KV – 100 KV	
Image sensor	CMOS image sensor with global shutter	
Number of effective pixels	1920 (H)×1200 (V)　Approx. 2.3M pixels	
F.O.V.	27mm×17mm	
Resolution	16.7 Lp/mm 30micron	
dimension	80mm (H)×90mm (V)×90mm (D)	100 mm (H)×75mm (V)×90mm (D)

Schematic design of X-ray CMOS camera

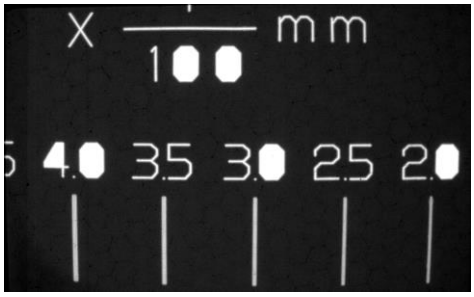


X-ray irradiates on scintillator's surface first. Scintillator converts X-ray to light and reproduced radiographic image on scintillator pass to CMOS image sensor through fiber taper. By direct contact coupling, CMOS camera could be capturing clear and distortion free image. At the same time fiber taper becomes X-ray shield to protect CMOS image sensor which is susceptible to radiation damage.

Imagista corporation

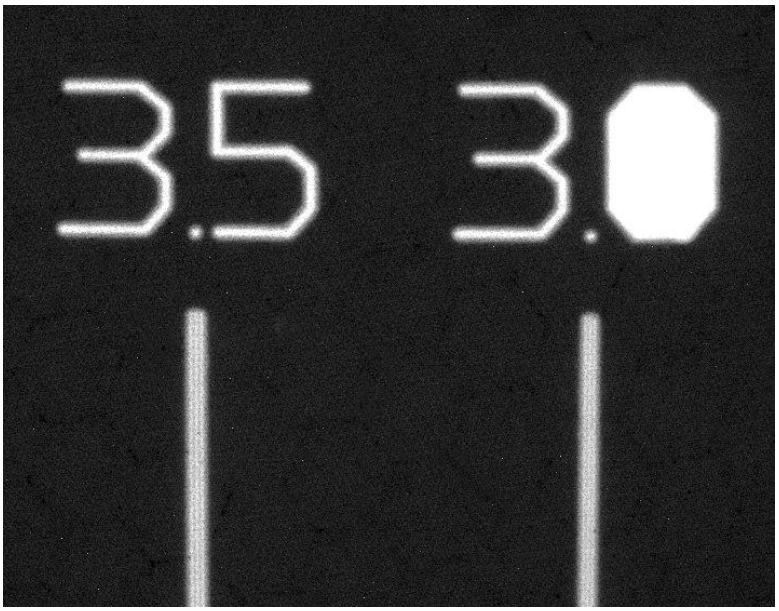
Featuring higher resolution

X-Point SUPER ZERO attain 30micron resolution. Combination of X-Point SUPERZERO and lower cost mini focus X-ray source makes higher performance machine and increase sales competitiveness because of lower cost effect.



X-ray resolution chart captured by XP Zero

Enlarged center area



Special advantage

◇ Latest CMOS image sensor technology employed.
◇ Image is transferred by fiber coupling chain, high definition and just focused image can be captured.
◇ Comparatively wide F.O.V. expands possible application.
◇ low maintenance required.

Image samples