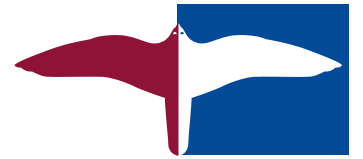


X-ray Line-Scan Camera Series



Falcon Single Energy LDA

The X-Scan Imaging XI8800 series of linear array x-ray cameras offer high performance for x-ray scanning applications at extra long lengths. At the heart of a XI8800 camera are X-Scan Imaging's CMOS silicon imaging detector array chips providing wide dynamic range and solid-state reliability. A wide selection of scintillation material converts x-rays into visible light for detection by the imaging array and optimizes both sensitivity

and resolution. The close proximity of the analog-to-digital converters (ADC) to the detector chips and the use of low-voltage-differential-signal (LVDS) technology minimize interference noise. A collection of hardware for interfacing to computers and software including drivers, an intuitive application programming interface (API), and example code software expedite developments of x-ray scanning system.

Key Features

Wide range of resolutions & selection of lengths

Compact form factor

Incorporates X-Scan Imaging's proprietary XB8800 Photodiode Detectors

- Selectable resolution for 0.1/0.2mm and 0.4/0.8mm
- Low noise, wide dynamic range, high sensitivity
- High MTF

16-bit analog-to-digital conversion

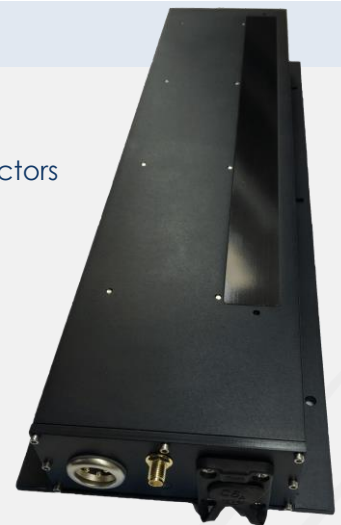
Supports variable scan speed with position synchronization

Software development kit

Device drivers, libraries, standard API

With x-ray tube voltages 15 – 160 kV

GigE/Camera Link/USB3 interface



Applications

Food and industrial inspection

Package content inspection

Security and cargo screening

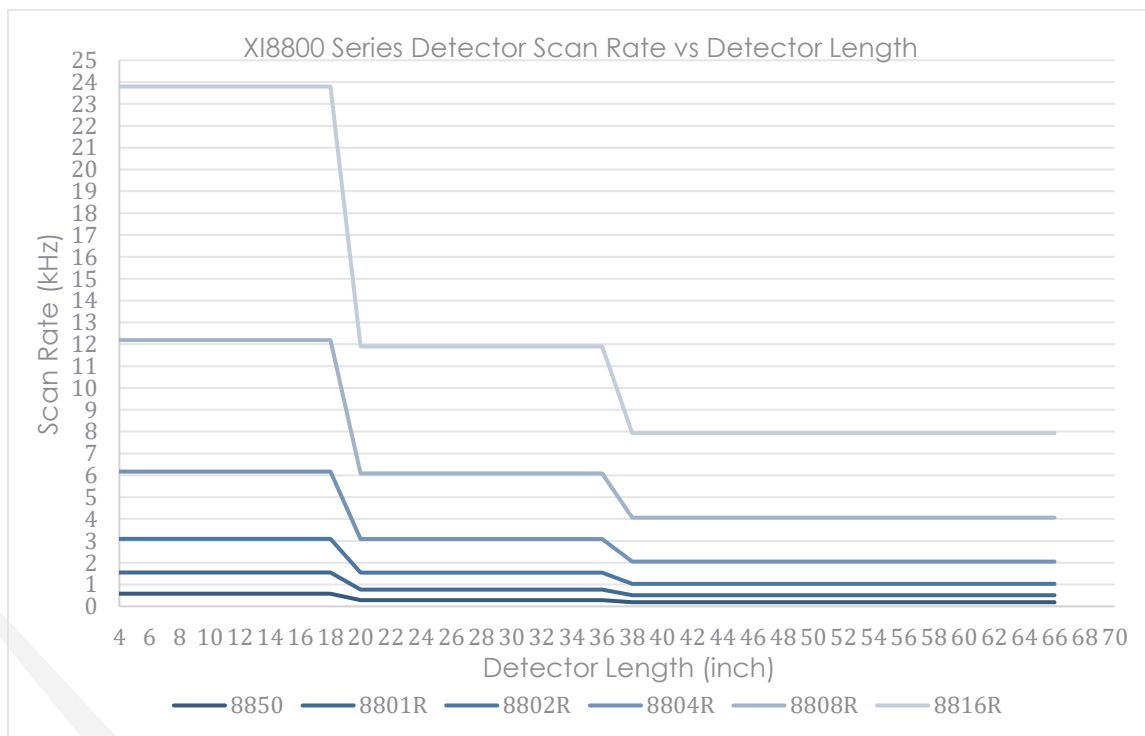
Industrial non-destructive testing (NDT)

Model : XI88_{LL}-[LLL]¹

Model series	XI8850	XI8801	XI8802	XI8804	XI8808	XI8816
Resolution	50 μ m	0.1 mm	0.2 mm	0.4 mm	0.8 mm	1.6 mm
Number of pixels	LLL \times 512	LLL \times 256	LLL \times 128	LLL \times 64	LLL \times 32	LLL \times 16
Maximum line rate up to 18 inches	550 Hz	1500 Hz	3 KHz	6 KHz	12 KHz	23 KHz

ⁱ Active Length is (25.6 mm \times LLL) where LLL is the detector length and a multiple of 2 and LLL \geq 8 (minimum length is 205 mm and no maximum length limit).
The maximum line rate is available for LLL \leq 18 (461 mm). Also depending in scintillator choice, image quality may be degraded at line rates greater than 1 KHz.

Scan Rate



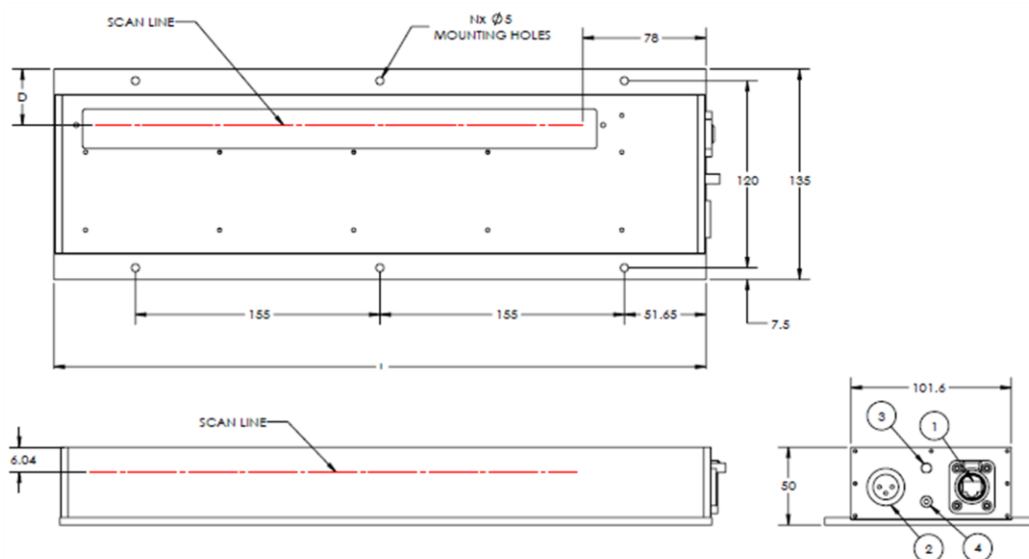
Calculate conveyor speed or object velocity by multiplying (Resolution * Scan Rate)
Example XI8804 16 inches long, Maximum velocity is (0.4mm * 6kHz) = 2.4m/s

Magnification may also need to be considered using the source to object and source to detector distances.

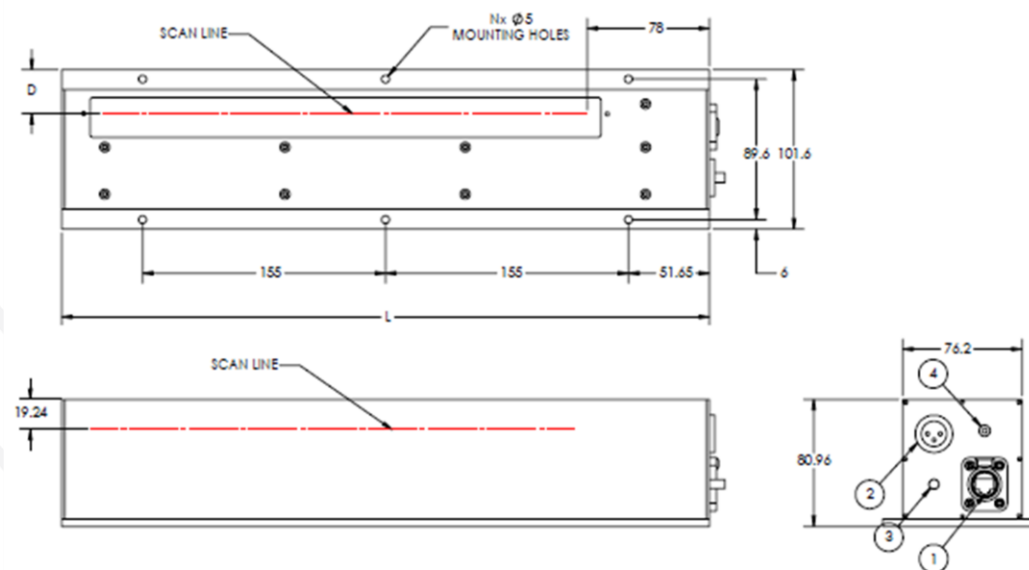
Mechanical Configurations

X-Scan Imaging housings are available in two form factors. The DR housing is a low profile, wider detector to fit under conveyor systems or other tight spaces. The DS housing is a taller, narrower profile. The standard X-Scan Imaging detectors, Single Energy, Dual Energy, and CMOS TDI all share the same mounting hole pattern.

DR:

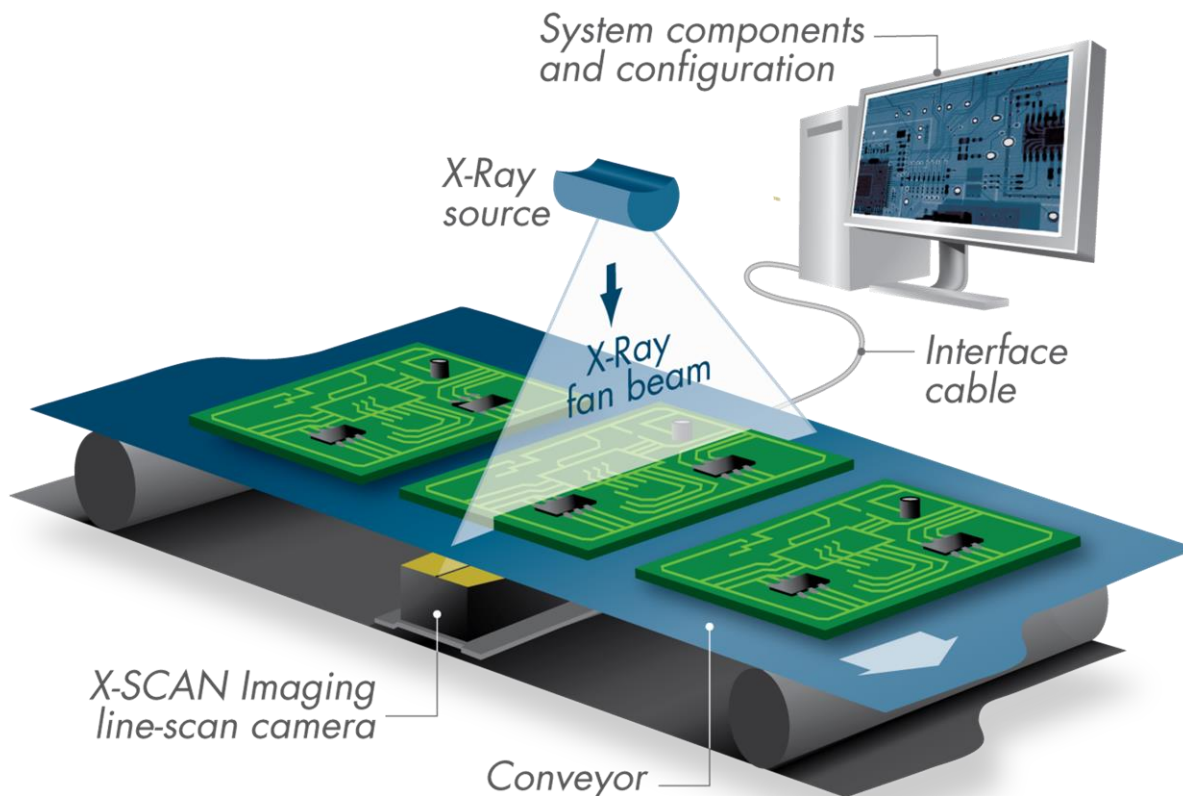


DS:



Setup

The XI8800 series camera system includes a camera unit, a software development kit, power adapter and cabling. The frame-grabber to be installed in the computer is provided optionally. Interfaces available include GigE, Camera Link, and USB3.0.



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