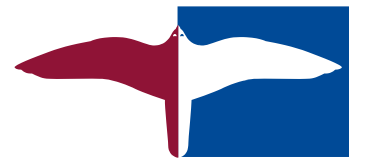


X-Ray Line-Scan Camera Series



Falcon Single Energy LDA

The X-Scan Imaging XI8800 series of linear diode array (LDA) 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 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 with computers and software including drivers, an intuitive application programming interface (API), and sample code expedite development.

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 / 0.2 mm and 0.4 / 0.8 mm
- 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

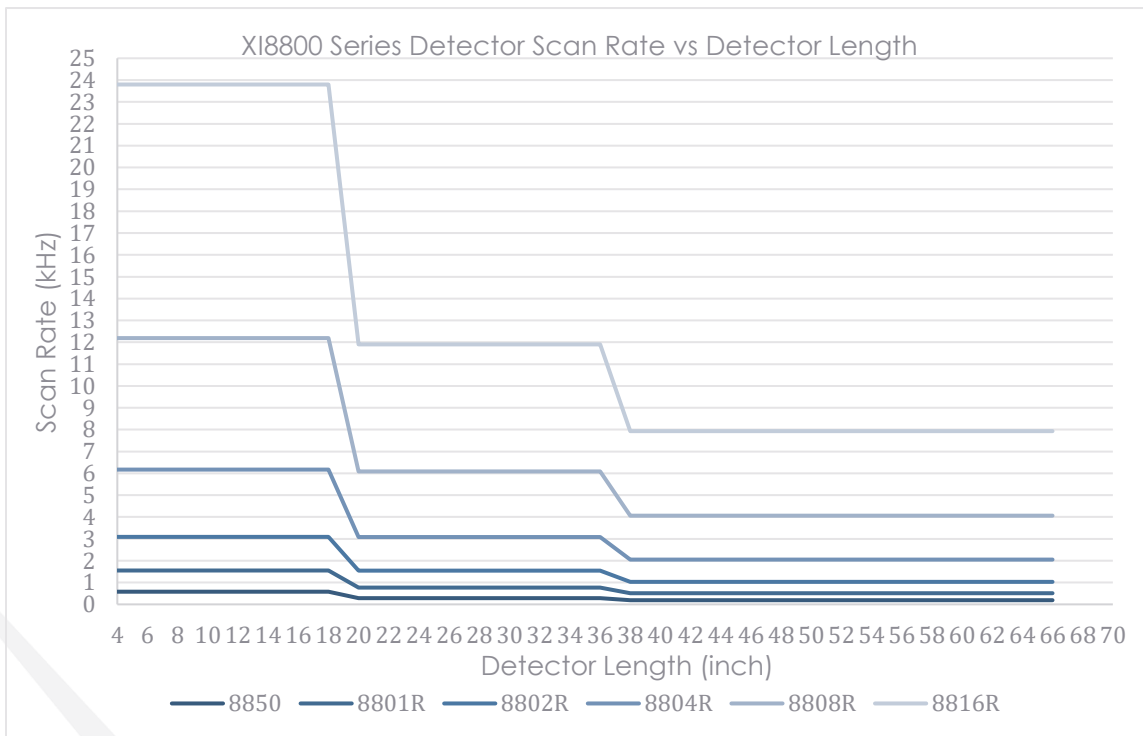
Industrial non-destructive testing (NDT)

Model: XI88_{LLL}-[LLL]¹

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

¹ Active length is 25.6 mm × LLL, where LLL is the detector length in multiples of 2 inches and greater than 8 inches (minimum length is 205 mm with no maximum limit). The maximum line rate is available for LLL ≤ 18 (461 mm). Depending on scintillator choice, image quality may be degraded at line rates greater than 1 kHz.

Scan Rate



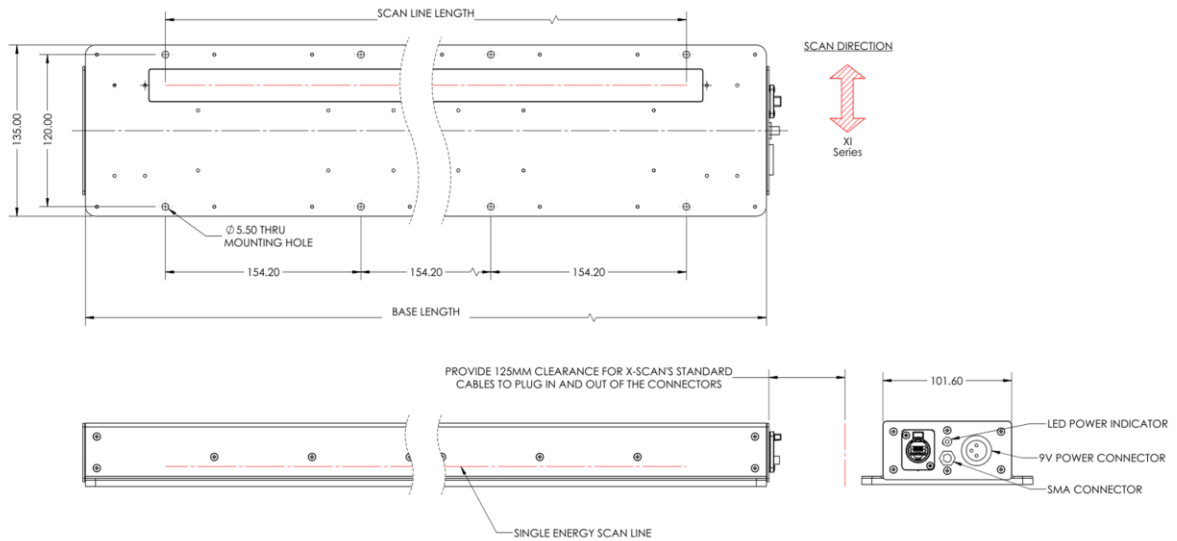
Calculate conveyor speed or object velocity by multiplying (resolution * scan rate).
 Example XI8804 16 inches long, the maximum velocity is (0.4 mm * 6 kHz) = 2.4 m/s

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

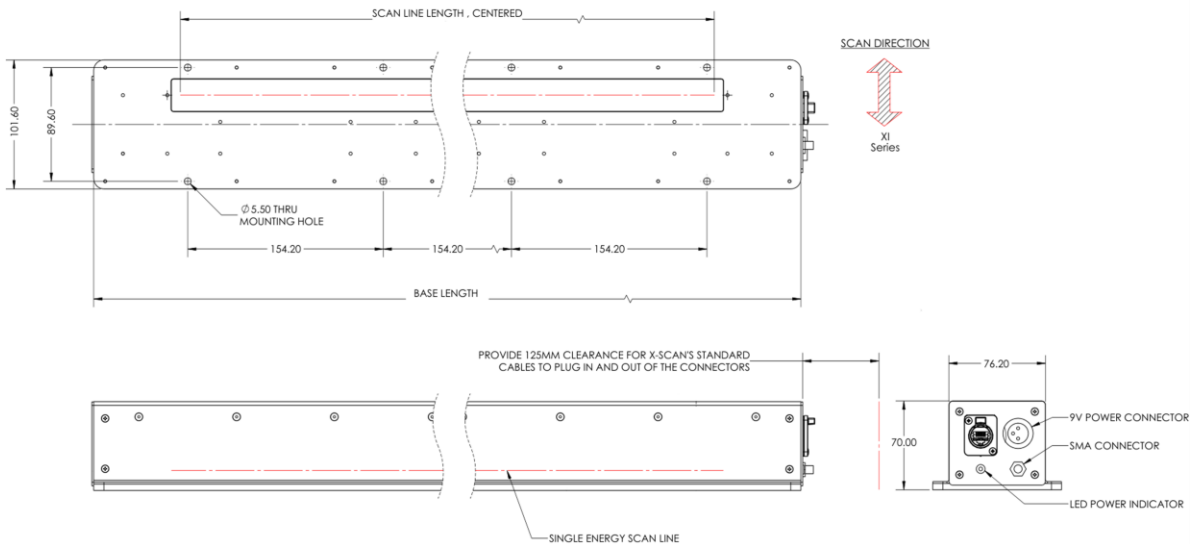
Mechanical Configurations

X-Scan Imaging housings are available in two form factors. The SR housing is a low profile, wider detector to fit under conveyor systems or other tight spaces. The SS 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.

SR (dimensions in mm):

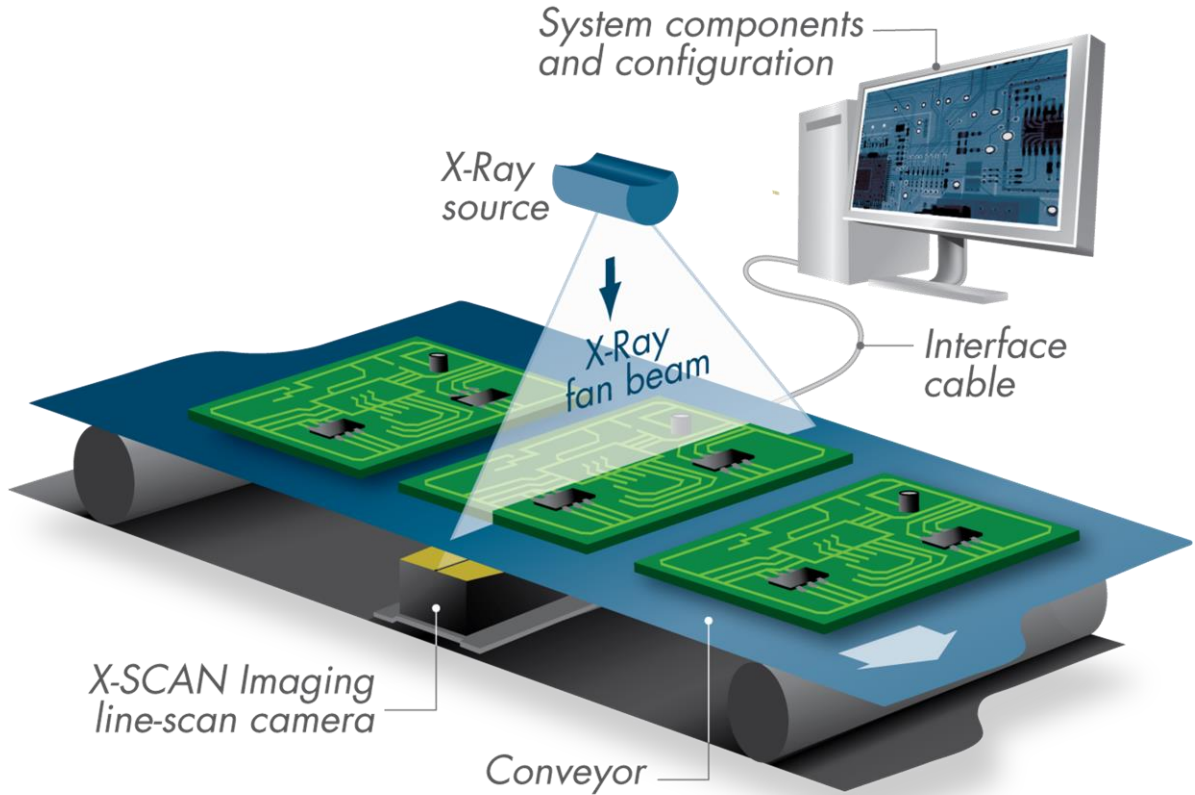


SS (dimensions in mm):



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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