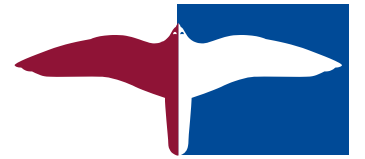


## X-ray Line-Scan Camera Series



# 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

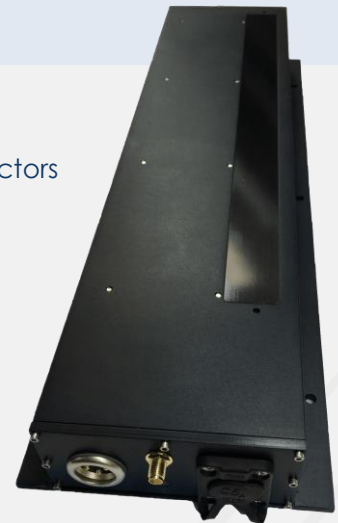
Supports variable scan speed with position synchronization

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

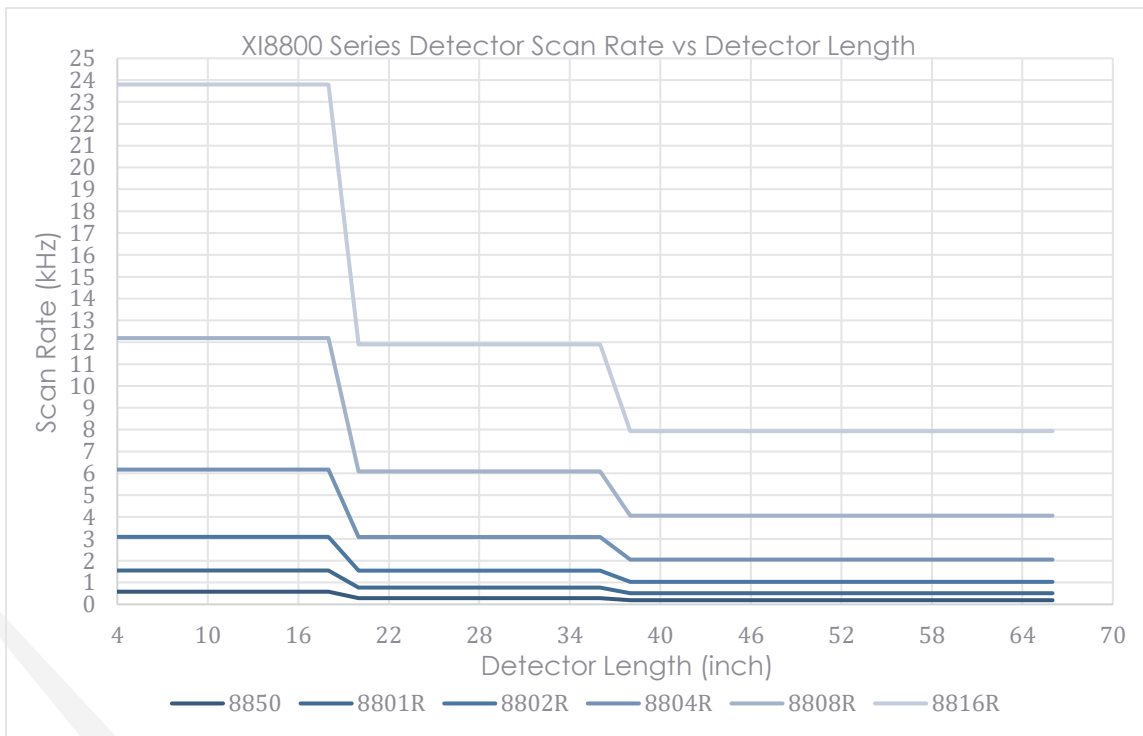
Industrial non-destructive testing (NDT)

## Model : XI88<sub>LLL</sub>-[LLL]<sup>1</sup>

|                                   |           |           |           |          |          |          |
|-----------------------------------|-----------|-----------|-----------|----------|----------|----------|
| 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   |

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

## Scan Rate



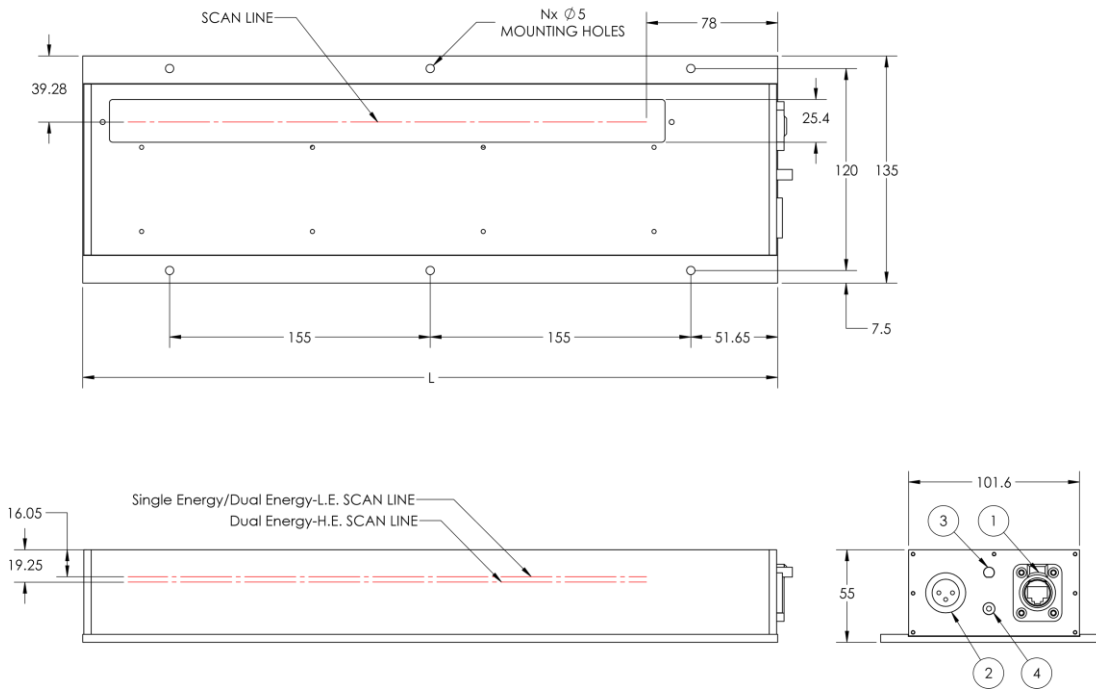
Calculate conveyor speed or object velocity by multiplying (Resolution \* Scan Rate)  
 Example XI8804 16 inches long, Maximum velocity is (0.4mm \* 6kHz) = 2.4m/s

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

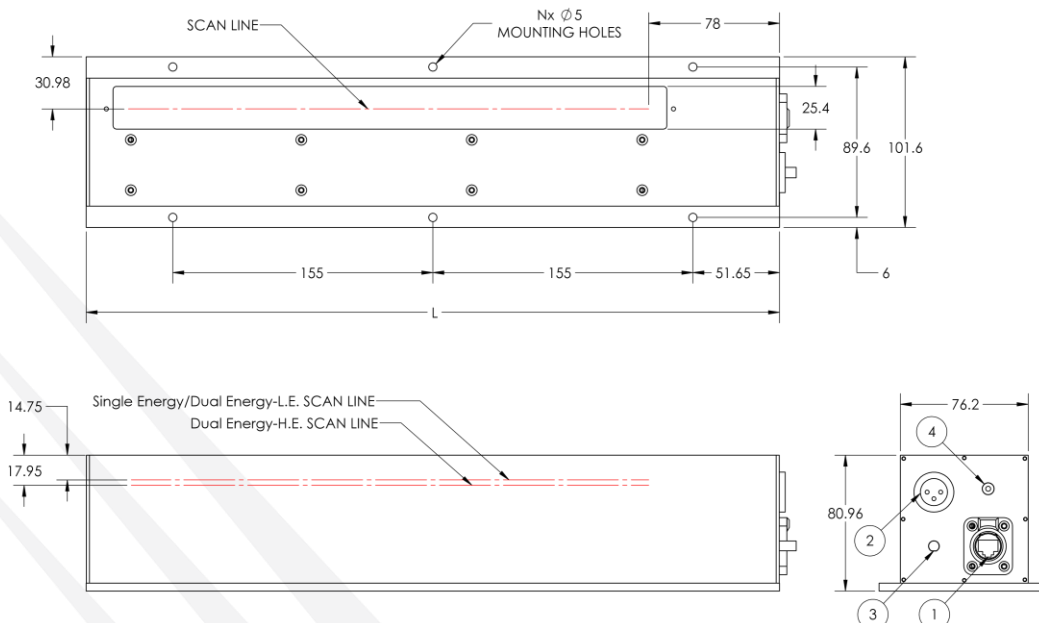
## Mechanical Configurations

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:

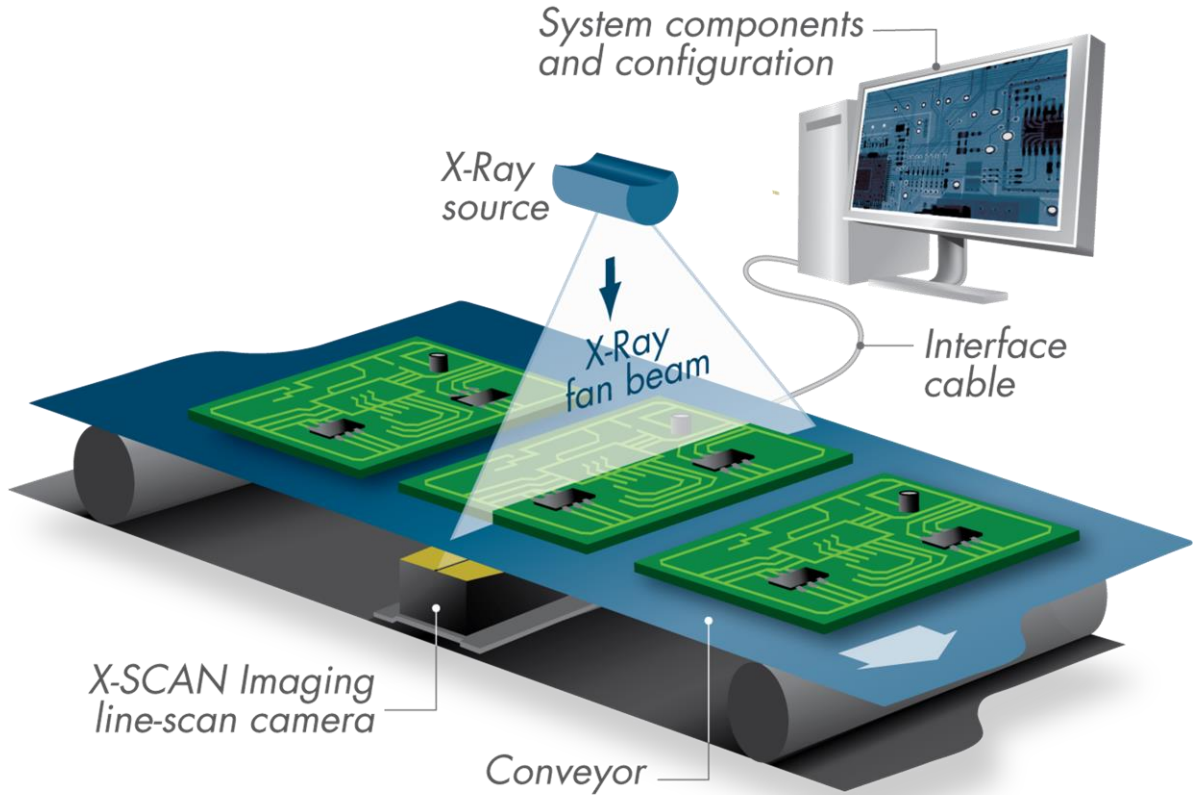


### DS:



## 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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