

High-Energy X-ray Line-Scan Camera Series

XIH8800 Series

The X-Scan Imaging XIH8800 series of linear array x-ray cameras offers high performance for high-energy x-ray and gamma-ray scanning applications in a compact form factor. A heavy-metal housing shields diode arrays and electronics ensuring long-life reliability under extreme radiation conditions. A wide selection of scintillation material converts high-energy photons into visible light, fiber optics convey the visible light to a shielded, off-axis CMOS imaging linear diode array (LDA) while providing a wide dynamic range, optimization of sensitivity and resolution, and solid-state reliability. 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 systems.

Key Features

- Off-axis, fiber-optic design for high-energy reliability in a compact form factor
- 50 KeV to 15 MeV energy range
- Choice of scintillators: GOS:Tb, CsI:Tl, CWO
- Wide range of resolutions & selection of lengths
- Incorporates X-Scan Imaging's proprietary photodiode arrays
 - Selectable resolution
 - 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
- GigE/Camera Link/USB3 interface

Applications

- Industrial non-destructive testing (NDT)
- Weld and corrosion inspection
- Fan-beam computed tomography (CT)



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Models

Model : XIH88_{□□}-[LLL]ⁱ

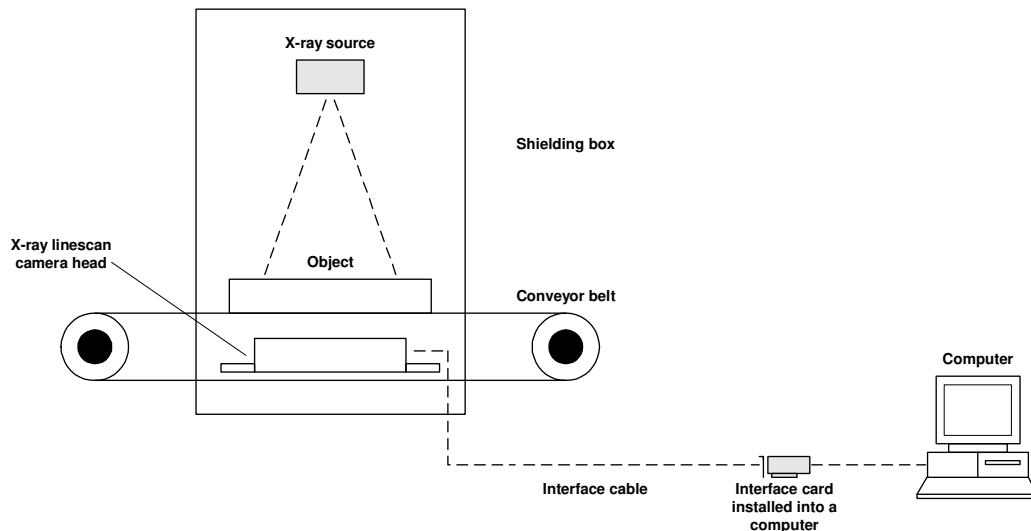
Model series	XIH8850	XIH8801	XIH8802	XIH8804	XIH8808	XIH8816
Resolution	50 μm	0.1 mm	0.2 mm	0.4 mm	0.8 mm	1.6 mm
Number of pixels	<i>LLL</i> × 512	<i>LLL</i> × 256	<i>LLL</i> × 128	<i>LLL</i> × 64	<i>LLL</i> × 32	<i>LLL</i> × 16
Maximum line rate ⁱⁱ	550 Hz	1500 Hz	3 KHz	6 KHz	12 KHz	23 KHz

ⁱ Active Length is (25.6 mm × *LLL*) where *LLL* is a multiple of 6 and *LLL* ≥ 12 (minimum length is 308 mm and no maximum length limit).

ⁱⁱ 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.

Setup

The XIH8800 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. The objects to be scanned should be passed between the x-ray source and the camera.



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