

X-Ray Line-Scan Camera Series



Hawk XID Dual Energy

The X-Scan Imaging XID8800 series of dual-energy linear diode array (LDA) X-ray cameras offer high performance and capability to differentiate materials in a variety of applications. At the heart of a XID8800 camera are X-Scan Imaging's CMOS silicon imaging detector diode array chips providing wide dynamic range and solid-state reliability. A wide selection of filter and scintillation materials select and convert X-rays for detection by the imaging array and

optimizes X-ray energy discrimination, 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 software expedite development.

Key Features

Extract material of a target from dual-energy image data

Incorporates X-Scan Imaging's proprietary XB8800 photodiode detectors

- High resolution with varieties of filters and scintillators
- Low noise, wide dynamic range, high sensitivity, high X-ray energy contrast
- X-ray energy range options for:
 - Low X-ray energy range (25 – 100 keV)
 - High X-ray energy range (45 – 160 keV)

Variable scan speed with position synchronization

16-bit analog-to-digital conversion

Software development kit

- Device drivers, libraries, standard API



Applications

Food and industrial inspection requiring high contrast
 Composite material sorting and inspection
 Security and cargo screening
 Waste sorting and recycling
 Rare metal or mineral detection
 Drug detection and control

Filter Material

Copper 0.250, 0.400, 0.800 mm standard
 Filter material can be customized

Adjustable low energy / high energy integration times

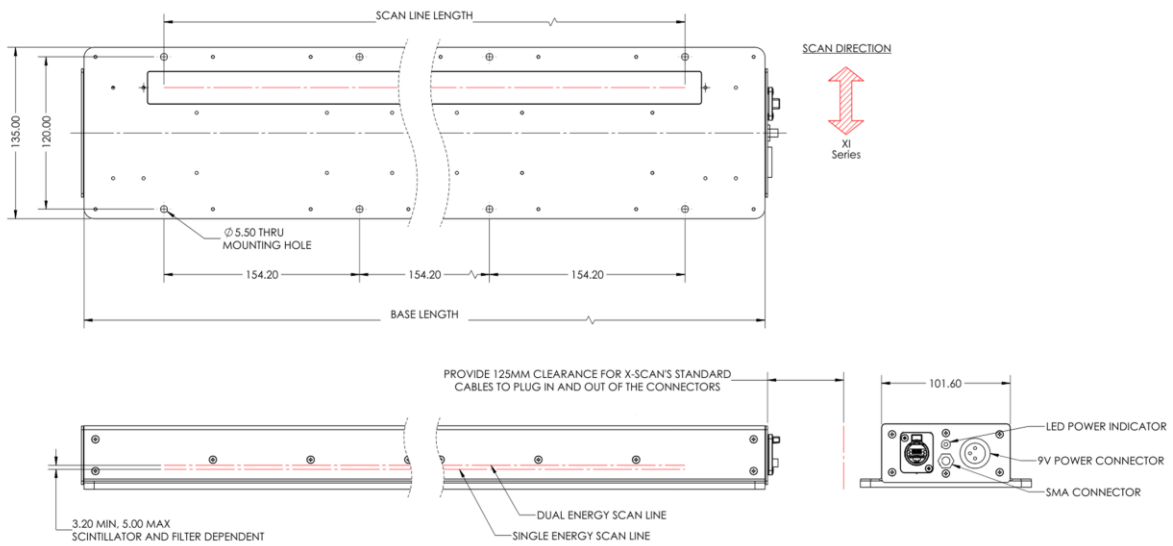
Model	Active length ⁱ	Number of pixels		
		XID8804 Series	XID8808 Series	XID8816 Series
XID88 _{uv} -012	307 mm	768 × 2	384 × 2	192 × 2
XID88 _{uv} -018	461 mm	1152 × 2	576 × 2	288 × 2
XID88 _{uv} -024	614 mm	1536 × 2	768 × 2	384 × 2
XID88 _{uv} -036	922 mm	2304 × 2	1152 × 2	576 × 2
XID88 _{uv} -048	1229 mm	3072 × 2	1536 × 2	768 × 2

ⁱ Other detector lengths are available upon request. Minimum active length is 154 mm.

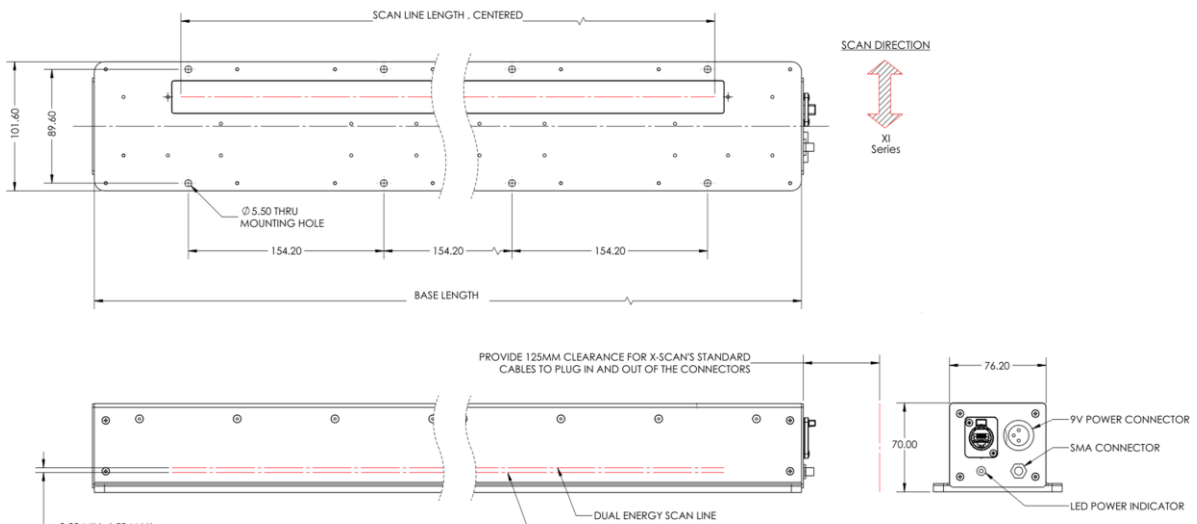
Mechanical Configurations

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):

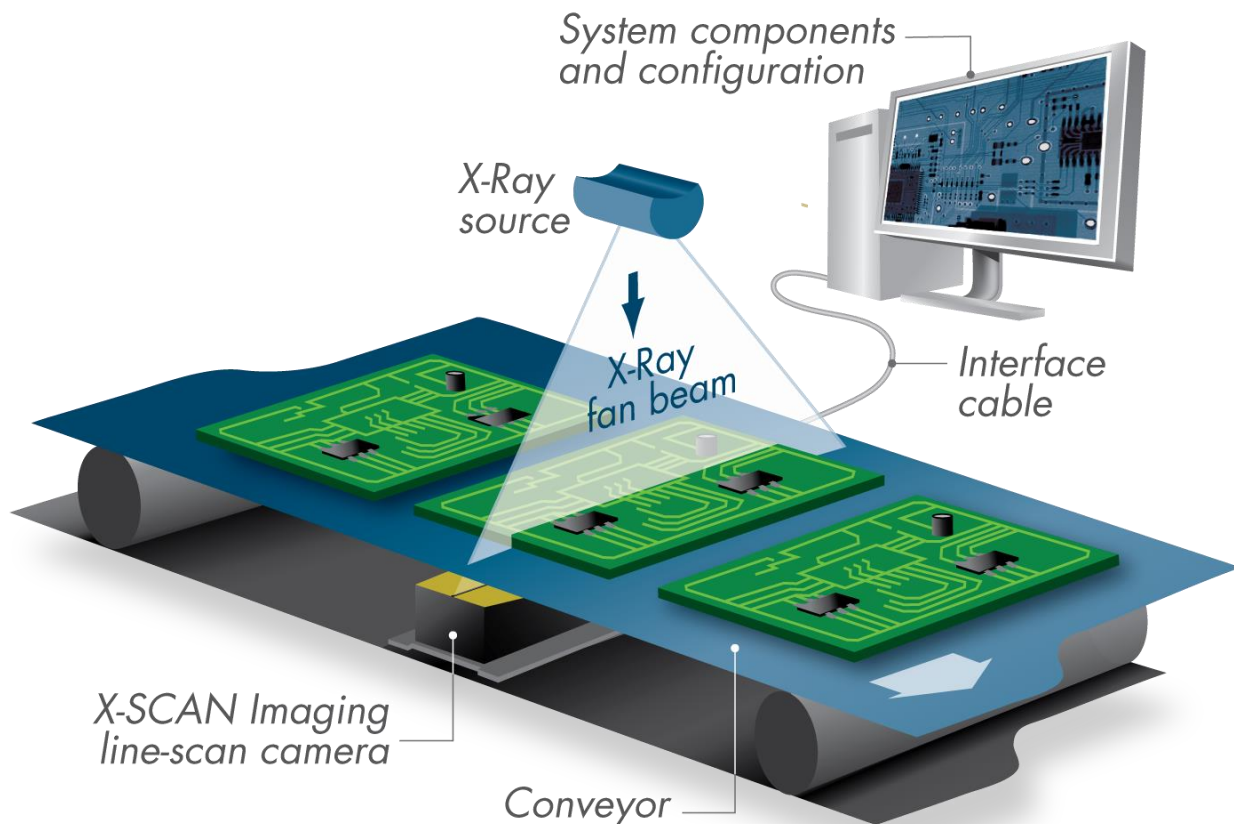


SS (dimensions in mm):



Setup

The XID8800 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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