X-SCAN IMAGING

X-ray Line-Scan Camera Series

HAWK

Hawk XID Dual Energy

The X-Scan Imaging XID8800 series of dual-energy linear array 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 diode 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 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

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, 0.800mm standard
Filter material can be customized.

Adjustable low energy/high energy integration times

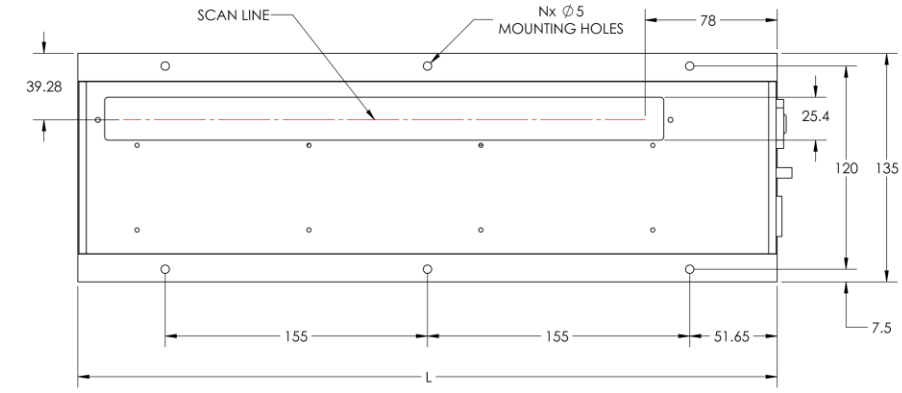
Model	Active length[i]	Number of pixels		
		XID8804 Series	XID8808 Series	XID8816 Series
XID88␣␣-12	307 mm	768 × 2	384 × 2	192 × 2
XID88␣␣-18	461 mm	1152 × 2	576 × 2	288 × 2
XID88␣␣-24	614 mm	1536 × 2	768 × 2	384 × 2
XID88␣␣-36	922 mm	2304 × 2	1152 × 2	576 × 2
XID88␣␣-48	1229 mm	3072 × 2	1536 × 2	768 × 2

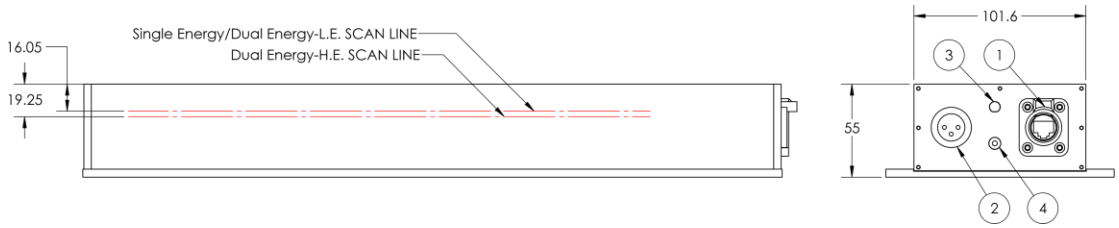
[i] Other detector lengths are available upon request. Minimum active length is 154mm.

Mechanical Configurations

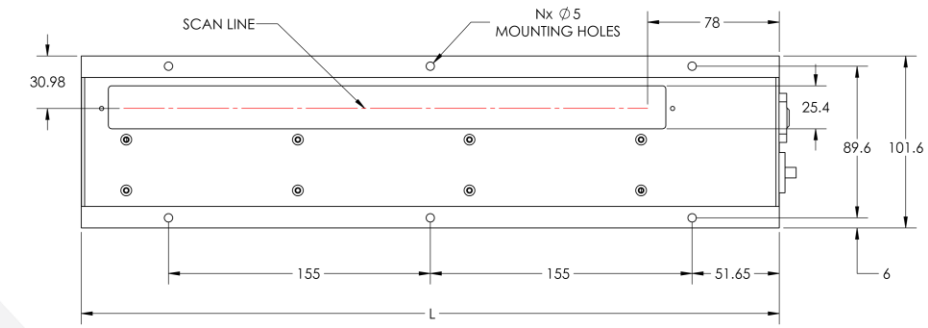
X-Scan Imaging housings are available in two form factors. The DR housing is a low profile, wider detector to fit under conveyor systems or other tight spaces. The DS housing is a taller, narrower profile. The standard X-Scan Imaging detectors, Single Energy, Dual Energy, and CMOS TDI all share the same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

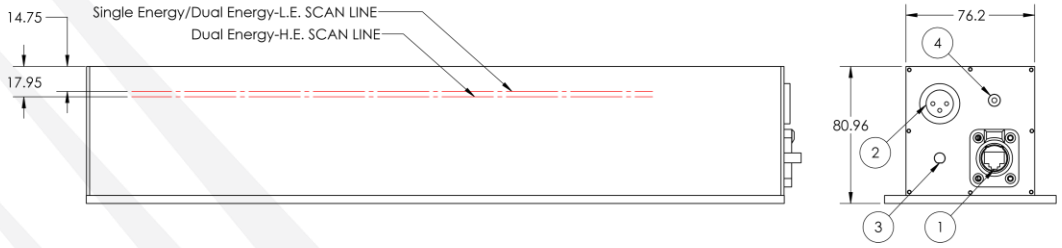
DR:





DS:





Setup

The 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.