

# Linear Imaging Detector and Software

**kromek**<sup>®</sup>  
detect image identify



## eV3500™

### Linear Imaging Detector and Software

The eValuator™-3500 is a fully integrated Photon Counting energy discriminating CZT detector. This includes, an on-board FPGA allowing true “real time” operation.

### Why CZT Detectors?

Density and Atomic Number Determination  
High Efficiency + Low noise = Low Dose

The solid-state detector technology, Cadmium Zinc Telluride (CZT), provides superior efficiency and energy discrimination capabilities vs conventional Scintillation-based detectors.

CZT based detectors are rapidly becoming the technology of choice in many of today’s most advanced medical, industrial, and security applications.

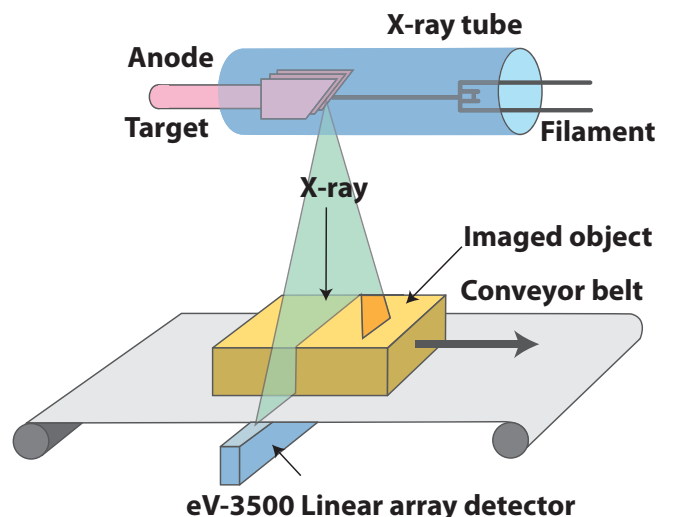
Increasingly x-ray Imaging requirements demand superior x-ray detection. As a result, all the major medical imaging companies are investing \$millions into CZT detector technology.

### Applications

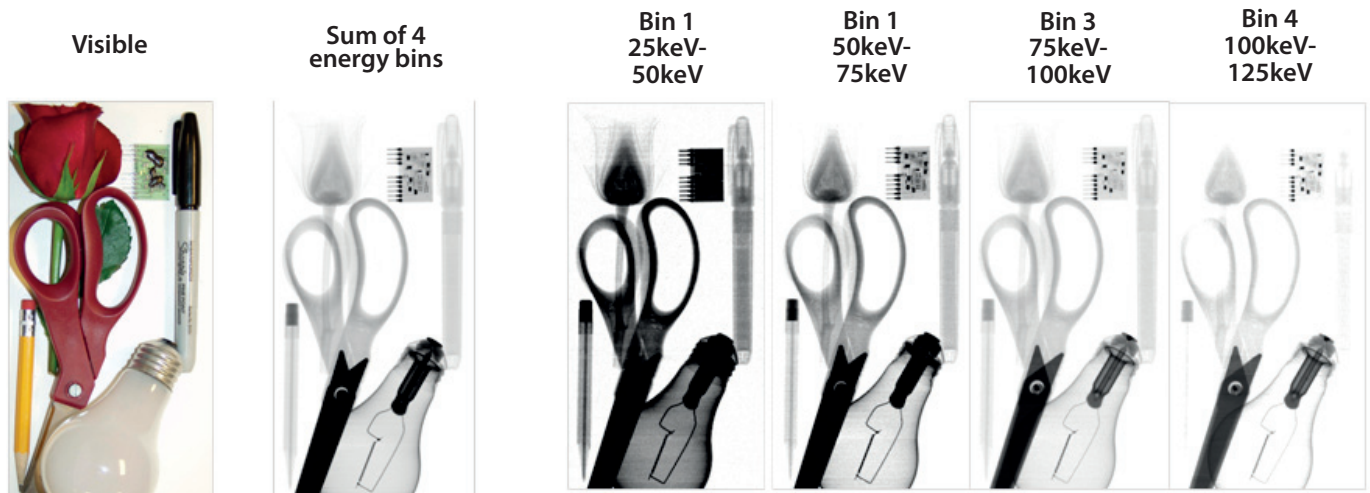
- Medical
  - Bone Mineral Densitometry
  - CT
  - Mammography
  - Research
- Security
  - Explosives Detection
- Industrial Food Inspection
  - Fat / Lean analysis
  - Contaminant Inspection
  - Process Control
- Laboratory and research imaging

### Features

- Low noise
- High efficiency
- 5 Photon energy thresholds
  - Independently tunable
- Solid state detector technology
- Integrated electronics
- Non-hygroscopic sensor
- Real-time imaging



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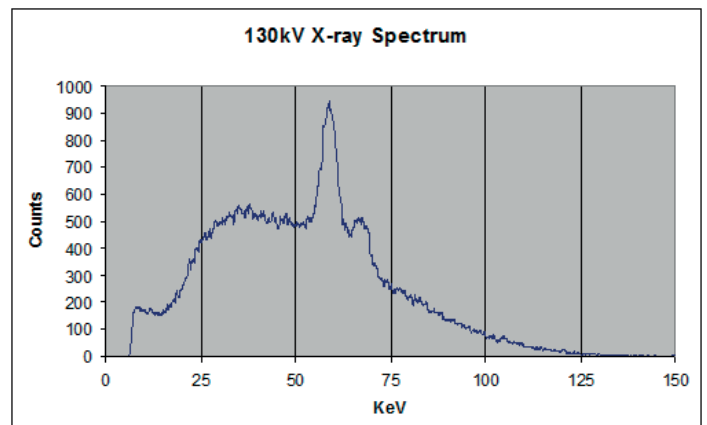


## Specifications

- CZT Semiconductor
- Length: 128mm to 1024 mm
- Tile up to >1 meter length
- Pixel Pitch: 2 pixels / mm length
- Custom Pixel Geometries available
- Energy Range: 20keV – 160keV
- Integrated high voltage power supply
- Power Input: 3V, 5V, 12V
- Communication:
  - USB 2.0 or
  - Ethernet
- Power LED indicator
- HV LED indicator
- Software designed for Windows™ and Linux
- 160nS peaking time
- Integration Period: minimum 250  $\mu$ S

## X-ray Operational Specifications

- 20-160 KVP
- 1 Million cps/pixel
- Operating Temperature 25°C to 40°C
- Recommend minimum 2mm Aluminum Filtration on X-ray output



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### Kromek Group plc

**UK** NETPark Thomas Wright Way Sedgfield County Durham TS21 3FD T: +44 (0) 1740 626060

**USA** Jackson's Pointe 143 Zehner School Road Zelenople PA 16063 T: +1 724 352 5288

E: sales@kromek.com W: www.kromek.com