X-Scan iL2 DE Series

X-ray dual energy linear array detector

APPLICATIONS

- Food industry
- Clothing industry
- Raw material sorting

KEY FEATURES AND BENEFITS

- X-ray energy range: 40-110kVp
- Active length: 410 mm
- Pixel pitch options: 0.4 mm and 0.8 mm
- 14-bit A/D, Dynamic range: > 4000
- Optimized energy separation in low energy range
- Accurate low and high energy alignment by hardware design and innovative algorithm
- Finely tuned dual energy algorithm for versatile applications
- Increased radiation hardness for a longer detector lifespan and reduced life time cost
- Industry leading image quality and speed with high performance DT proprietary photodiode and ASIC designs
- USB 2.0 interface
- Rapid evaluation and software development with DT demo SW and SDK

X-Scan iL2 DE Series | The X-Scan iL2 DE Series is an enhanced product family of dual energy linear array detectors for Food and other Industrial applications requiring material discrimination.

The detector produces industry-leading quality image with reduced dark image noise and increased sensitivity.

The optimized scintillator structure brings about the superior energy separation when X-ray energy < 110kVp. Low and high energy alignment accurate to sub-line level makes a precise image registration. Finely tuned dual energy SDK satisfies the most challenging material differentiation demand.

GENERAL CHARACTERISTICS

PRODUCT	X-Scan 0.4iL2-410 DE-USB-L	X-Scan 0.8iL2-410 DE-USB-L
X-ray tube voltage Vp range	40-110 kVp	
Scintillator of low energy	Phosphor screen	
Scintillator of high energy	Pixelated ceramic	
Active area lengths	410 mm	410 mm
Number of pixels	2048 Low energy: pixel 0-1023 High energy: pixel 1024-2047	1024 Low energy: pixel 0-511 High energy: pixel 512-1023
Pixel pitch (spacing)	0.40 mm	0.80 mm
Pixel height	0.60 mm	0.80 mm
Pixel width	0.32 mm	0.72 mm
Maximum scanning speed	121 cm/s	242 cm/s
Minimum integration time	0.33 ms	
Maximum integration time	128 ms	
A/D Resolution	14 bits	
Dynamic range	> 4000	
Data digital interface	16 bits	
Interface	USB 2.0	
Linearity	> 99 %	
Operational voltage	+12 V DC	
Power consumption	30 W Max	
IP classification	IP50	
Operational temperature	0 - +40°C	
Operational humidity	30 - 80 %	
Storage temperature	-10 - +50°C	
On-board calibration	Yes	
Binning function	Yes	
AD Gain/Offset calibration	Yes	
Averaging and summing functions	Yes	
Temperature drift compensation	Yes	
LE/HE registration	Yes	
Dual energy SDK	Yes	