

X-Scan f5 Series

X-ray linear array detector



X-Scan f5 Series | The X-Scan f5 Series is an enhanced product family of high performance linear array detectors for Food, Pharmaceutical and other Industrial Inspection applications.

Increased radiation hardness increases the lifespan of the detector, reducing the lifetime cost of the system.

APPLICATIONS

- Food inspection
- Pharmaceutical inspection
- Raw material sorting
- Foreign particle detection
- Thickness measurement
- Tire inspection
- Foreign particle detection
- Non-destruction testing

KEY FEATURES AND BENEFITS

- X-ray energy range: 30 – 160 kVp
- Active length options: from 102 mm to 1638 mm
- Pixel pitch options: 0.2 mm, 0.4 mm and 0.8 mm
- 14-bit AD, Dynamic range: > 4000
- New functionalities including pixel binning and temperature drift compensation
- CE marking (EMC standard compliance)
- High throughput design for maximum scanning speeds with long active detectors
- Increased radiation hardness for longer detector lifespan and reduced life time cost
- Industry leading image quality and speed with high performance DT proprietary photodiode and ASIC designs
- Increased sensitivity and reduced dark image noise for improved image quality
- USB 2.0 and frame grabber interfaces to meet a wide range of compatibility and performance requirements
- Rapid evaluation and software development with included X-View demo software, control library and sample source code



GENERAL CHARACTERISTICS			
PRODUCT	X-Scan 0.2f5	X-Scan 0.4f5	X-Scan 0.8f5
X-ray tube voltage Vp range	30-160 kVp		
Scintillator material	GOS		
Active area length	102-1229 mm	102-1638 mm	256-1638 mm
Number of pixels	512-6144	256-4096	320-2048
Pixel pitch (spacing)	0.20 mm	0.40 mm	0.80 mm
Pixel height	0.30 mm	0.60 mm	0.80 mm
Pixel width	0.15 mm	0.32 mm	0.72 mm
Maximum scanning speed			
- Active lengths of (102-820 mm)	60 cm/s	166 cm/s	666 cm/s
- Active lengths of (922-1229 mm)	32 cm/s	121 cm/s	333 cm/s
- Active lengths of (1434-1638 mm)		65 cm/s	
Maximum Integration Time			
- Active lengths of (102-820 mm)	0.33 ms	0.24 ms	0.12 ms
- Active lengths of (922-1229mm)	0.62 ms	0.33 ms	0.24 ms
- Active lengths of (1434-1638 mm)		0.62 ms	
Maximum integration time	128 ms		
A/D resolution	14 bits		
Dynamic range	> 4000		
Data digital interface	16 bits		
Interface	USB 2.0 or Frame grabber (Control: RS232, Image: RS422)		
Linearity	> 99 %		
Operational voltage	+12 V DC, range: 10.5 V - 13.5 V		
Power consumption	60 W max		
IP classification	IP50		
Operational temperature	0 - 40°C		
Operational humidity	30 - 80 %		
Storage temperature	-10 - +60°C		
On-board calibration	Yes		
Binning function	Yes		
AD Gain/Offset calibration	Yes		
Averaging and summing function	Yes		
Temperature drift compensation	Yes		
Support multi USB detectors	Yes		
CE marking	EMC standard compliance (EN61326-1:2013, EN61000-3-2:2006+A1+A2 and EN61000-3-3:2008)		

ENCLOSURES OF THE X-SCAN F5 SERIES					
PRODUCT MODEL	Active length	Length	Width	Height	Weight
X-Scan f5-102	102 mm (4.0")	348 mm (13.7")	160 mm (6.3")	50 mm (2.0")	6 kg (13 lbs)
X-Scan f5-156	156 mm (6.0")				
X-Scan f5-205	205 mm (8.1")				
X-Scan f5-256	256 mm (10.1")				
X-Scan f5-307	307 mm (12.1")				
X-Scan f5-410	410 mm (16.1")	450 mm (17.7")	160 mm (6.3")	50 mm (2.0")	7 kg (15 lbs)
X-Scan f5-512	512 mm (20.2")	552 mm (21.7")	160 mm (6.3")	50 mm (2.0")	10 kg (22 lbs)
X-Scan f5-614	614 mm (24.2")	655 mm (25.8")	160 mm (6.3")	50 mm (2.0")	12 kg (26 lbs)
X-Scan f5-717	717 mm (28.2")	759 mm (29.9")	160 mm (6.3")	50 mm (2.0")	13 kg (28 lbs)
X-Scan f5-820	820 mm (32.3")	860 mm (33.9")	160 mm (6.3")	50 mm (2.0")	15 kg (33 lbs)
X-Scan f5-922	922 mm (36.3")	962 mm (37.9")	160 mm (6.3")	50 mm (2.0")	16 kg (35 lbs)
X-Scan f5-1229	1229 mm (48.4")	1270 mm (50.0")	160 mm (6.3")	50 mm (2.0")	21 kg (46 lbs)
X-Scan f5-1434	1434 mm (56.5")	1474 mm (58.0")	160 mm (6.3")	50 mm (2.0")	25 kg (55 lbs)
X-Scan f5-1638	1638 mm (64.5")	1678 mm (66.1")	160 mm (6.3")	50 mm (2.0")	28 kg (62 lbs)

DETECTION TECHNOLOGY PLC

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