

X-Scan U Series

X-Scan linear array detector



X-Scan U Series is an enhanced product family of U-shaped X-ray line cameras specifically developed and optimized for high-speed digital tire inspection utilizing panoramic X-ray sources.

Increased radiation hardness for increased detector lifetime, together with excellent reliability minimizes significantly the lifetime cost of the systems.

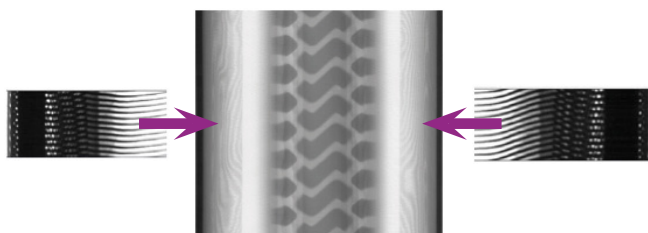
The entire standard series covers a broad range of tire applications from passenger car and truck tires to off-the-road tires with detector active lengths from 1382mm up to 3379mm, covering tire bead sizes of 15-17 and 20-35 inches.

APPLICATIONS

- Passenger car tire inspection
- Truck tire inspection
- Off-the-road tire inspection

KEY FEATURES

- X-ray source energy range: 30–160 kVp
- Active lengths: From 1382mm to 3379mm
- Pixel pitches: 0.4mm and 0.8mm with binning
- Min integration time: 0.22ms
- 16-bit AD, dynamic range: > 4000:1
- Industry leading image quality and speed
- Especially designed for high temperature, humid and contaminated environment
- Remote firmware upgrade
- Optimized design for tire applications covering tire bead sizes of 15-17 and 20-35 inches
- Easy software design based on DT's Software Development Kit
- CE marked (EMC standard compliance)
- GigE interface



GENERAL CHARACTERISTICS

PRODUCT	X-Scan U01041382A	X-Scan U01041434A	X-Scan U01043379A
X-ray energy range KV	30-160 KV		
Scintillator material	GOS		
Active area length	1382 mm	1434 mm	3379 mm
Number of pixels	3456	3584	8448
Pixel pitch (spacing)	0.4 mm	0.4 mm	0.4 mm
Pixel height	0.6 mm	0.6 mm	0.6 mm
Pixel width	0.32 mm	0.32 mm	0.32 mm
Max scanning speed	138 cm/s	138 cm/s	57 cm/s
Min integration time	0.29 ms	0.29 ms	0.7 ms
Max integration time	128 ms	128 ms	128 ms
X-Card type	X-Card2 0.4-128G	X-Card 0.4-128G	X-Card2 0.4-128G
X-Card number	27	28	66
X-Card arrangement	3-3-3-3-3-3-3-3	8-1-10-1-8	20-2-22-2-20
Gap among segments	<0.2 mm	<0.3 mm	<0.3 mm
IP classification	IP43		
Weight	~34 Kg	~22 Kg	~120 Kg
Power consumption	~17 W	~18 W	~42 W
A/D resolution	16 bits		
Dynamic range (@1pf feedback cap)	> 4000		
Data digital interface	16 bits		
Interface	GigE (Camera link as an option)		
Linearity	> 99 %		
Operational voltage	+12V or +24V DC		
Operational temperature	0-65°C		
Operational relative humidity (non-condensing)	30-80%		
Storage temperature	-10-70°C		
Lifetime under x-ray	10M rads		
On-board calibration	Yes		
Pixel discontinuity correction	Yes		
Dead pixel correction	Yes		
Non-linear calibration in SW	Yes		
Binning function	Yes		
Averaging and summing function	Yes		
Remote firmware upgrade function	Yes		
Multi-detector support	Yes		
CE marking	EMC standard compliance (EN61326-1:2013, EN61000-3-2:2006+A1+A2 and EN61000-3-3:2008)		

DETECTION TECHNOLOGY PLC

Elektroniikkatie 10
90590 Oulu Finland

Tel. +358 20 766 9700
Fax +358 20 766 9709

contact@deetee.com
www.deetee.com

All images © Detection Technology
DS0000025E