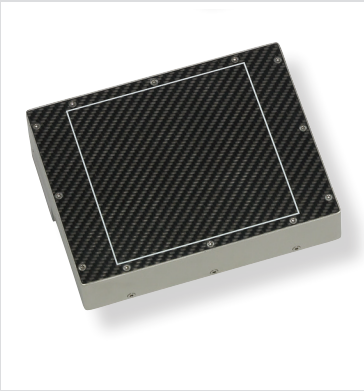
Xineos-1313

CMOS Flat Detector for Dynamic X-ray Imaging



Xineos CMOS flat detectors deliver high speed, low dose imaging at full resolution.

The Xineos-1313 offers advanced capabilities including 30 frames per second performance at 13 cm x 13 cm imaging area with full 100 μm pixel resolution. Add to that the industry's lowest electronic noise and a Gigabit Ethernet interface that will reduce your system cost and ease your design-in efforts.

The Xineos-1313 is also compatible with frame-based panoramic imaging. At full resolution with a 1 cm x 13 cm Region of Interest, frame rates in excess of 300 fps are achieved.

The Xineos-1313 detector has been designed for the lowest dose fluoroscopic imaging. Its CMOS technology enables real time imaging for orthopedic and other diagnostic and interventional applications that require real-time imaging at the lowest possible patient dose.

Key Features

- 100 μm CMOS Active Pixel Design
- Best-in-class DQE at any dose level
- Low readout noise
- Negligible image lag
- Up to 45 fps at full resolution
- GigE and CameraLink interface options

Typical Applications

- Dental 3D-CBCT
- Orthopedics
- Veterinary
- 6" II-CCD replacement

Specifications

	CD22 models	CD33 models
Saturation Dose (RQA5)	2 uGy (0.2 mR)	9 uGy (0.9 mR)
Dynamic Range	69 dB	72 dB
Random Noise	6 ADU	4 ADU
DQE(0) (RQA5)		
- @>10% of Saturation Dose	70%	70%
- @10 nGy (1 μR)	68%	

	All Xineos-1313 models
Resolution	1316x1312 pixels (1.7 Mpxl)
Pixel Pitch	100.1 μm
Active Area	131x131 mm (5.1"x5.1")
MTF (@1 lp/mm, RQA5)	58%
Frame Rate	30 fps (GigE) / 45fps (CL) 60 fps in 2x2 binning mode 300 fps in Panoramic ROI mode
ADC Conversion	14 bits (16.384 levels)
Image Lag	<0.1%
Data Interface	Gigabit Ethernet (GigE) or CameraLink Base (CL)
Power Supply	+12 Vdc
Power Consumption	11 W (GigE), 8 W (CL)
Weight	2.4 kg (5.3 lbs)
Pb-shielding	Integrated
IP Classification	IP40
Operating Temperature	+10..+40°C
X-ray Energy Range	40..125 kV

TELEDYNE DALSA
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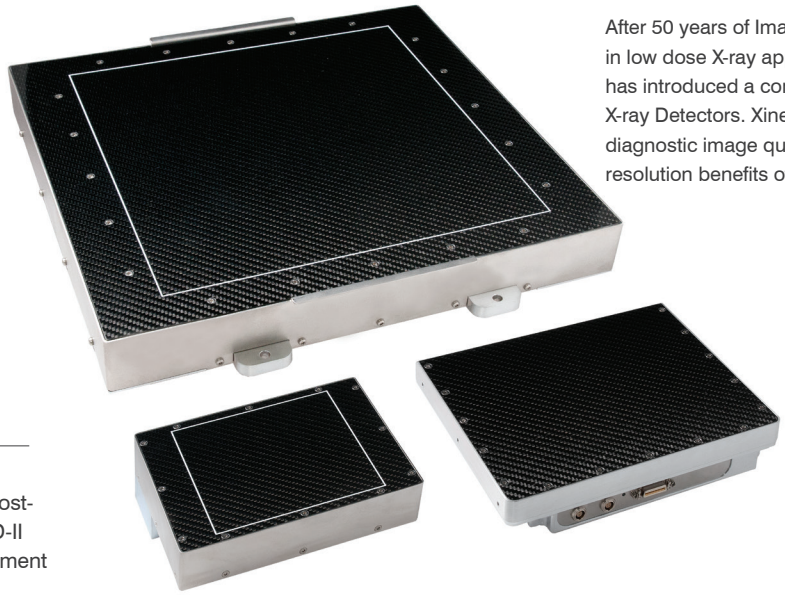
The Xineos Family

After 50 years of Image Intensifier (II) dominance in low dose X-ray applications, Teledyne DALSA has introduced a complete family of CMOS Flat X-ray Detectors. Xineos combines II-CCD low-dose diagnostic image quality with the form factor and resolution benefits of flat detectors.

Xineos-3030HR
Ultimate 12" detector delivering highest signal-to-noise ratio at low dose levels

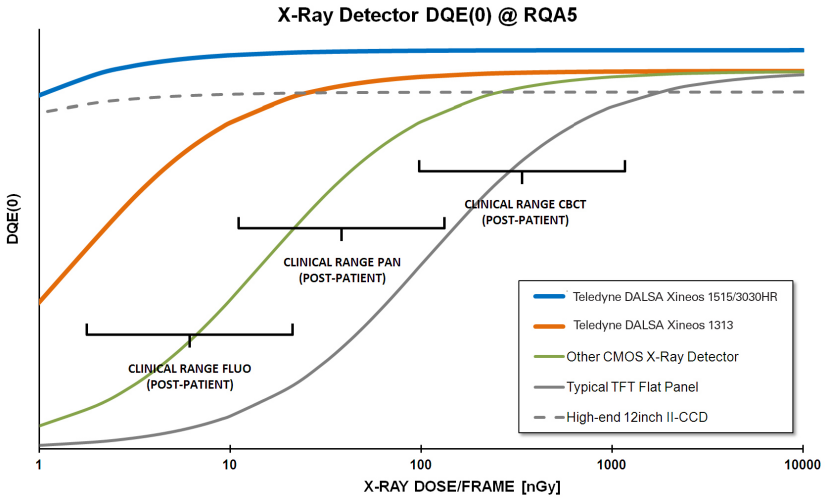


Xineos-1515
Extended field-of-view coverage with only 7.3 mm edge clearance

Xineos-1313
Compact and cost-effective 6" CCD-II camera replacement

Detective Quantum Efficiency (DQE):

To become an accurate indicator of detector performance, DQE value must be reported at a specific dose value. For dynamic X-ray applications the meaningful doses should be very low. This requirement is the primary goal of the Xineos architecture. While Xineos routinely achieves 70% or higher DQE at doses of 200 μR, the detector performance is not compromised at 1 μR entrance dose level.



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