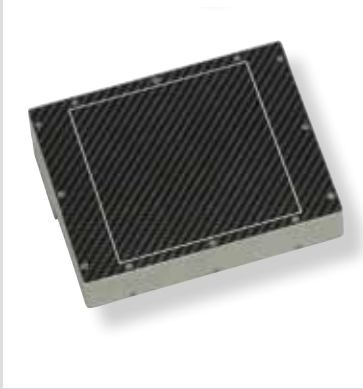


# Xineos-1313

CMOS Flat Detector for Dynamic X-ray Imaging



## Key Features

- 100  $\mu\text{m}$  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

## 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  $\mu\text{m}$  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.

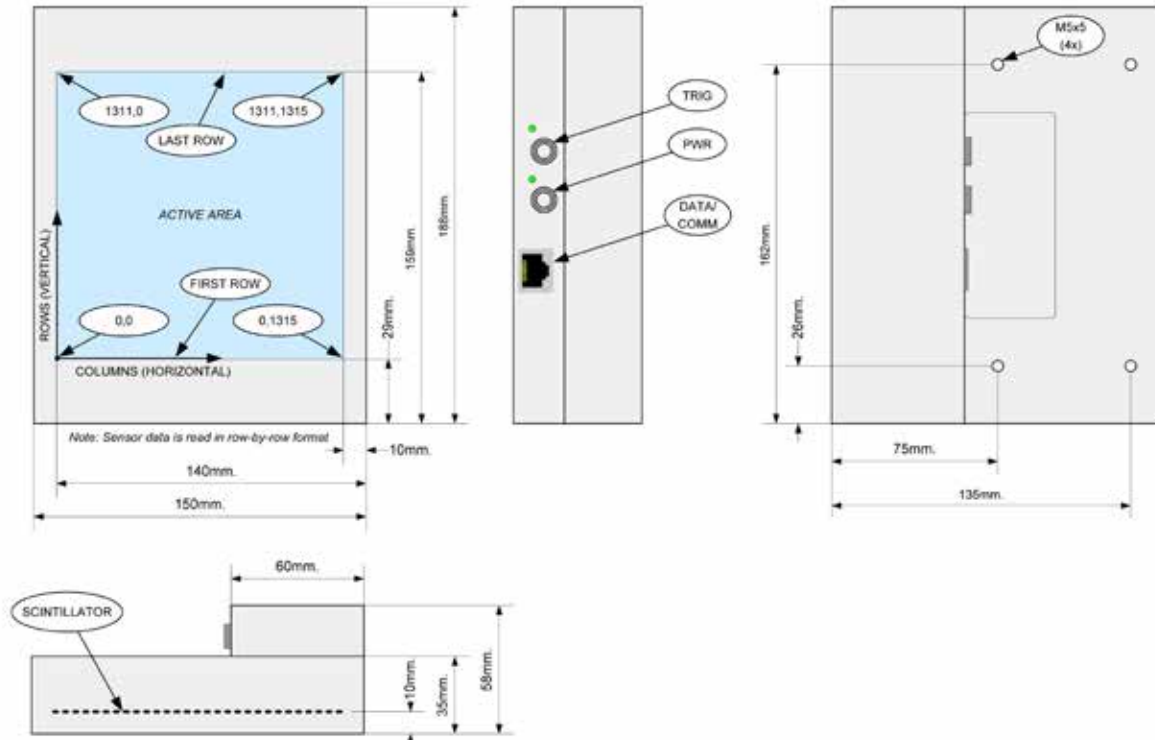
The Xineos-1313 detector has been designed for the lowest dose fluoroscopic imaging. Its CMOS technology enables real time imaging for orthopedic and other diagnostic and interventional applications that require real-time imaging at the lowest possible patient dose.

## Specifications

	High sensitivity model (CD22)	High dynamic range model (CD33)
Saturation Dose (RQA5)	2 $\mu\text{Gy}$ (0.2 mR)	9 $\mu\text{Gy}$ (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 $\mu\text{R}$ )	68%	
<b>All Xineos-1313 models</b>		
Resolution	1316x1312 pixels (1.7 Mpxl)	
Pixel Pitch	100.1 $\mu\text{m}$	
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	

# Xineos-1313

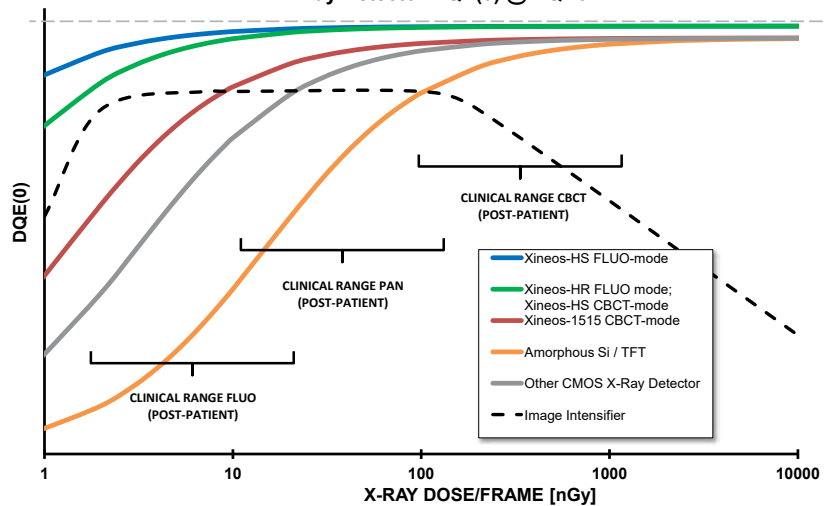
CMOS Flat Detector for Dynamic X-ray Imaging



## 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  $\mu$ R, the detector performance is not compromised at 1  $\mu$ R entrance dose level.

## X-Ray Detector DQE(0) @ RQA5



[www.teledynedalsa.com](http://www.teledynedalsa.com)

### Americas

Waterloo, ON  
+1 519-886-6000  
sales.sensors@teledynedalsa.com

### Europe

Eindhoven, The Netherlands  
+31 40-259-9000  
sales.sensors@teledynedalsa.com

### Asia Pacific

Tokyo, Japan  
+81 3-5960-6353  
sales.sensors@teledynedalsa.com

Shanghai, China  
+86 21-3368-0027  
sales.sensors@teledynedalsa.com

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