Xineos CMOS X-Ray Flat Detectors: Better Images, Lower Dose

Utilizing Teledyne DALSA’s latest generation proprietary radiation-hard CMOS Active Pixel design, the Xineos-HR Flat X-ray Detectors offer the industry’s highest spatial resolution available in a compact flat detector package. Offering temperature-stable imaging characteristics and eliminating the need for forced cooling, these Xineos detectors are easy to integrate and reliable, reducing system recalibration and maintenance requirements in critical, heavy-use imaging systems.

The Xineos-HR range is specifically designed to meet the demanding needs of clinical, scientific and industrial applications, by using an advanced switchable pixel design that combines a high dynamic range with unsurpassed signal-to-noise performance at the lowest exposure levels. These dynamic applications benefit from the increased detectability of small or low-contrast features while imaging lag-free at high frame rates in full resolution. Flexible zoom modes can be used to capture regions-of-interest at 100fps or even faster. Instantly after power-on, the detectors are ready to output crystal clean images and switching between different readout modes is instant.

Specifications (Typical Values @ RQA5)

**Parameter** | Xineos-2022HR | Xineos-3030HR
--- | --- | ---
Pixel Pitch | 99µm | 296x296mm²
Active Area | 204x221mm² | 2994x2997
Resolution | 205x2237 | 70dB / 75dB
Binning support | 1x1 / 2x2 | Medical-grade columnar CsI
Scintillator | 5uGy / 23uGy | 70% / 66%
Saturation Dose, RQA5 (per mode) | 68% | 64%
Dynamic Range (per mode) | 70%/30% | 58%/28%
MTF @ 1lp/mm / 2lp/mm | 60%/30% | 66%
DQE(0) @ 1uGy, RQA5 | 70% | 66%
DQE(0) @ 10uGy, RQA5 | 68% | 64%
Image Bit Depth | 14 bit | CameraLink (Full)
Data Interface | | 14 bit
Frame Rate | | CameraLink (Full)
ROI readout | | Centered 100%/70%/50% MAG modes
Trigger modes | | Internal or External (Continuous or Pulsed)
X-Ray Energy Range | 15.15kV | 311ps / 63fps
Power Consumption (active) | <15W | <18W
Dimensions (WxHxD) | 235x292x56mm | 327x377x55mm
Weight | 6kg | 9kg
UNLESS OTHERWISE SPECIFIED

1. UNITS: MM
2. DRAWING PER ASME Y14.5M-1994
3. TOLERANCES:
   LINEAR      ±0.15
   ANGLES     ±0.5
   SURFACE FINISH

A. COX
CASTOR
SEP 02/2014

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THIRD ANGLE PROJECTION

XINEOS-2022HR (CL) CUSTOMER DRAWING

02 ADDED MTG HOLES AND CORRECTED THE IMAGING PLANE DISTANCE.
CONNECTOR COVER PLATE REVISED. APR 06/2016 AC

Digitally signed by Ivan Bruulsema
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Date: 2016.04.08 11:51:52 -04'00'

Xineos-2022HR
CMOS Flat X-ray Detectors for Fluoroscopy
Xineos-2022HR & Xineos-3030HR
CMOS Flat X-ray Detectors for Fluoroscopy

Xineos-2022HR/3030HR Sensitivity (RQA5)

Xineos-2022HR/3030HR DQE and MTF (RQA5)

Teledyne DALSA has its corporate offices in Waterloo, Canada
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