

# XINEOS-1313 (CD55M112)

6" CMOS Flat X-Ray Detector for Dental 2-in-1 and Mini C-arm Systems



## KEY FEATURES

- Best in class low-dose image quality
- 99 µm pixel pitch
- 30 fps at full resolution
- Programmable high-speed ROI mode
- Negligible image lag
- Gigabit Ethernet data interface

## TYPICAL APPLICATIONS

- Dental 2-in-1 (3D + Pan) systems
- Orthopedics mini C-arm systems
- Portable or Desktop Fluoroscopy
- Dental Cone Beam CT
- Veterinary imaging

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

The Xineos-1313 detector sets a new benchmark in low dose imaging performance. Built with our sixth generation CMOS technology, Xineos-1313 offers a software switchable saturation dose to maximize dynamic range or low-dose sensitivity on demand. This critical feature enables cost-effective design of dental imaging systems using a single detector for both 3D Cone Beam Computed Tomography and Panoramic imaging modalities, without compromising clinical image quality required for confidence in diagnostics.

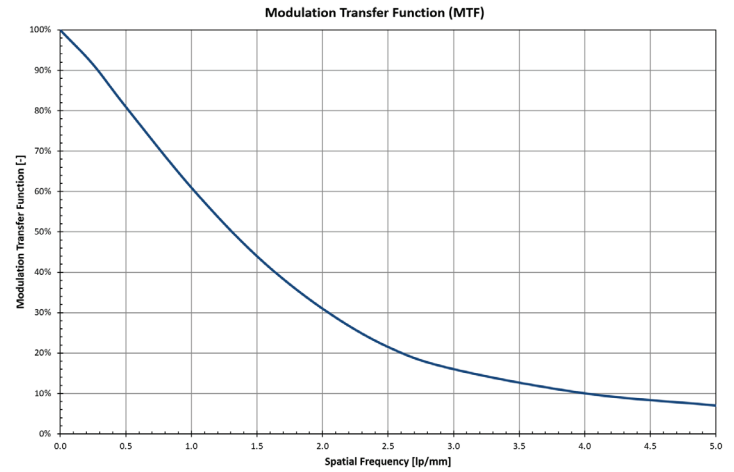
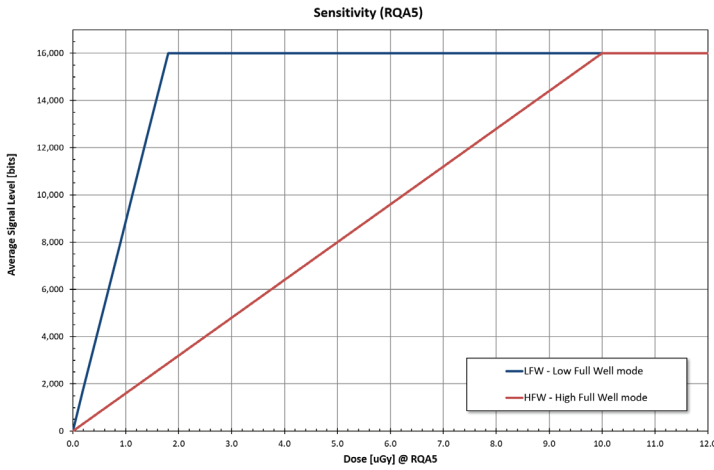
Providing a cost-effective square 13 x 13 cm active area in a tight enclosure, the Xineos-1313 is especially suitable for compact, portable systems that demand a high degree of positioning flexibility. The low power consumption and elimination of forced detector cooling further simplify system design and extend battery lifetime in portable applications, while the industry-leading low-dose diagnostic image quality of Xineos-1313 are an ideal match for low-power x-ray generators.

The Gigabit Ethernet interface communicates directly to a computer's network card, saving image acquisition hassle and integration cost.

## SPECIFICATIONS

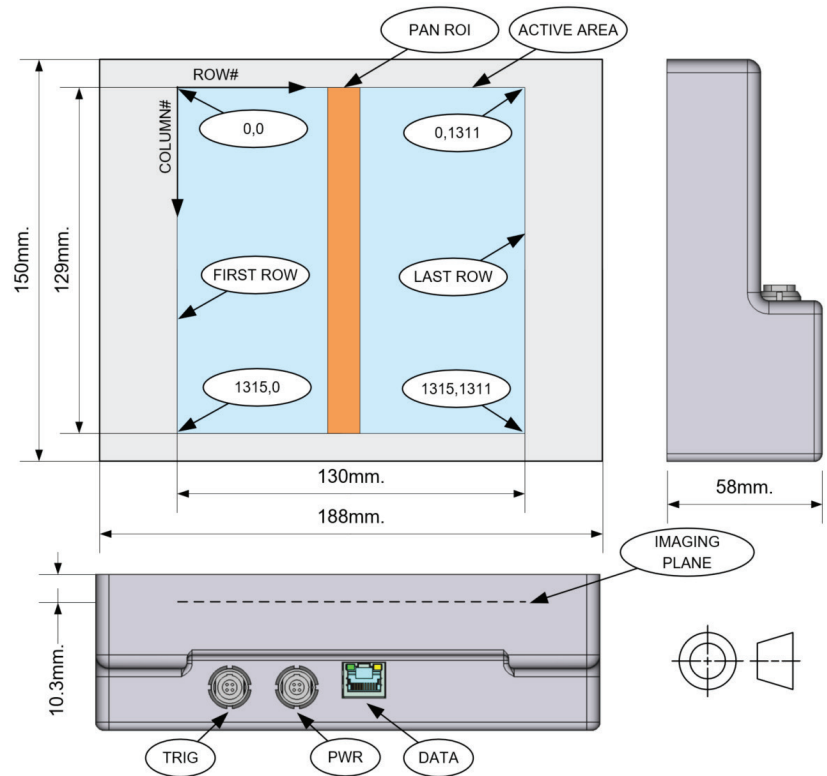
Parameter	Specification (RQA5) Xineos-1313
Pixel Pitch	99 µm
Active Area	129 x 130 mm <sup>2</sup>
Resolution	1312 x 1316 pixels
Binning Support	1 x 1 / 2 x 2
Scintillator	Medical-grade Columnar CsI
Seamless Switchable Saturation Modes	2 Modes, Software Switchable
Saturation Dose, RQA5 (per mode)	2 µGy / 10 µGy
Dynamic Range (per mode)	71 dB / 76 dB
MTF @ 1, 2 lp/mm	60% / 30%
DQE (0), RQA5	70%
Non-linearity (typ.)	<1%
Image Lag (1st Frame @ 30 fps)	<0.1%
ADC Conversion	14 bit
Data Interface	Gigabit Ethernet (GigE)
Frame Rate	
• Full Size, Full Resolution	30 fps
• Full Size, 2 x 2 Binning	60 fps
• 1316 x 68 pxl ROI, Full Resolution	300 fps
ROI Readout	Programmable (x,y) position & size
Trigger Modes	Continuous or Synchronized
X-Ray Energy Range	40-125 kVp
Power Consumption (Active)	11 W
Dimensions (W x H x D)	188 x 150 x 58 mm
Weight	2.4 kg (approx.)

SPECIFICATIONS



**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 2 uGy (230 μR), the detector performance is not compromised at 10 nGy (1.1 μR) entrance dose level.



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