

## XRD 1620 xN CS



## Flat Panel X-ray Detector

## Features and Benefits

- 200  $\mu\text{m}$  pixel pitch
- 65,536 grey levels
- High sensitivity
- Suitable for a wide range of X-Ray energies
- Selectable gain setting

Applications<sup>1</sup>

- Non-destructive testing
- 3D Cone Beam CT
- Metrology
- Scientific applications

## Superior Image Quality High Dynamic Range

### Overview

The PerkinElmer XRD 1620 xN CS Flat Panel X-ray Detectors (FPDs) are a member of the PerkinElmer family of 16-inch (41 cm) field of view amorphous silicon (a-Si) digital X-ray FPDs. The XRD 1620 FPDs provide a dynamic range over 84 dB and frame rates up to 7.5 frames per second. The PerkinElmer XRD 1620 xN CS supports a broad range of energy levels from 20 kV – 15 MV and is available with several scintillator options. Rapid system integration is accomplished via a customized parallel interface, integrated trigger and X-ray synchronization circuitry. A comprehensive software library for image acquisition and processing is also provided.

The wide energy range, variable frame rates and scintillator options allow the PerkinElmer XRD 1620 xN CS to meet the component requirements of industrial non-destructive testing, as well as life and physical science applications<sup>1</sup>.

We have over 20 years of experience partnering with customers to develop products in a wide range of X-ray applications. Let our digital imaging experience work for you.

# XRD 1620 xN CS

## Sensor

Panel	Single substrate amorphous silicon active TFT/diode array
Scintillator	Direct deposition CsI:Tl or various Gd <sub>2</sub> O <sub>3</sub> :Tb
Pixel Matrix	2048 × 2048 @ 200 μm pixel pitch
Total Area	409.6 × 409.6 mm <sup>2</sup>

## Electronics

Charge Amplifier	Low noise ASICs with user selectable gains		
ADC	16 bit		
Read-out Mode	Matrix	Pixel (μm <sup>2</sup> )	fps
	2048 × 2048	200 × 200	3.75
	1024 × 1024	400 × 400	7.5

## Mechanical

Size	672 mm × 599 mm × 44 mm
Weight	21 kg
Housing	Aluminum with Aluminum (XRD 1620 AN CS) or carbon-fiber (XRD 1620 CN CS) entrance window

## Communication I/F

Data I/F	Customized parallel Interface
X-ray I/F	Integrated Trigger control
Software	Support for 32 bit and 64 bit Windows OS

## Image Performance

Dynamic Range	> 84 dB
Radiation Energy	40 kV – 15 MV (XRD 1620 AN CS)
	20 kV – 15 MV (XRD 1620 CN CS)
Lag	< 8% 1st frame

## Environmental

Temperature	10 – 35 °C (operating), -10 – 50 °C (storage)
Humidity	10 – 90 % RH (non-condensing)
Vibration	IEC/EN 60068-2-6 (10 – 150 Hz, 0.5 g)
Shock	IEC/EN 60068-2-27 (11 ms, 2 g)

## Power

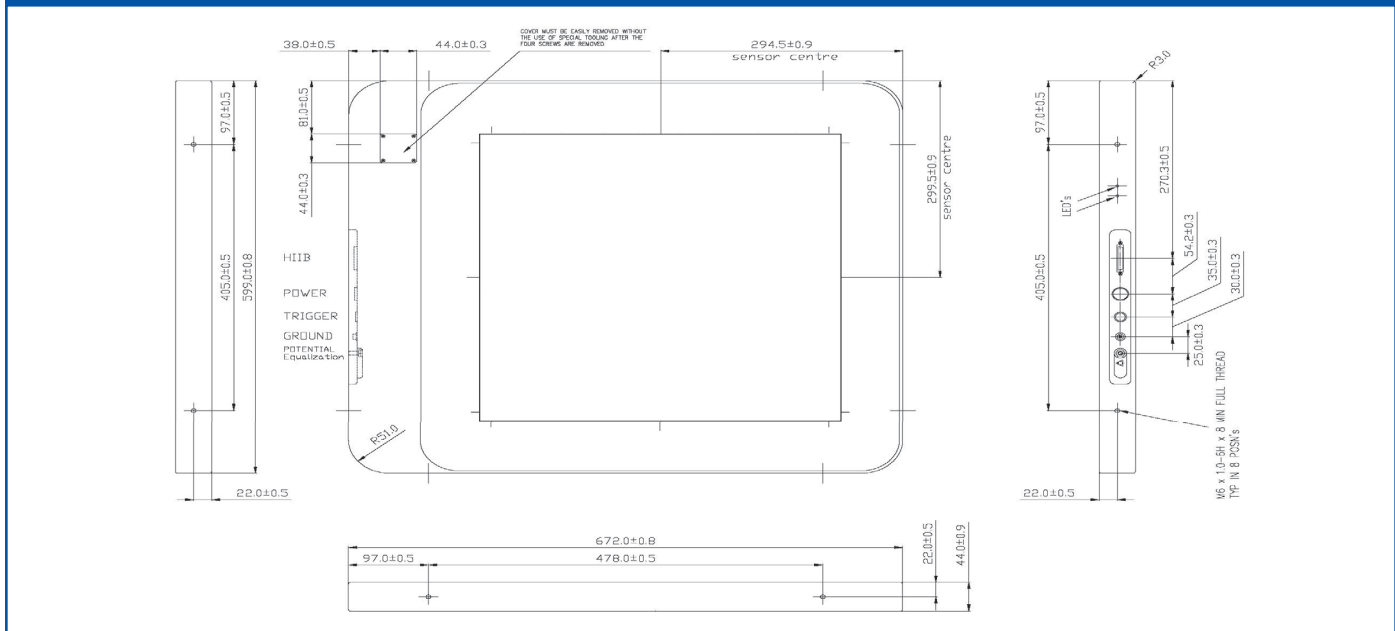
Supply	XRD EPS Power Supply 215 W
Dissipation	50 W

## Regulatory

Standards	IEC/EN-60950-1
Regulations	RoHS

1: Unless otherwise specified, PerkinElmer Flat Panel X-ray Detectors are components intended to be integrated into products by X-ray system manufacturers. System manufacturers are responsible for qualifying and validating their products for their intended uses and meeting all applicable regulatory requirements. Contents in this document are subject to change without notice.

## Mechanical Characteristics



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