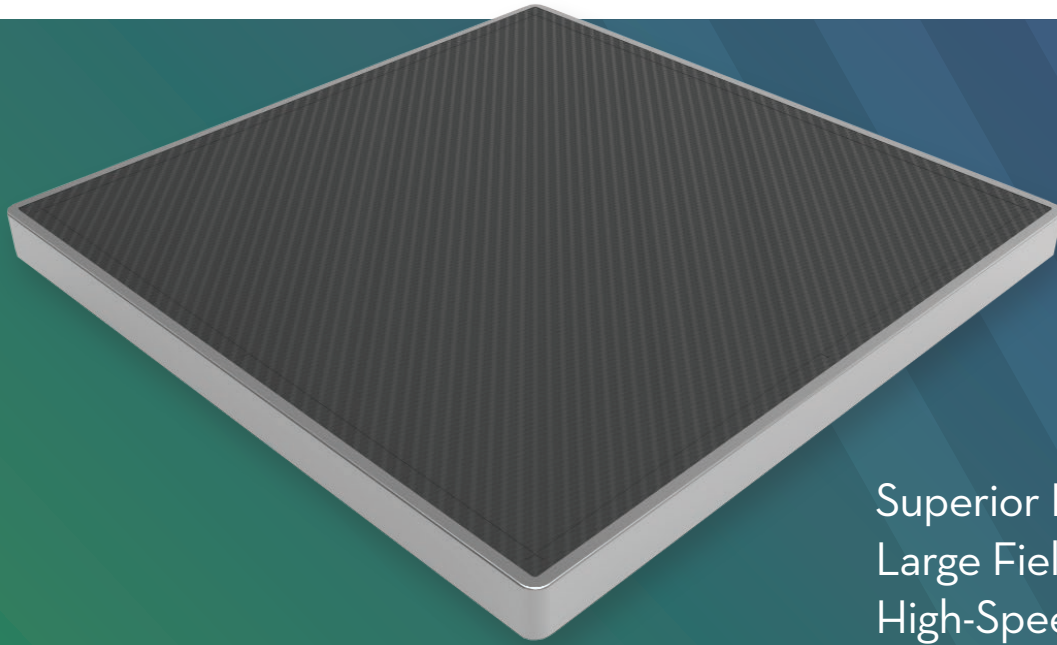


# XRD 4343CT

## Industrial Flat Panel Detector



Superior Image Quality  
Large Field of View  
High-Speed Real-time Imaging

### OVERVIEW

Varex Imaging XRD 4343CT is based on the next generation platform of Varex Imaging's amorphous silicon (a-Si) Flat Panel X-ray Detectors (FPDs). The enhanced performance XRD 4343CT supports a full 43 x 43 cm<sup>2</sup> (17 x 17 in<sup>2</sup>) field of view providing superior imaging for low-dose non-destructive testing and cone beam CT applications. The Varex Imaging XRD 4343CT offers 150 μm native pixel resolution and frame rates up to 85 fps. XRD 4343CT supports energy levels up to 225 kV and is available with several scintillator options. Rapid system integration is accomplished with real-time image processing PCIe board for host computer, integrated trigger and X-ray synchronization circuitry and a comprehensive software library for image acquisition and processing.

### FEATURES AND BENEFITS

- 15 fps @ 150 μm, 30 fps @ 300 μm (full FOV)
- 85 fps @ 300 μm (432 mm x 72 mm FOV)
- 150 μm pixel pitch, 2880 x 2880 pixel matrix
- Various binning and FOV options
- 65,536 grey levels (16-bit ADC)
- Ultra high sensitivity
- Selectable gain settings
- Up to 225 kV in microfocus applications
- Fiber optical interface with real-time corrections

### APPLICATIONS<sup>1</sup>

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

## Technical Specifications

### SENSOR

Panel . . . . . Single substrate amorphous silicon active TFT-diode array  
 Scintillator . . . . . Direct deposition CsI: Tl or various Gd<sub>2</sub>O<sub>2</sub>S:Tb (Gadox)  
 Pixel Matrix . . . . . 2880 × 2880 @ 150 μm pitch  
 Total Area . . . . . 432 mm × 432 mm

### ELECTRONICS

Amplifiers . . . . . Low noise ASICs with 6 user selectable gain settings  
 ADC . . . . . 16-bit

Read-out Modes	Field of View (mm <sup>2</sup> )	Pixel Matrix	Binning	Pixel Pitch (μm <sup>2</sup> )	(fps)
432 × 432		2880 × 2880	1 × 1	150	15
		1440 × 1440	2 × 2	300	30
		960 × 960	3 × 3	450	45
288 × 288		1920 × 1920	1 × 1	150	20
		960 × 960	2 × 2	300	40
		640 × 640	3 × 3	450	60
216 × 216		1440 × 1440	1 × 1	150	25
		736 × 720	2 × 2	300	50
		480 × 480	3 × 3	450	70
432 × 216		2880 × 1440	1 × 1	150	25
		1440 × 720	2 × 2	300	50
432 × 72		2880 × 480	1 × 1	150	60
		1440 × 240	2 × 2	300	85

### MECHANICAL

Size . . . . . 470 mm (w) × 470 mm (l) × 57 mm (h)  
 Weight . . . . . 16 kg  
 Housing . . . . . Aluminum with carbon-fiber entrance window

### COMMUNICATIONS

Data I/F . . . . . Fiber optical to PCIe image processing board on host computer  
 X-ray I/F . . . . . Integrated X-ray trigger control  
 Software . . . . . Support for 32 and 64 bit Windows® OS

### IMAGE PROCESSING

Type . . . . . Real time pixel corrections (offset, gain, defective pixels) on PCIe board

### IMAGING PERFORMANCE

Typical DQE (CsI) . . . . . 76% (0 cy/mm), 60% (1 cy/mm), 44% (2 cy/mm), 32% (3 cy/mm) for RQA5  
 Typical MTF (CsI) . . . . . 66% (1 cy/mm), 34% (2 cy/mm), 18% (3 cy/mm)  
 Energy Range . . . . . 20 - 225 kV (microfocus)  
 Detector requires additional external shielding  
 Typical . . . . . < 5% 1<sup>st</sup> frame

### ENVIRONMENTAL

Temperature . . . . . 10 to 35°C (operating), -10 to 50°C (storage)  
 Humidity . . . . . 30% to 70% RH (operating, non-condensing)  
 Vibration . . . . . IEC/EN 60721-3 class 2M3 (10-150 Hz, 0.5 g)  
 Shock . . . . . IEC/EN 60721-3 class 2M3 (11 ms, 2 g)

### POWER

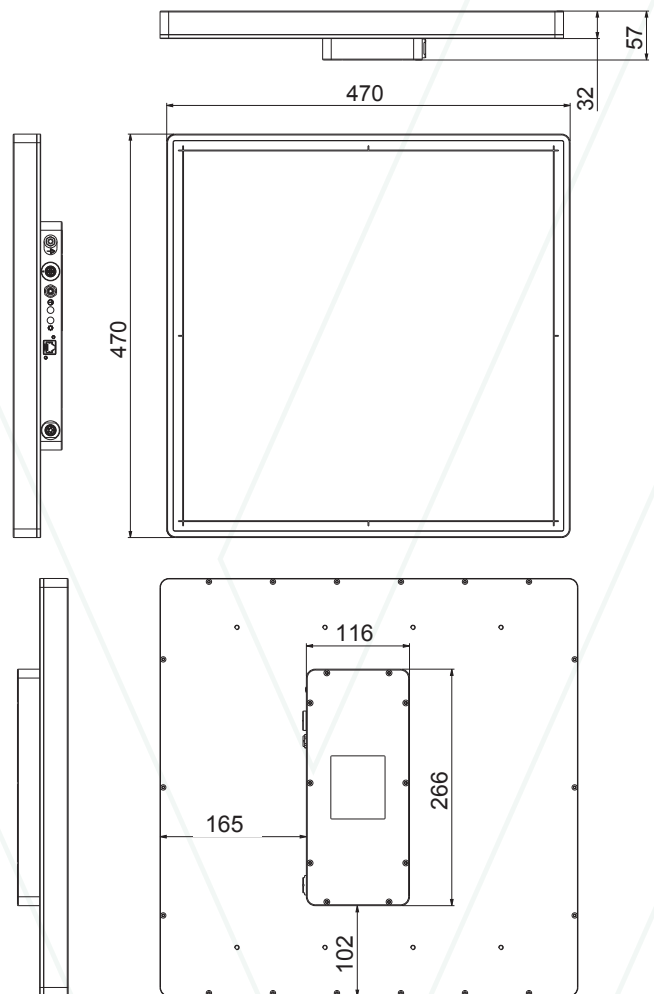
Supply . . . . . 100 – 240 VAC, 50/60 Hz, XRD-EPS Power Supply  
 Dissipation . . . . . 25 W

<sup>1</sup> Unless otherwise specified, Varex Imaging 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

(Dimensions in mm)



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