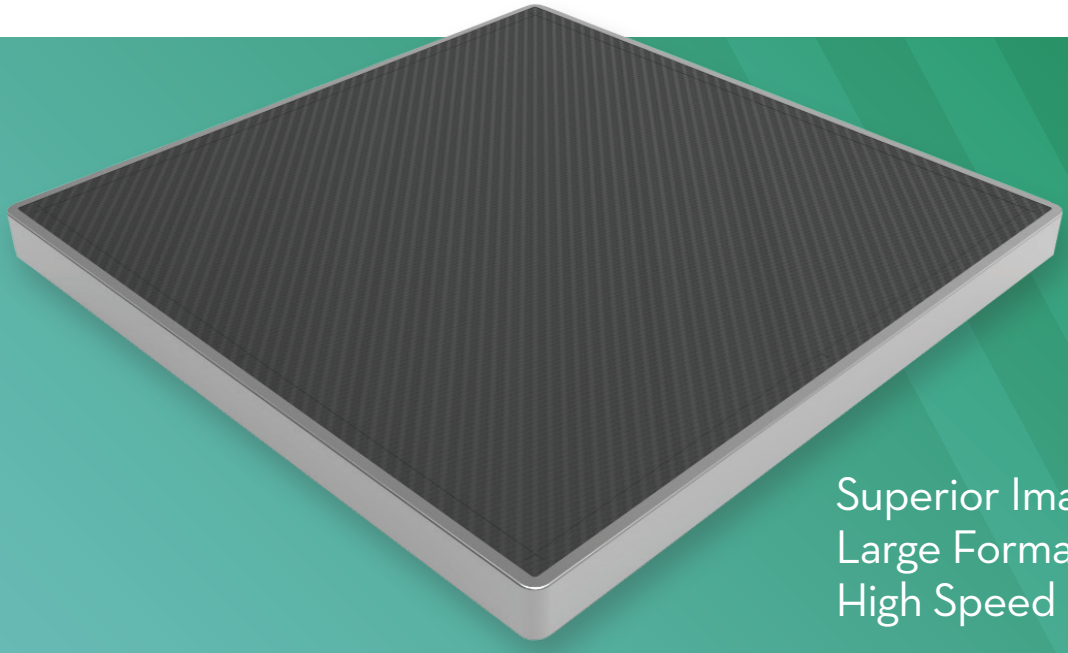
# XRD 4343RF

## Flat Panel Detector

VAREX IMAGING



Superior Image Quality
Large Format, Static and
High Speed Real-time Imaging

## OVERVIEW

Varex Imaging XRD 4343RF is based on the next generation platform of Varex Imaging amorphous silicon (a-Si) Flat Panel X-ray Detectors (FPDs). The enhanced performance Varex Imaging XRD 4343RF supports a full 43 x 43 $cm^2$ (17 x 17 $in^2$) field of view providing superior imaging for fluoroscopy, radiography and cone beam CT applications. The detector offers frame rates up to 85 fps and has a direct deposited Cesium Iodide scintillator for superior image quality.

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 at 150 µm pixel pitch
- 2880 x 2880 pixel matrix
- Excellent DQE
- 16-bit digital output
- Directly deposited CsI scintillator
- Fast switching between imaging modes
- Fiber optical interface
- Real time corrections on a PCIe card
- Trigger interface for X-ray generator

## APPLICATIONS[1]

- Radiography & Fluoroscopy
- 3D Cone Beam CT

## Technical Specifications

### SENSOR

Panel ..... Single substrate amorphous silicon active TFT-diode array
Scintillator ..... CsI:Tl
Pixel Matrix ..... 2880 × 2880 @ 150 µm pitch
Total Area ..... 432 mm × 432 mm

### ELECTRONICS

Amplifiers .. User selectable gain and frame rate settings to support RAD, DSA and fluoroscopy
ADC ..... 16-bit

| Field of View ($mm^2$) | Pixel Matrix | Binning | Pixel Pitch ($\mu m^2$) | (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 |

Mode Transition ..... <1 second

### MECHANICAL

Size ..... 470 (w) × 470 (l) × 57 (h)
Weight ..... 12 kg
Housing ..... Aluminum frame with carbon-fiber entrance window

### COMMUNICATIONS

Data I/F ..... Fiber optical to PCIe frame grabber board
Class 1 Laser per IEC 60825-1
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 on frame grabber

### IMAGING PERFORMANCE

Typical DQE ..... 62% (1 cy/mm), 48% (2 cy/mm), 25% (3 cy/mm) for RQA5
Typical MTF .... 58% (1 cy/mm), 28% (2 cy/mm), 12% (3 cy/mm) for RQA5
Saturation Dose ..... 80 µGy
Energy Range ..... 40 - 150 kV
Typical Lag ..... < 5% 1st frame
Dynamic Range ..... 82 dB
(measured at Gain 5)

### ENVIRONMENTAL

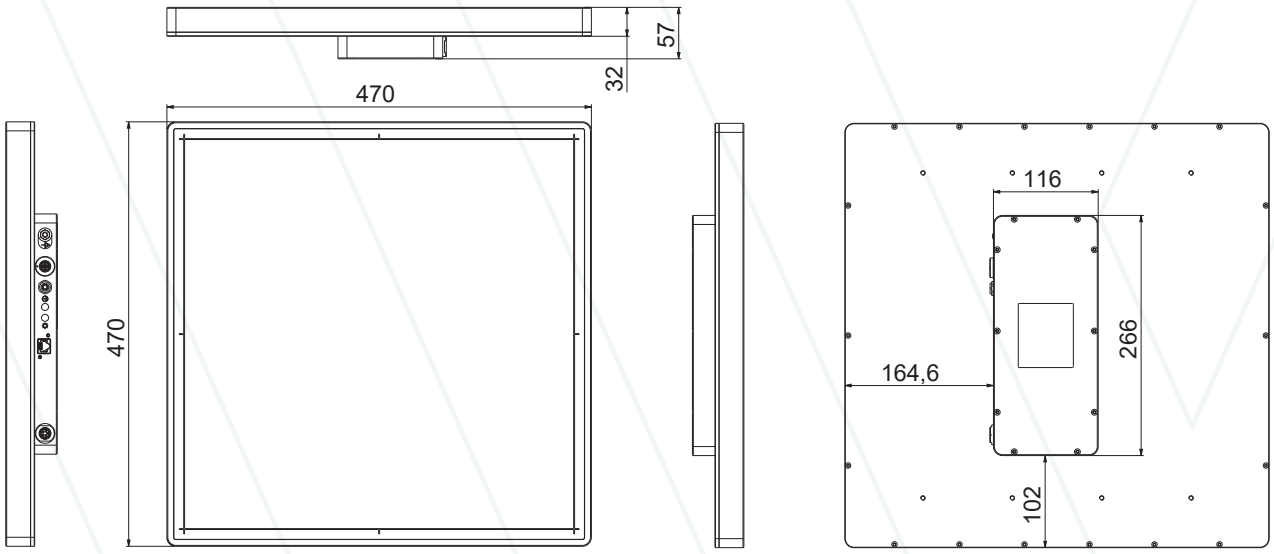
Temperature ..... 10°C to 35°C (operating), -10°C to 55°C (storage)
Humidity ..... 30% to 70% RH (operating, non-condensing)
Vibration ..... IEC/EN 60721-3 class 2M3 (10-150 Hz, 0.5 g)
Shock ..... IEC/EN 60721-3 class 2M3 (11 ms, 2 g)

### POWER

Supply ..... 100 – 240 VAC, 50/60 Hz XRD-EPS Power Supply 215 W
Dissipation ..... 25 W

### MECHANICAL CHARACTERISTICS

*(Dimensions in mm)*




[1] 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.

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*The data in this document is for reference only.*