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 cm² (17 x 17 in²) 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
- 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 (mm²) | Pixel Matrix | Binning | Pixel Pitch (µm²) | (fps)
--- | --- | --- | --- | ---
432 × 432 | 2880 × 2880 | 1 × 1 | 150 | 15
 | 1440 × 1440 | 2 × 2 | 300 | 30
 | 960 × 960 | 3 × 3 | 450 | 45
 | 1920 × 1920 | 1 × 1 | 150 | 20
288 × 288 | 960 × 960 | 2 × 2 | 300 | 40
 | 640 × 640 | 3 × 3 | 450 | 60
 | 1440 × 1440 | 1 × 1 | 150 | 25
216 × 216 | 736 × 720 | 2 × 2 | 300 | 50
 | 480 × 480 | 3 × 3 | 450 | 70
 | 1440 × 1440 | 1 × 1 | 150 | 25
 | 1440 × 720 | 2 × 2 | 300 | 50
32 × 32 | 2880 × 1440 | 1 × 1 | 150 | 25
 | 1440 × 480 | 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)

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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.

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The data in this document is for reference only.