Varex Imaging XRD 1621 FPDs provide a dynamic range exceeding 88 dB and frame rates up to 30 frames per second. XRD 1621 xN supports a broad range of energy levels from 20 kV to 16 MV and is available with several scintillator options. System integration is accomplished via a frame grabber with a customized fiber-optical interface. The frame grabber is designed to perform on-board corrections including Multiple Gain Correction at up to 10 signal levels. Rapid system integration is accomplished via optical data communication, 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 Varex Imaging XRD 1621 xN to meet the component requirements of industrial non-destructive testing, as well as life and physical science applications.1

FEATURES AND BENEFITS
- 200 µm pixel pitch
- 65,536 grey levels (16-bit ADC)
- Ultra high sensitivity
- Live images @ 30 fps
- Suitable for a wide range of X-ray energies
- Selectable gain setting
- Galvanic isolation by fiber-optical interface

APPLICATIONS1
- Non-destructive testing
- 3D Cone Beam CT
- Metrology
- Scientific applications

Superior Image Quality
High Dynamic Range

Varex Imaging XRD 1621 Flat Panel X-ray Detector (FPD) is a member of the Varex Imaging family of 16-inch (41 cm) field of view amorphous silicon (a-Si) FPDs.
**TECHNICAL SPECIFICATIONS**

### SENSOR
- Panel: Single substrate amorphous silicon active TFT-diode array
- Scintillator: CsI:Tl or various Gd$_2$O$_2$:Tb
- Pixel Matrix: 2048 x 2048 @ 200 µm pixel pitch
- Total Area: 409.6 x 409.6 mm$^2$

### ELECTRONICS
- Amplifiers: Low noise ASICs with up to 6 user selectable gains
- ADC: 16-bit
- Read-out Modes: Matrix, Pixel (µm$^2$), fps

### MECHANICAL
- Size: 672 mm x 599 mm x 44 mm
- Weight: 25 kg
- Housing: Aluminum with Aluminum (1621 AN) or carbon-fiber (1621 CN) entrance window

### COMMUNICATION I/F
- Data I/F: Fibre optic to PCIe frame grabber
- X-ray I/F: Integrated Trigger control
- Software: Support for 32 and 64 bit Windows® OS
- Laser: Class 1

### MECHANICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Dimensions in mm</th>
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<tbody>
<tr>
<td>407.8 x 407.8</td>
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<tr>
<td>224.0 x 224.0</td>
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</tbody>
</table>

### IMAGE PROCESSING
- Type: Real Time offset, gain, defective pixel corrections on frame grabber

### IMAGE PERFORMANCE
- Dynamic Range: > 88 dB
- Radiation Energy: 40 kV – 16 MV (XRD 1621 AN ES)
- 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: 80 W

### REGULATORY
- Standards: IEC/EN-61010-1, EN 61326-1, EN 60825-1
- Regulations: RoHS

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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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