OVERVIEW

Varex Imaging’s 1512N CMOS Flat Panel X-ray Detector (FPD) is a high speed, low noise X-ray detector with excellent sensitivity. It employs state-of-the-art large-area CMOS (Complementary Metal-Oxide Semiconductor) image sensor technology and is supplied with a range of scintillator and interface options.

Varex Imaging 1512N Flat Panel X-ray Detector has switchable pixel gain that makes it well suited to real-time imaging and CT as well as static imaging with high dynamic range.

FEATURES AND BENEFITS

- 74.8 µm pixel pitch
- 1944 x 1536 pixel matrix
- High Sensitivity and High Dynamic Range modes
- Operation up to 225 kV
- Suitable for real-time imaging at up to 86 fps
- 1 x 1, 2 x 2 and 4 x 4 pixel binning options
- High DQE
- Various scintillator options available
- Input/output for X-ray generator synchronization
- Camera Link or GigE Vision data connection

APPLICATIONS

- Electronics inspection
- Casting inspection
- Weld and pipeline inspection
- Metrology
- Micro Cone Beam Computed Tomography
- Materials science
- Quality control in automotive, aerospace and electronics manufacturing

www.vareximaging.com
### Technical Specifications

#### SENSOR
- **Pixel Size (µm)**: 74.8
- **Sensitive Area (mm²)**: 145.4 × 114.9
- **Pixel Matrix (px)**: 1944 × 1536

#### MAX FRAME RATE (FPS)

<table>
<thead>
<tr>
<th>Pixel Binning</th>
<th>Camera Link</th>
<th>GigE Vision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1×1</td>
<td>26</td>
<td>14</td>
</tr>
<tr>
<td>2×2</td>
<td>70</td>
<td>56</td>
</tr>
<tr>
<td>4×4</td>
<td>86</td>
<td>86</td>
</tr>
</tbody>
</table>

#### IMAGE PERFORMANCE
- **Dynamic Range (dB)**: typ. 71
- **High Dynamic Range Mode**: typ. 68
- **X-ray Energy Range (kV)**: 12 - 225

#### MECHANICAL
- **Weight (kg)**: 3.2
- **Dimensions l × w × h (mm³)**: 223.5 × 150 × 42

#### MECHANICAL CHARACTERISTICS

(Dimensions in mm)

### COMMUNICATIONS
- **Camera Link**: Base 80 Mhz (1 cable)
- **GigE Vision**: 1000BASE-T
- **Digital Output**: 14-bit
- **Control Channel**: 115 kBaud serial link / Camera Link / GigE Vision
- **Sync Ports**: BNC
- **Sync In Port**: 3 - 15 V edge or level trigger
- **Sync Out Port**: TTL (0 - 5.0 V)
- **Software**: Support for 32 and 64 bit Windows® OS

### POWER
- **Camera Link**: 8.5 W
- **GigE Vision**: 10.5 W

### SCINTILLATOR OPTIONS
- High Efficiency microcolumnar CsI
- High Resolution microcolumnar CsI
- Various Gd₂O₂S:Tb (GOS) fluorescent screens

### TEMPERATURE RANGE
- **Operating Temperature**: +10°C to +40°C
- **Storage Temperature**: -10°C to +50°C

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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.

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