OVERVIEW

Varex Imaging’s 2307N CMOS Flat Panel X-ray Detector is a high speed, low noise X-ray detector with a long and narrow active area suitable for high-energy pipe inspection. The 2307S is designed for low-dose applications e.g. pre-clinical imaging. The 2307N and 2307S CMOS employ state-of-the-art large-area CMOS (Complementary Metal-Oxide Semiconductor) image sensor technology.

Varex Imaging’s 2307N and 2307S CMOS Flat Panel X-ray Detectors have 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
• 3072 x 864 pixel matrix
• High Sensitivity and High Dynamic Range modes
• Operation up to 225 kV (2307N) or 90 kV (2307S)
• Suitable for real-time imaging at up to 190 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
• GigE Vision data connection

APPLICATIONS

• Weld and Pipe inspection
• Aerospace
• Industrial non-destructive testing
• Micro Cone Beam Computed Tomography
• Scientific applications
• Pre-clinical imaging (2307S)

www.vareximaging.com
### Technical Specifications

#### SENSOR
- **Pixel Size (µm)**: 74.8
- **Sensitive Area (mm²)**: 229.8 x 64.6
- **Pixel Matrix (px)**: 3072 x 864

#### MAX FRAME RATE (FPS)
- **Pixel Binning**
  - 1x1: 15
  - 2x2: 63
  - 4x4: 190

#### IMAGE PERFORMANCE
<table>
<thead>
<tr>
<th></th>
<th>2307N</th>
<th>2307S</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dynamic Range (dB)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>High Dynamic Range Mode</strong></td>
<td>typ. 73</td>
<td>typ. 69</td>
</tr>
<tr>
<td><strong>High Sensitivity Mode</strong></td>
<td>typ. 73</td>
<td>typ. 69</td>
</tr>
<tr>
<td><strong>X-ray Energy Range (kV)</strong></td>
<td>12 - 225</td>
<td>12 - 90</td>
</tr>
</tbody>
</table>

#### MECHANICAL
<table>
<thead>
<tr>
<th></th>
<th>2307N</th>
<th>2307S</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Weight (kg)</strong></td>
<td>5.2</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Dimensions l x w x h (mm³)</strong></td>
<td>290 x 90 x 50</td>
<td></td>
</tr>
</tbody>
</table>

### MECHANICAL CHARACTERISTICS
(Dimensions in mm)

![Mechanical diagram](image)

### COMMUNICATIONS
- **Camera Link**: N/A
- **GigE Vision**: 1000BASE-T
- **Digital Output**: 14-bit
- **Control Channel**: 115 kbaud serial link
- **Sync Ports**: 6w LEMO
- **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
- **Dissipation**: 25 W

### SCINTILLATOR OPTIONS
- **2307N**: High Resolution CsI
- **2307N**: Various Gd₂O₂S:Tb (GOS) fluorescent screens
- **2307S**: Gadox AD Mammo

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

### ACCESSORIES
- **Power Supply Type**: PSU-3A
- **Power Cable**: 3 m Lemo Low Voltage
- **Power Supply Input**: 50 - 60 Hz, 100 - 240 VAC
- **Power Supply Output**: 24 V
- **Network Interface Card**: Intel I210-T1

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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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