

CDD DE series Xray Detectors

Cheyney are the innovators of Linear Diode Arrays for Xray detection. We now have more than 30 years of in designing and manufacturing Xray detectors.

It has the following features :

- Available in diode pitch of 1.6mm, 0.8mm, 0.4mm, 0.2mm
- Data interface RS422 pixel rate of up to 4MHz
- Scan rate from 50 to 4000 scans/sec
- Output resolution of 8 to 12 bits as standard
- Control interface USB 2.0 as standard, RS232 optionally
- Multi channel radiographic trigger
- Scan rate fixed or synchronous to external clock
- Pixel output normalised by internal DSP processor
- Output translation tables provide gamma law
- All cables exit from end of module for easy connection

Control Commands

 Set Line/Integration period

<td>GOS</td>
<td>GOS</td>
<td>GOS</td>
<td>GOS</td>
</tr>
<tr>
<td>Active area lengths</td>
<td>102-410 mm</td>
<td>102-819 mm</td>
<td>102-1024 mm</td>
<td>205-1638 mm</td>
</tr>
<tr>
<td>Number of pixels</td>
<td>512-2048</td>
<td>256-2048</td>
<td>128-1280</td>
<td>128-1024</td>
</tr>
<tr>
<td>Pixel Pitch</td>
<td>0.2 mm</td>
<td>0.4 mm</td>
<td>0.8 mm</td>
<td>1.6 mm</td>
</tr>
<tr>
<td>Pixel Height</td>
<td>0.3 mm</td>
<td>0.6 mm</td>
<td>0.8 mm</td>
<td>1.6 mm</td>
</tr>
<tr>
<td>Pixel Width</td>
<td>0.1 mm</td>
<td>0.3 mm</td>
<td>0.7 mm</td>
<td>1.4 mm</td>
</tr>
<tr>
<td>Max. Scanning Speed</td>
<td>12 m/mn ⁽¹⁾</td>
<td>50 m/mn ⁽¹⁾</td>
<td>170m/mn ⁽¹⁾</td>
<td>300m/mn⁽¹⁾</td>
</tr>

<tr>	<td>Min. Integration Time</td>	<td>1 ms</td>	<td>0.5 ms</td>	<td>0.25 ms</td>	<td>0.25 ms</td>
</tr>	<tr>	<td>Max Integration Time</td>	<td>20 ms</td>	<td>20 ms</td>	<td>20 ms</td>
</tr>	<tr>	<td>A/D Resolution</td>	<td>12-bits</td>	<td>12-bits</td>	<td>12-bits</td>
</tr>	<tr>	<td>Dynamic Range</td>	<td>> 2000 ⁽²⁾</td>	<td>> 2000 ⁽²⁾</td>	<td>> 2000 ⁽²⁾</td>
</tr>	<tr>	<td>Data Digital Interface</td>	<td>12-bits ⁽³⁾</td>	<td>12-bits ⁽³⁾</td>	<td>12-bits ⁽³⁾</td>
</tr>	<tr>	<td>Power consumption</td>	<td>50 W max</td>	<td>50 W max</td>	<td>50 W max</td>
</tr>	<tr>	<td>Image acquisition interface</td>	<td>RS-422</td>	<td>RS-422</td>	<td>RS-422</td>

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        <td>RS-422</td>
    </tr>
    <tr>
        <td>Control interface</td>
        <td>USB 2.0</td>
        <td>USB 2.0</td>
        <td>USB 2.0</td>
        <td>USB 2.0</td>
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</table>

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<u>Notes

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 Maximum speed is specified for active length up to 512 mm.
 Dynamic Range is defined as saturation signal/RMS noise, normal detector sensitivity.
 Digital interface has 16 RS-422 I/O lines for data, but user can select actual data to be 14,12,10 or 8 bits. The default value is 8 or 12 bits
 User can designate radiographic trigger outputs by specifying Window left, Window right and Threshold.


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**<b>Physical Dimensions:</b>** &nbsp;   

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 <tbody>
 <tr>
 <td>Model</td>
 <td>Active Length</td>
 <td>Number of Pixels</td>
 <td>Length</td>
 <td>Width</td>
 <td>Height</td>
 <td>Weight</td>
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 <tr>

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 <td>CDD048</td>
 <td>204mm</td>
 <td>256</td>
 <td>260mm</td>
 <td>130mm</td>
 <td>50mm</td>
 <td>4Kg</td>
 </tr>
 <tr>
 <td>CDD068</td>
 <td>307mm</td>
 <td>384</td>
 <td>360mm</td>
 <td>130mm</td>
 <td>50mm</td>
 <td>6Kg</td>
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 <tr>
 <td>CDD098</td>
 <td>461mm</td>
 <td>576</td>
 <td>510mm</td>
 <td>130mm</td>
 <td>50mm</td>
 <td>9Kg</td>
 </tr>
 <tr>
 <td>CDD128</td>
 <td>614mm</td>
 <td>768</td>
 <td>660mm</td>
 <td>130mm</td>
 <td>50mm</td>
 <td>12Kg</td>
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<b>Enviromental Characteristics:</b>

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 <td>Characteristic</td>
 <td>Specific characteristic</td>
 <td>Specification</td>
 <td>Notes</td>
 </tr>
 <tr>
 <td>Operational</td>
 <td>Ambient temperature</td>
 <td>0-40 C</td>
 <td></td>
 </tr>
 <tr>
 <td></td>
 <td>Relative humidity</td>
 <td>30-80 % (non condensing)</td>
 <td></td>
 </tr>
 <tr>
 <td>Storage</td>
 <td>Ambient temperature</td>
 <td>-10-50 C</td>
 <td></td>
 </tr>
 <tr>
 <td></td>
 <td>Relative humidity</td>
 <td>30-80 % (non condensing)</td>
 <td></td>
 </tr>
</tbody>
</table>

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Power Requirements:

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 <tbody>
 <tr>
 <td>Supply voltage</td>
 <td>Maximum current</td>
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