Forth Dimension Displays presents the QXGA-3DM spatial light modulator (SLM) solution, specifically designed to meet the demands of customers who require the highest resolution SLMs.

The QXGA-3DM is a fast switching, all digital, high performance reflective SLM solution which features Forth Dimension Displays’ (ForthDD) industry proven 3.1 MPixel Time Domain Imaging™ display combined with an application specific non-video display interface.

The interface allows the system builder to precisely time their images on the SLM. Bi-directional trigger signals (either to the interface or from it) ensure accurate synchronisation with other system components such as cameras. With storage for up to 1024 full resolution binary images, the interface allows offline set up for online optimisation. No controlling PC is required during operation.

The QXGA resolution SLM delivers digitally precise images in a high fill-factor liquid crystal on silicon package. The QXGA-3DM from ForthDD offers a solution for the current and future requirements of optical metrology, structured light and super resolution microscopy applications.

**BENEFITS**
- High resolution, QXGA (2048 x 1536 pixel) Spatial Light Modulator (SLM)
- 40 microsecond switching of liquid crystal enables the rapid rendering of complex patterns
- > 94% fill factor means projection of accurate images with no visible structure
- Fast 4.5kHz refresh rate at full resolution
- All digital grey scale - linear response Time Domain Imaging™
- Powerful GUI and API
- Reduced design-in time

**APPLICATIONS**
- High resolution structured illumination
- Coded Aperture Compressive Temporal Imaging
- 3D AOI and SPI systems
- Super Resolution and Confocal Microscopy
- Lattice Light Sheet Microscopy
- Structured Light Projection

**FEATURES**
- Small Form Factor
- Flexible synchronisation (bi-directional)
- Non-volatile storage for 1024 bit-planes
- LED control interface with optional LED driver board
- Direct drive of the SLM
- Variable display addressing sequences
- RS-232 / RS-485 / USB interfaces for system control
All Digital Time Domain Imaging™

QXGA-3DM
For fast bit-plane sequencing applications

Outline Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution</td>
<td>QXGA (2048 x 1536 pixel)</td>
</tr>
<tr>
<td>Non-volatile Storage Capacity</td>
<td>1024 x 1-bit QXGA resolution bit-planes</td>
</tr>
<tr>
<td>Maximum Refresh Rate</td>
<td>4.5KHz Binary / 550Hz 8-bit Greyscale</td>
</tr>
<tr>
<td>Interfaces</td>
<td>USB 2.0 / RS-232 / RS-485</td>
</tr>
<tr>
<td>Synchronisation</td>
<td>Isolated Input Triggers</td>
</tr>
<tr>
<td></td>
<td>Programmable Isolated Output Sync</td>
</tr>
<tr>
<td></td>
<td>Isolated Illumination Sync</td>
</tr>
<tr>
<td>Power</td>
<td>+12VDC / 3W (including Microdisplay)</td>
</tr>
<tr>
<td>Weight</td>
<td>67g (Driver Board &amp; Microdisplay)</td>
</tr>
<tr>
<td>Operational Temp Range</td>
<td>-10°C to +50°C</td>
</tr>
</tbody>
</table>

For further information or to receive a quotation please contact:

T: +44(0)1383 827950  F: +44(0)1383 827951
E: sales@forthdd.com  W: www.forthdd.com

A subsidiary of Kopin Corporation