Overview

Digital Projection International (DPI), Texas Instruments’ first DLP™ partner and the original innovator of the 3-chip DLP™ projector, proudly introduces the TITAN WUXGA 3D family.

Weighing in at just 31.8kg/68 lbs. every TITAN 3D display employs the latest in WUXGA dark chip, 3-chip DLP™ technology to deliver up to 10,000 ANSI lumens and up to 4000:1 contrast. This award-winning compact chassis now includes four WUXGA active 3D models. All robustly built and extremely quiet, TITAN 3D projectors are the perfect imaging solution for vital immersive applications including: military simulation, scientific visualization, medical and geological research, product engineering, commercial cinema and theme park attractions.

In addition to the active 3D capability, TITAN 3D models also include DPI’s new FastFrame™ technology, a revolutionary combination of hardware and firmware that reduces the artifacts and image blur typically associated with rapidly moving displayed content. The benefits of FastFrame™ are especially important for simulation environments such as commercial and military flight training, and other applications where maintaining the visual integrity of high-speed imagery is vital.

For challenging 3D venues that require extreme mechanical rigging or precise mechanical alignment, the TITAN 3D products can be ordered with DPI’s RapidRig™ flying and stacking frame. The RapidRig™ frames provide integrated pitch, roll and yaw adjustments, simplifying installation and alignment accuracy. TITAN 3D models utilize the same lenses employed across the rest of DPI’s TITAN and LIGHTNING product range, so optical accuracy is always ensured.

Other key benefits of the TITAN WUXGA 3D models include:

- High Bandwidth input >120Hz active stereoscopic DVI with no need for frame doubling. This capability extends the dynamic range up to 16 bit for improved contrast and color gamut.
- Dual Fast Processing™ (DFP) - Enables distribution of 3D content via 60 Hz formats by providing the option to frame-double the signal within the projector. When this option is selected, the input signal, having been processed and re-sized to map to the native resolution of the projector, will also be frame-doubled to 120 Hz, and the doubled frames interleaved. This produces imagery with the low flicker characteristics of a native 120 Hz source, but without the infrastructure costs associated with distributing and switching ultra-high bandwidth signals.
- Projectors which provide an interface to drive an infrared transmitter to synchronize switching glasses with active displayed frames. The user can elect either to pass through an external sync pulse, or to use the reference generated internally by the projector. Adjustments are provided to accommodate the phase and dead time characteristics of different switching glasses.
- FastFrame™ technology, a revolutionary combination of hardware and firmware that provides user adjustments to vastly reduce the artifacts and image blur typically associated with rapidly moving display content.
- Minimal video delay from input to screen - as low as 1 frame.
- Eight user-selectable inputs, including HDCP-compliant DVI plus SD/HD-SDI.
- High bandwidth DVI inputs offer Single, Twin, Dual & Dual-Twin DVI connectivity.
- Up to 16 Bit color for breathtaking image reproduction.
- DPI’s ColorMax™ calibration capabilities including enhanced seven-point color correction for broader color space and precise color alignment.
- DPI’s CoolTek™ engineering, delivers the highest lumen performance with the lowest power consumption, thermal (BTU) and noise level (dB(A)) output.

TITAN WUXGA 3D Pro Series II displays - powerful tools for immersive large screen applications - bringing the precision of Digital Projection to your venue.

**INPUT CAPABILITIES**

<table>
<thead>
<tr>
<th>Type</th>
<th>Connector</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite</td>
<td>BNC</td>
<td>1</td>
</tr>
<tr>
<td>S-Video</td>
<td>4-pin mini DIN</td>
<td>1</td>
</tr>
<tr>
<td>Component Interlaced/Std def Y, Cr/Pr, Cb/Pb</td>
<td>BNC4</td>
<td>1</td>
</tr>
<tr>
<td>Graphical Progressive RGB/Progressive Interlaced Hi def Y, Cr/Pr, Cb/Pb</td>
<td>BNC4</td>
<td>1</td>
</tr>
<tr>
<td>RGBHV (Progressive)</td>
<td>D sub (5-pin)</td>
<td>1</td>
</tr>
<tr>
<td>Digital RGB</td>
<td>DVI</td>
<td>1</td>
</tr>
<tr>
<td>Serial Digital SD/HD-SDI (SMPTE 259M/292M)</td>
<td>BNC</td>
<td>1</td>
</tr>
<tr>
<td>DVI - High bandwidth</td>
<td>DVI</td>
<td>1</td>
</tr>
<tr>
<td>Dual - main</td>
<td>DVI</td>
<td>1</td>
</tr>
<tr>
<td>Dual - sub</td>
<td>DVI</td>
<td>1</td>
</tr>
</tbody>
</table>

**PERFORMANCE SPECIFICATIONS**

- **Brightness (±10%)**
  - WUXGA 3D: 5,000 Lumens
  - WUXGA Dual 3D Ultra Contrast: 2,500 Lumens
  - WUXGA Dual 3D: 10,000 Lumens
  - WUXGA Dual 3D Ultra Contrast: 5,000 Lumens

- **Contrast Ratio (±10%)**
  - Standard Models: 2000:1
  - Ultra Contrast Models: 4000:1

- **Display Type**
  - 3 x Darlink WUXGA DMD™ with Fast Transit Pixels for smooth greyscale and improved contrast

- **DMD Specification**
  - 1920 x 1200 pixels native, 12” tilt angle

- **Fill Factor**
  - 87%

- **Sealed Optics at DMD™ Interface**
  - Protects DMD’s™ from optical contamination

- **Source Compatibility**
  - Composite, s-video, and color difference video standards
  - RGB graphics standards up to 1920 x 1080
  - DVI standards with HDCP compliance
  - High definition RGB and color difference standards
  - High definition / standard definition serial digital formats (3D/HD-SDI)
  - High bandwidth - Dual DVI, and Dual-Twin DVI

- **Video Processing**
  - Enhanced 7 point color correction
  - Dual Fast Processing™ increases 60 Hz inputs to 120 Hz displayed output
  - FastFrame™ Motion Blur Reduction
  - Xenon Color Mode - User selectable notch filter and xenon-color mode processing, enable the projector to replicate xenon lamp spectral performance
  - Class leading Video de-interlacing/processing of SD and HD sources using auto 3.2 and 2.2 extraction, ruggedized for editing discontinuities
  - Pixel-based motion adaptive interpolation
  - User selectable preset, parametric de-gamma and user downloadable de-gamma
  - Frame Delay: as low as 1 frame, source dependent
  - Auto mode selection - plug and play setup

- **High Bandwidth Input**
  - 3D capable
  - Pixel Mapped - with low latency
  - FastFrame™ Motion Blur Reduction
  - 120 Hz with no frame doubling

- **3D Sync**
  - Sync In - External lock
  - Sync Out - Shutter glass control

- **Network Connection**
  - LAN via RJ 45, Wireless 802.11b, full protocol feature set

- **Lamp Life (typical)**
  - 2000 hours per lamp, dual lamp models provide 4000 hours sequential lamp operation, lamp low provides extended lamp life

- **Lens Mount**
  - Zoom: Motorized horizontal and vertical lens shift, zoom & focus
  - Fixed: Manual Focus
  - Intelligent Lens Memory with 10 user-definable preset positions

- **Lens Shift (maximum)**
  - Fixed 1.12 and Zoom Lenses:
    - Vert: ±0.7 - ±0.5 frame; Hor: ±0.1875 frame
    - 0.67 Fixed Lens:
      - Vert: ±0.1 frame; Hor: ±0.1 frame
      - 1.12:1 Lenses include manual aperture
      - High-contrast lenses available for 0.67:1 and all zoom lenses

- **Lens Options**
  - 0.67: :1 fixed 1.87:2.56 :1 zoom
  - 1.12: :1 fixed 2.56:4.16 :1 zoom
  - 1.16-1.49 :1 zoom 4.16:6.96 :1 zoom
  - 1.39-1.87 :1 zoom 6.16:10.49 :1 zoom

- **Mechanical Mounting**
  - Front or rear table: Front or rear ceiling (ceiling mount optional)
  - Rugged, stage tolerant chassis with integrated handles
  - Optional RapidRig™ frame with integrated pitch, roll and yaw adjustments

- **Weight (chassis only)**
  - 68 lbs (31kg)
## TITAN WUXGA 3D Pro Series II

### Projector Dimensions

<table>
<thead>
<tr>
<th>Dimensions (in)</th>
<th>L1</th>
<th>W1</th>
<th>H1</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>25.4</td>
<td>21.4</td>
<td>10</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>645.4</td>
<td>543.5</td>
<td>253.5</td>
</tr>
</tbody>
</table>

### TITAN WUXGA 3D side panel

- Shown with optional rigging frame

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## ADVANCED TECHNICAL SPECIFICATIONS

### PARAMETERS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Single Lamp Models</th>
<th>Dual Lamp Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native Color Temperature</td>
<td>6500°K±1000°K; white balance-adjustment: 3000°K to 10000°K</td>
<td></td>
</tr>
<tr>
<td>HDTV Formats Supported</td>
<td>1080i (50Hz, 60Hz), 1080p (24Hz, 25Hz, 30Hz, 60Hz), 1080 24sf, 720p (50, 60Hz), 480i, 480p</td>
<td></td>
</tr>
<tr>
<td>Scan Rates Supported</td>
<td>Input 1-7: Horizontal: 15kHz to 100kHz / Vertical: 24Hz to 85Hz - Input 8: 3D progressive 576p up to 1080p @ 120Hz</td>
<td></td>
</tr>
<tr>
<td>Remote Control</td>
<td>Addressable IR remote control, wireless and wired with loop-through / On board invertable keypad</td>
<td></td>
</tr>
<tr>
<td>Automation Control</td>
<td>LAN connection via RJ45 / RS232 9-pin D type</td>
<td></td>
</tr>
<tr>
<td>Operating/Storage Temperature</td>
<td>Operating: 0 to 40°C / Storage: -10 to 50°C</td>
<td></td>
</tr>
<tr>
<td>Operating Humidity</td>
<td>20 to 80% non-condensing</td>
<td></td>
</tr>
<tr>
<td>Thermal Dissipation</td>
<td>1,770 BTU/hr</td>
<td>2,777 BTU/hr</td>
</tr>
<tr>
<td>Fan Noise</td>
<td>Less than 42dBA</td>
<td>Less than 45dBA</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>100-240 VAC ±10%, 50/60Hz single phase</td>
<td>100-240 VAC ±10%, 50/60Hz single phase</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>580 watts maximum</td>
<td>910 watts maximum</td>
</tr>
</tbody>
</table>

### Lenses

- **HB Part #**
  - 0.67:1
  - 1.12:1
  - 1.12:1 (short)
  - 1.16:1.49:1
  - 1.39 - 1.87:1
  - 1.87 - 2.56:1
  - 2.56 - 4.16:1
  - 4.16 - 6.96:1
  - 6.92-10.36:1
  - 109-662
  - 109-663
  - 109-664
  - 109-665

### Projectors

- **Part #**
  - 109-662
  - 109-663
  - 109-664
  - 109-665

### Accessories

- **Part #**
  - Single TITAN 3D Lamp & Housing* (2 required) 109-319
  - RapidRig™ Frame 107-956
  - TITAN 3D Series Adjustable Ceiling Mount 108-499
  - Infrared Remote (Replacement) 105-023

* Includes high-performance replacement air filter(s)

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1 Based on 4-6 hour/day operational profile. Venue and application conditions may impact actual lamp life. See Digital Projection’s Product Warranty Statement for details on lamp warranty. Installations requiring horizontal or vertical tilt orientations greater than 15 degrees may reduce the actual operational hours of one of the two lamps.