The Only SIP™ in Town

Stereoscopic image alignment for pre-production, production and post-production

All in one sleek package

SIP-2100
Stereoscopic Image Processor™
The Stereo Image Processor (SIP) is the brain of the 3ality Technica family. Controlled via laptop or iPad, this multifaceted tool carries you from pre-production, through the post-production process, ensuring perfect stereoscopic 3D in every shot.

**Pre-Production**
During rig prep, the operator uses the SIP to match and align lenses for focus, iris, and field of view and lens tracking throughout the zoom range. The SIP’s pixel perfect analysis assists the engineer in determining the point of rotation for 3D triangulation, preparing the rig for trouble-free shooting during production.

**Production**
During the shoot, the SIP continually analyzes your stereo imagery, correcting luma, chroma, and monitoring misalignments to ensure that your geometry stays aligned and consistent along all axes. Capture metadata as you shoot, Assess and analyze stereo from any combination of 2D and 3D monitors. Be assured that you are capturing near-perfect pixel matching during even the most complex moving shots.

**Post-Production**
Use the SIP to guide you to perfect alignment on all your post-processed stereoscopic footage. Two video inputs will give you all the data you need to see geometric disparities, excessive parallax, color mismatches and more.

**IntelleSystems:**
The SIP gives you access to numerous on-screen analytics, including focus, iris, field of view, geometry, color, luma, and depth analysis. In addition, the SIP is your key to access to the entire IntelleSystem Family: the standard for highly accurate stereoscopic analysis.

**IntelleMatch** brings you alignment capabilities that work with any 3D system. Let IntelleMatch completely control your system, as with the 3ality Technica TS line of rigs; or adjust your settings manually, as with any manual or semi-manual system; or let IntelleMatch do all the matching for you. With as little as a single frame delay, IntelleMatch fixes any geometric mismatch in your capture.

**IntelleCal** analyzes and aligns your 3D system in a matter of minutes, with no more than a push of a single button.

**IntelleMatte** removes the complication and expense from multi-cam live shoots. Once set up with your stereo parameters, IntelleMatte takes over the convergence and Interaxial, allowing your stereographer to maintain creative integrity, while the system ensures that the stereo is comfortable and interesting. IntelleMatte brings true S3D graphics to live S3D content. Moving your graphic dynamically along the Z-Axis allows you to place your 3D anywhere in space, behind or in front of the action. Live and in real time.

The Stereo Image Processor from 3ality Technica is the answer to your 3D pipeline.

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**SPECIFICATIONS**

**Video Processing Chain:**
- Color Space: YCbCr 4:2:2 SMPTE 274m –ITU-R BT.709
- Pipeline Bit width: 10 bit per color channel, 20bit total

**Geometry Analyzer:**
- Total Disparity Range: X: ± 63 pixel
- Detectable Height Misalignment: Y: ± 16 lines
- Detectable Rotation Misalignment: ± 1° around image center, if no other geometric misalignment
- Detectable Zoom Mismatch: ± 2.5%
- Detectable Keystone Angle: ± 1°
- Detectable Depth Disparity: 6.5% of the screen width

**Image Alignment:**
- Y Alignment Range : ±32 pixel, symmetrical
- X Pre-shift Range : ±266 pixel, symmetrical

**Wedge Corrector:**
- Colorspace: YCbCr
- Correction method: Between image top and bottom linearly
- Interpolated matrix(3x3)+(1x3) for each (L/R) image

**Gain range:** ± 2
**Input Bit width:** 10
**Output Bit width:** 10
**Coefficient Bit width:** 12 (2 int. 10 fractional)
**Correction method:** Matrix $(3x3)+(1x3)$ for each (L/R) image
**Maximum gain:** ± 4
**Input Bit width:** 10
**Output Bit width:** 10
**Coefficient Bit width:** 16 (3 integer, 13 fractional)
**Non-Linear 1D-LUT (Gamma):**
- Colorspace: YCbCr
- Correction method: 1D LUT
- Input Bit width: 10
- Output Bit width: 10

**Connectors and Interfaces:**
  - (720p/60, 720p/59.94, 720p/50)
- Connector: BNC (female), 75Ω
- Input Equalization: Yes
- HD-SDI video outputs: Standard: Same as input
- Outputs: Two video data streams
- Standards: Same as input
- Outputs: Two video data streams
- DVI-D (digital interface support only)
- Only displays with 1920x1080x60fps or 1920x1200x60fps are supported
- Outputs: Mixed data (Left / Right / Overlay)
- Ethernet:
  - Standard: 1000MBit/ s (IEEE802.3 1000BaseT)
  - Connector: RJ45

**Dimensions:**
- 1RU (19”w x 1.75”h x 20”d)
- Weight: 2.5kg (approx)
- Power: Input voltage: 100-240VAC @ 47-63Hz