

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™**



SIP-2100

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.

IntelleCam removes the complication and expense from multi-cam live shoots. Once set up with your stereo parameters, IntelleCam 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.

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
Y: ± 16 lines

Detectable Height Misalignment: ± 16 lines, Detectable Rotation Misalignment: ± 1° around image center, if no other geometric misalignment

Detectable Zoom Mismatch: ± 2.5%, Detectable Keystoning Angle: ± 1°

Detectable Depth Disparity: 6.5% of the screen width

Image Alignment:

Y Alignment Range : ±32 pixel, symmetrical

X Pre-shift Range: ±256 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 (720p/60, 720p/59.94, 720p/50)

Input Bit width: 10 Connector: BNC (female), 75Ω

Output Bit width: 10 Input Equalization: Yes

Coefficient Bit width: 12 (2 int. 10 fractional) **HD-SDI video outputs:**

Match and Artistic Color Corrector: Standard: Same as input

Colorspace: YCbCr Outputs: Two video data streams

Correction method: Matrix (3x3)+(1x3) for each (L/R) image One view/mix data stream

Maximum gain: ± 4 Connector: BNC (female), 75Ω

Input Bit width: 10 Signal Voltage Swing: 750 ... 850 mV

Output Bit width: 10 DC Offset: AC-coupled output

Coefficient Bit width: 16 (3 integer, 13 fractional) **DVI-Out:**

Non-Linear 1D-LUT (Gamma): Standard: DDWG DVI 1.0 Spec.

Colorspace: YCbCr DVI-D (digital interface support only)

Correction method: 1D LUT Only displays with 1920x1080x60fps or 1920x1200x60fps are supported

Input Bit width: 10 Outputs: Mixed data (Left / Right / Overlay)

Output Bit width: 10 **Ethernet:**

Connectors and Interfaces: Standard: 100MBit/ s

HD-SDI video inputs (IEEE802.3 100BaseT)

1.485 GBit/s SMPTE292M, SMPTE274M, Connector: RJ45

SMPTE296M - **Dimensions:**

1080i/60, 1080i/59.94, 1080i/50, 1RU (19" w x 1.75" h x 20" d)

1080p/30sF, 1080p/29.97sF, 1080p/25sF, **Weight:**

1080p/24sF, 1080p/23.98sF, 1080p/30, 2.5kg (approx)

1080p/29.97, **Power:**

1080p/25, 1080p/24, 1080p/23.98, Input voltage: 100-240VAC @ 47-63Hz

“Within the first 10 minutes of using the SIP2100 on a 3D finishing project, I knew I could never do another job without it. It provides real-time 3D analysis in accuracy beyond what the eye can see, valuable color analysis to match eyes. The SIP2100 is not just another tool in my 3D finishing tool-belt — it is the foundation.”

**— George Bellias
Jade Productions**



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