AlphaEye:
Real-time Wide-angle lens distortion and perspective corrector for HD cameras

The use of small broadcast quality HD cameras with wide-angle or fisheye lenses have become increasingly prevalent in live broadcast applications such as sport, ENG, wildlife programming, and reality TV, with non-broadcast use in medical, forensics/security and online gaming. For creative as well as other considerations, lens distortion and curvilinear perspective errors arising from the use of these camera lenses and camera positioning can produce results which can be considered undesirable and require correction. For live image feeds, rendered software based offline processing is not possible. AlphaEye addresses the problem directly through a hardware based sub pixel geometry engine that can correct for lens distortion in real-time. The corrected output exhibits no visible artefacts at all operational HD resolutions and is suitable for all high bar broadcast and non-broadcast applications.

- Provides lens distortion and perspective correction for any type of lens
- Supports HD resolution- 1080i, 1080P, 720P
- Inputs: 1x 3G HD SDI, 1x Genlock, Fiber. HDVI
- Outputs: 2 3G HD SDI, Fibre, HDVI
- PC based UI for set up
- Enabling technology for wider utilisation of low cost small wide angle Broadcast HD cameras in variety of applications.

Pre corrected live feed showing classic lens distortion & curvilinear perspective artefacts
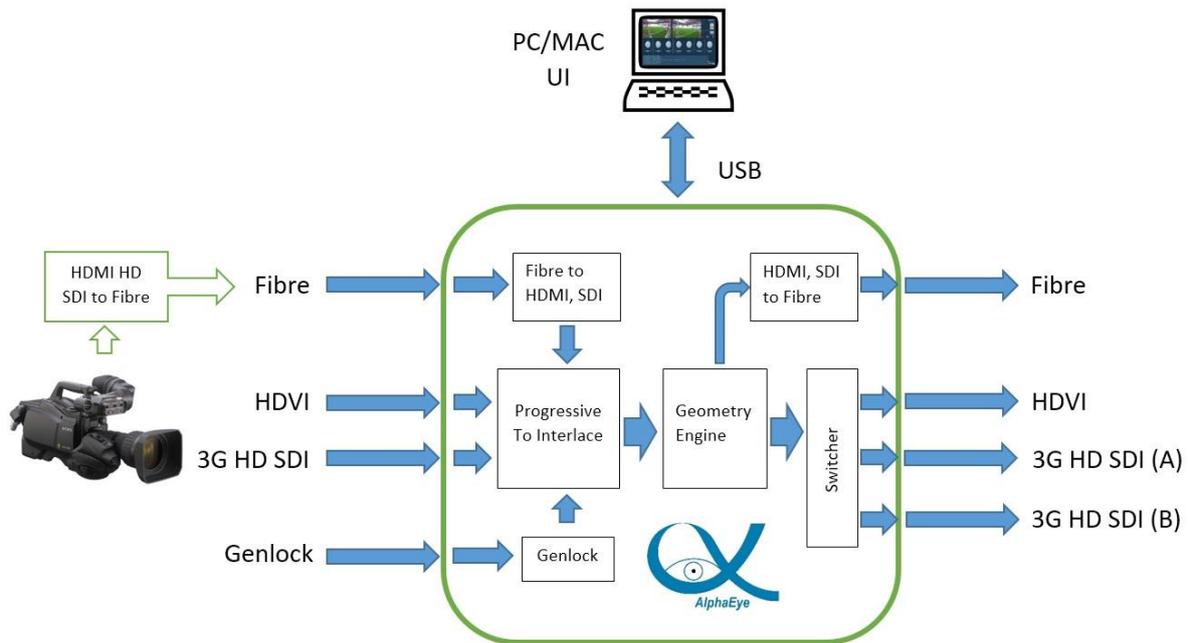

AlphaEye corrected live feed with lens distortion & curvilinear perspective artefacts removed
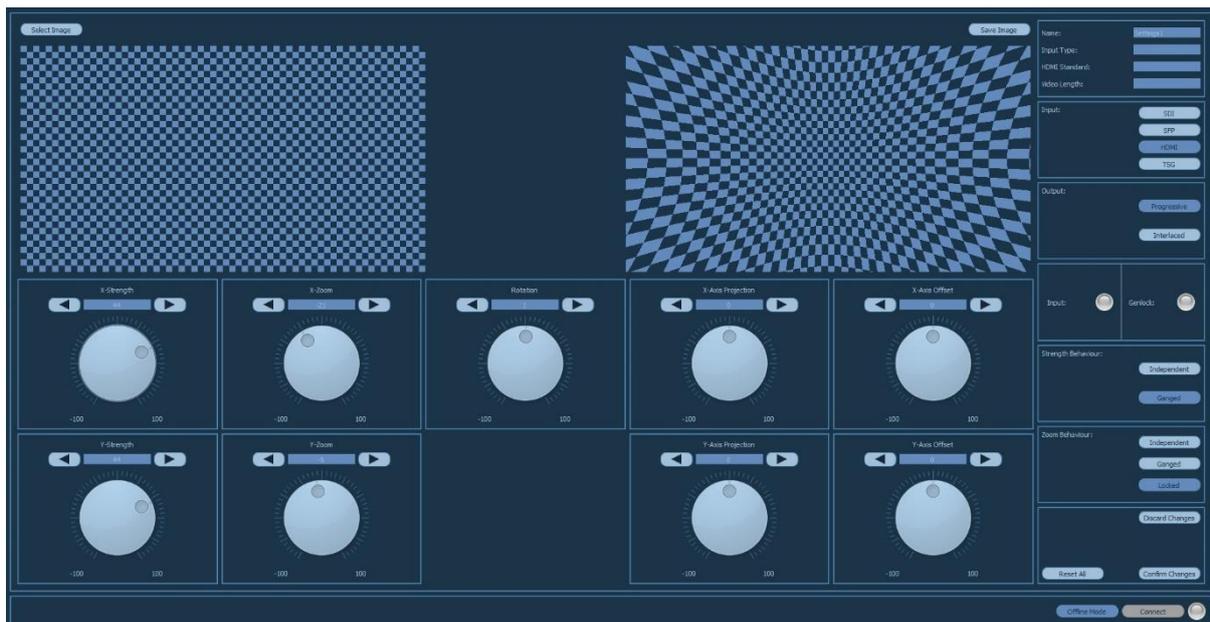
The AlphaEye does not require co-location with the camera source. The unit can be located remotely via industry standard 3G co-axial cable subject to commensurate distance limits, but optionally supports fibre connections up to and beyond distances of 10,000 metres. Additionally the unit has a Genlock input removing the need for external Genlock/Synchroniser hardware.

For more information please contact sales@alphaimage.tv   www.alphaimage.tv

System Configuration

PC/MAC UI

USB

HDMI HD SDI to Fibre → Fibre → Fibre to HDMI, SDI

HDVI → Progressive To Interlace → Geometry Engine → Switcher

3G HD SDI

Genlock → Genlock

HDMI, SDI to Fibre → Fibre

HDVI

3G HD SDI (A)

3G HD SDI (B)

AlphaEye

PC/MAC based UI

Configuration requires the one time connection via USB of the AlphaEye unit to a Mac or Windows laptop or hand held Windows based Microsoft Surface Tablet to set up and save the correction parameters of the distorted image source feed. Once configured, the set up is saved to the AlphaEye unit, and the external USB laptop/tablet device can be disconnected.

Rear Panel Video I/O

Front Panel Control I/O, and Power

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