



# GEO Semiconductor Inc.

## GEO Introduces New Geometric Processing IC for Ultra-Wide Angle Cameras and Pico Projector Based Heads-Up Displays

**Brings dewarping and digital calibration to automotive, surveillance and cloud cameras**

**San Jose, California (July 11, 2013)** GEO Semiconductor Inc., a semiconductor and software company specializing in camera and projection solutions, announced today the introduction of the GW3300 and GW3400 programmable geometric processors.

The GW3300 integrates GEO's patented eWARP® core and a Tensilica® CPU with parallel and MIPI interfaces on both inputs and outputs. The GW3300's fully programmable geometry processing engine can correct for complex lens distortion, perspective and rotational misalignment, as well as brightness non-uniformity in real time with as low as 1/6 frame of latency.

The GW3400 integrates an Apical ISP with High Dynamic Range (HDR) technology. The ISP applies different processing to each pixel of each video frame to pull out hidden detail in shadows and highlights while preserving colors, local contrast and natural appearance. The ISP also has support for HDR sensors for incredible low light and direct sunlight performance.

"There is an explosion of use cases for ultra-wide panoramic, or 'fisheye' lenses, and heads up display (HUD) systems. All these require intense geometric image processing. The programmability of the GW3400 allows customers to perform best-in-class geometric processing, such as dewarping, and automate the calibration process which saves enormous manufacturing costs," said Brian Gannon, VP of Marketing at GEO Semiconductor.

The eWARP® features include pincushion/barrel distortion correction, keystone correction, rotational misalignment correction, stitching of multiple cameras, stitching of multiple projectors, digital calibration, custom lens design, and ePTZ (electronic Pan, Tilt, and Zoom).

Data is processed with 1/32 pixel accuracy for:

- Precise convergence, alignment, and stitching of cameras and projectors
- Precise correction of lens distortion, including ultra wide angle lenses
- Supporting custom and tailored innovative lens designs
- Factory, field, and self-calibration

### Feature Summary

- 190° WFOV Fisheye Lens image restoration with increased resolution and Zero Content Loss
- Embedded eWARP™ Engine for real-time geometric transform generation
- 533MHz DDR3 SDRAM supporting high resolutions
- Projection distortion correction
- Electronic Pan / Tilt / Zoom
- High Dynamic Range HDR/WDR ISP
- Supports resolutions from 720x480 up to 4kx4k
- 360 degree rotation correction

### Availability

The GW3300/GW3400 and reference designs are available to qualified customers. Pricing information and specifications can be obtained by visiting [www.geosemi.com](http://www.geosemi.com).

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### World Headquarters

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### Development and Operations Center

#### GEO Semiconductor Inc.

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## **About GEO**

GEO Semiconductor Inc. is a semiconductor and software company based in Silicon Valley and inventor of the eWARP® geometric processing technology. GEO provides innovative geometric processing, image signal processing and video compression solutions to address a wide variety of camera and projection products. These products include automotive cameras, heads-up displays, security IP camera, smartphone peripherals, projectors and consumer cloud cameras. GEO has operations in San Jose, Toronto, Orlando, Cambridge UK, and Bangalore, and sales channels around the world. For more information about GEO, please visit [www.geosemi.com](http://www.geosemi.com).

## **Contacts**

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