



Automatic, High Accuracy, Real-Time Distortion Correction

VISION_x INC.

www.visionxinc.com

Automatic, High Accuracy, Real-Time (e. "On-The-Fly") Distortion Correction

VisionGauge® OnLine has an advanced and unique tool for fully automated, high-accuracy, real-time distortion correction.

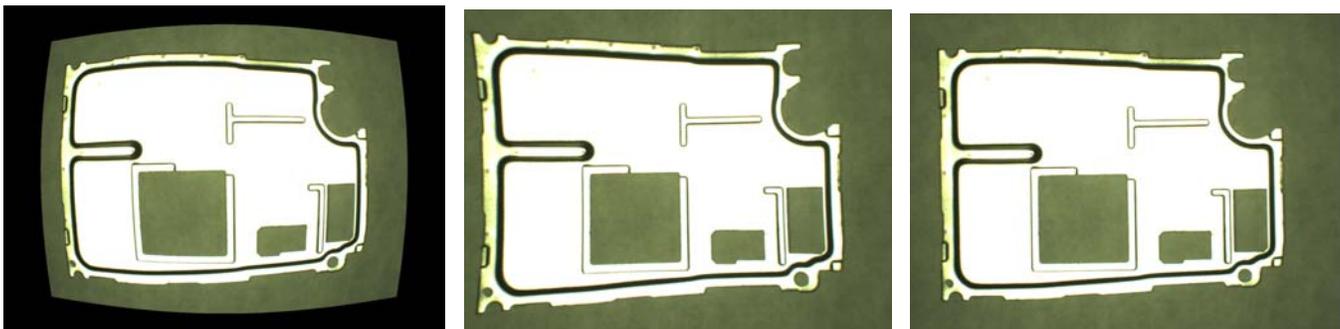
This is a very fast, accurate and easy-to-use tool that automatically compensates for optical distortion. This is especially useful in lower-magnification applications, when telecentric lenses are not available. In this case, the optical system always introduces optical distortion. And even a small amount of optical distortion significantly degrades a machine vision system's measurement accuracy and the robustness of all of its results (e.g. pattern matching, optical character recognition & verification, etc...).

Optical distortion occurs when the transverse magnification of a lens is not constant. The case where the magnification increases with the off-axis distance is known as positive or pincushion distortion. Similarly, negative or barrel distortion corresponds to the situation where the magnification decreases with the axial distance.

VisionGauge® OnLine's proprietary distortion correction tool is able to accurately and automatically remove all such optical distortion. Furthermore, VisionGauge® OnLine's distortion correction tool is highly optimized so that it is extremely fast and can keep up with the live video image stream. It is thus perfectly suited for high-speed, real-time applications.

Finally, note that VisionGauge® OnLine's distortion correction tool is hardware-independent and is extremely easy to calibrate.

Thanks to this advanced distortion correction tool, VisionGauge® OnLine provides unparalleled accuracy and robustness in applications that require a wide field-of-view, and all of this at a lower cost!



Two forms of optical distortion: pincushion distortion (left image) and barrel distortion (center image).
The right image is distortion-corrected (automatically, and in real-time).