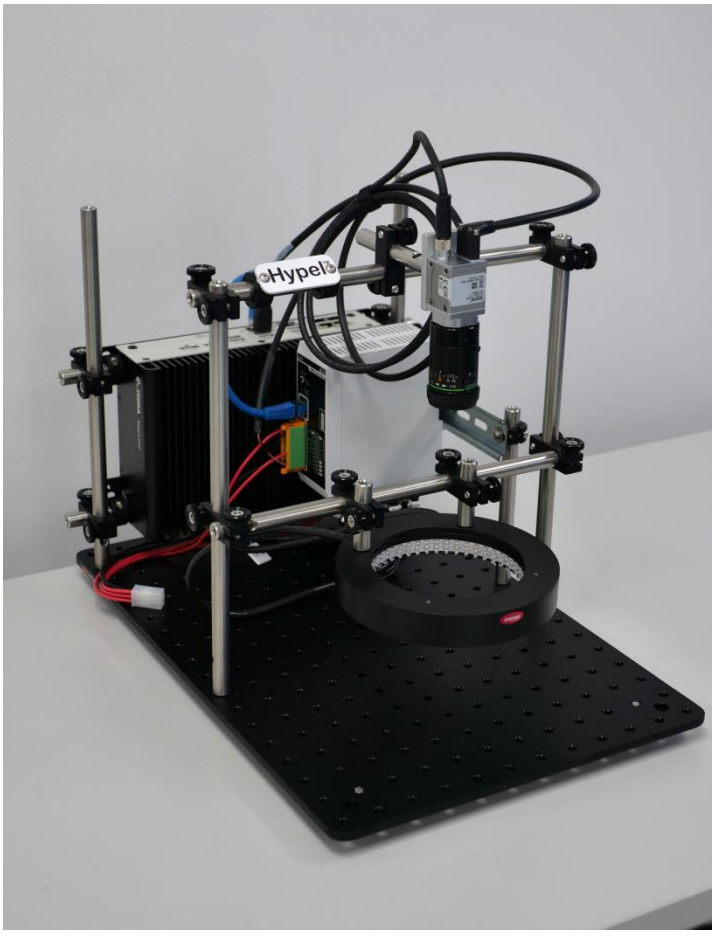
Hypel™

Better Images for Better Results

Do you face any of these challenges?

- Keeping all object features in focus
- Glint from shiny objects
- Insufficient contrast
- Noisy background interfering with foreground features



Our new technology will build better images, enabling better inspection results.

Building Better Images

Hypel imaging can automatically and rapidly vary image focus, light geometry, and exposure duration while capturing multiple images of an object. It uses information extracted from many images to build a superior composite image. The resulting image provides better image intensity, contrast, and focus.

Processing Better Images

You can keep using your favorite image processing tools. Turbocharge your current toolset by feeding it Hypel's superior images. Ask us about seamless integration with Zebra Aurora Design Assistant, Cognex Designer, and other software environments.

Still Imaging with Old Tech?

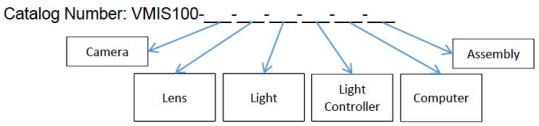
Back in the day, we captured *one* image of each object, then crossed our fingers, hoping that image was good enough. Today, Hypel gains information by processing *multiple* images of an object, each captured under different conditions. It uses this information to build a composite image that is far superior to any single input image.

High-Value

Hypel imaging systems have been pre-integrated to get you up and running fast. It includes a camera, lens, light, controller, processor, and cables appropriate for your project requirements. The software blends these disparate components into a ready-to-go solution, potentially eliminating weeks of engineering and programming effort.

Industrial Grade

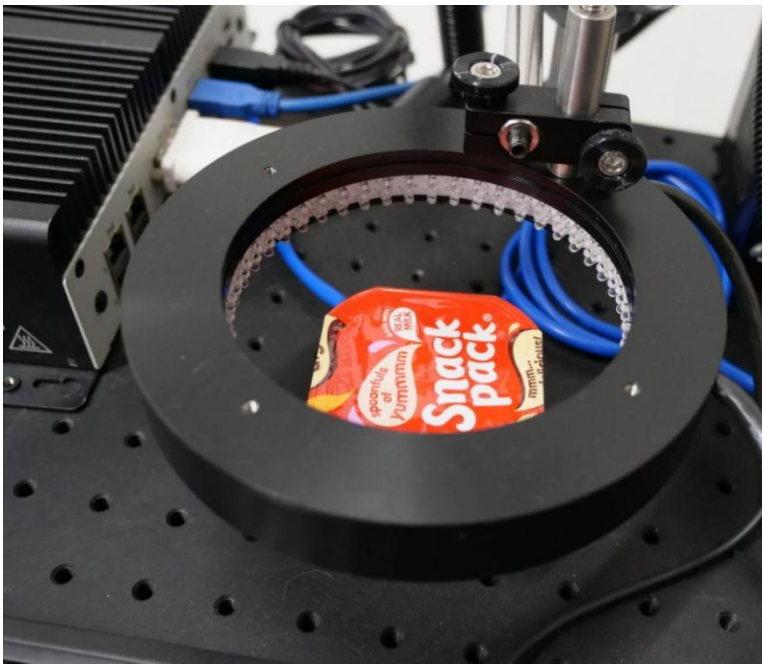
Mount the Hypel components on your machine, or pre-assembled on a breadboard for use in your lab. All components are industrial-grade and made by leading manufacturers.

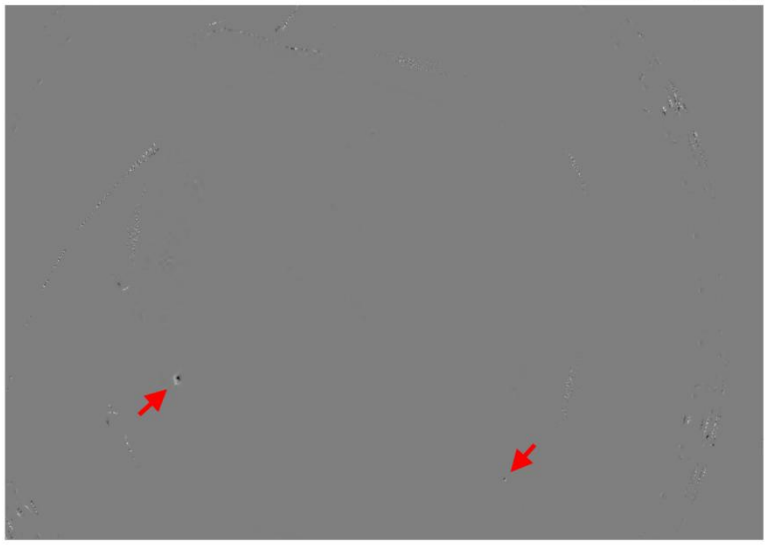


Configurable

We'll configure each system for your exact requirements. Chose from 3 cameras, 21 lenses, and 7 lights. Available with or without flowchart software for further image processing capabilities.

Example: Contrast Enhancement



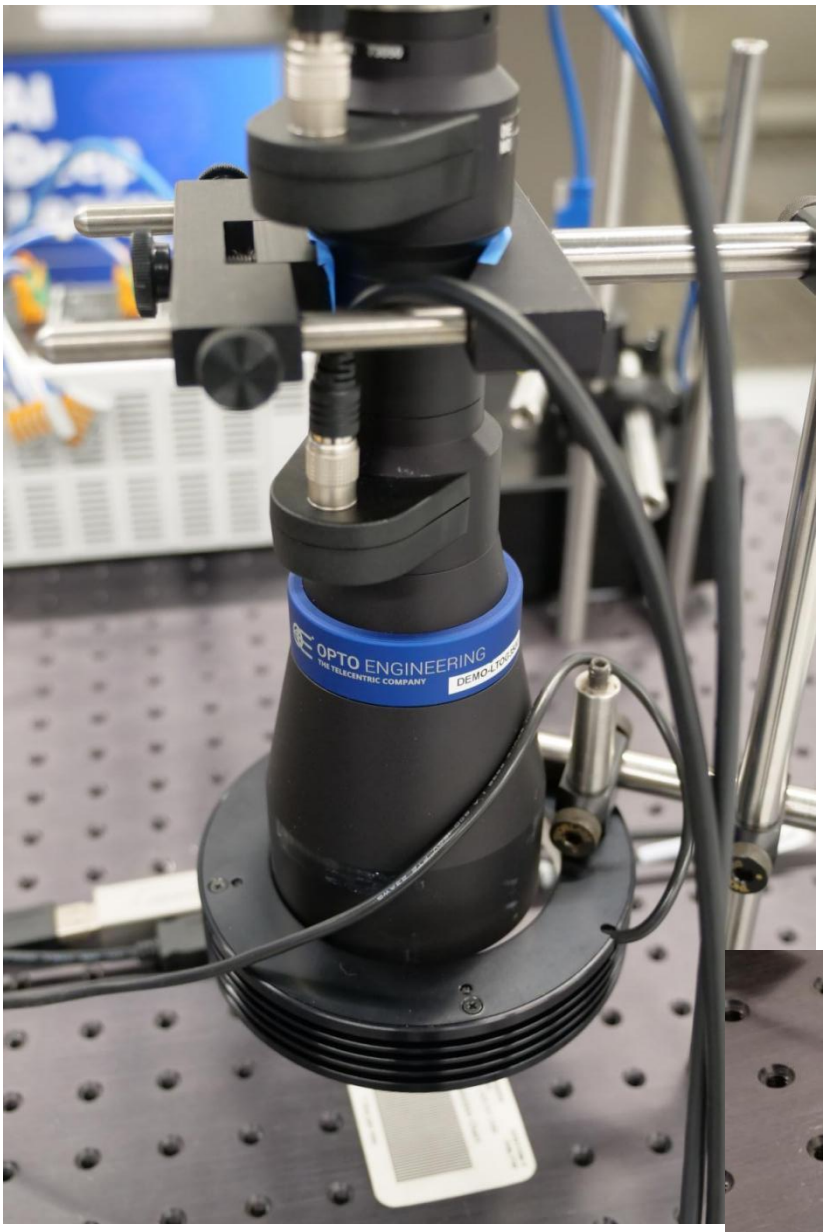


The pudding cup's top film would normally be challenging to inspect for pinholes. The film's glossy, undulating surface reflects light in arbitrary directions, producing random reflections. Furthermore, the surface contains printed graphics, making it difficult to differentiate between dark print and a pinhole.

The Hypel imaging system rapidly changes the direction of light as eight images are captured. Hypel software extracts information from each of the input images to build a composite image.

The resulting composite image is not only free of all reflections, but the graphic print is made transparent. Only the pinholes (shown at bottom) remain. A simple blob tool from your favorite image processing platform will have no trouble finding these flaws.

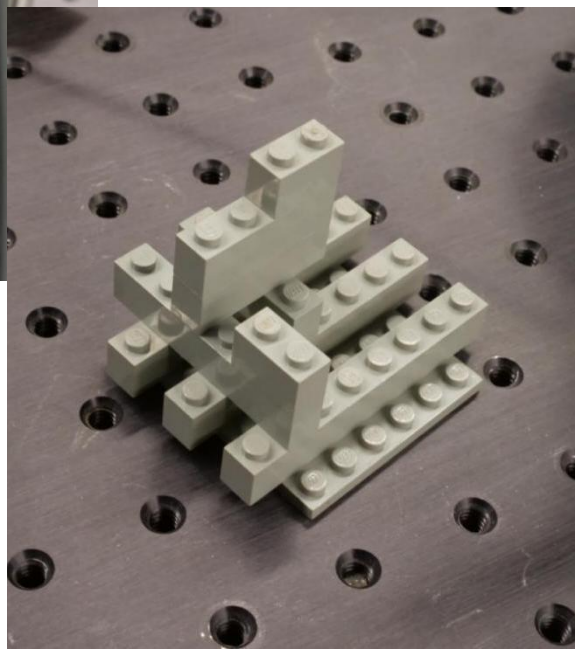
Example: Focus Enhancement



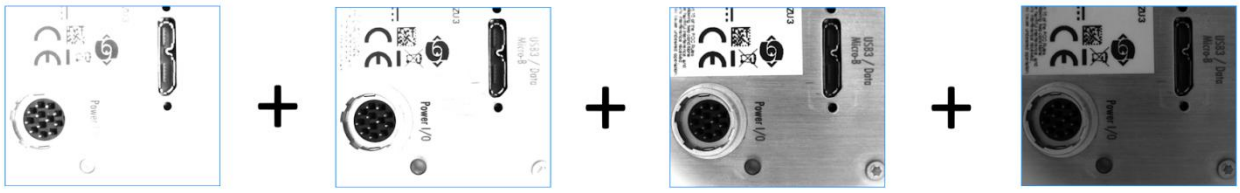
An object, such as that shown below, may have features on several planes. Or, the distance between the lens and the object may vary. When imaged under magnification, it is often impossible to capture an image having sharp focus. Simply put, the laws of physics get in the way.

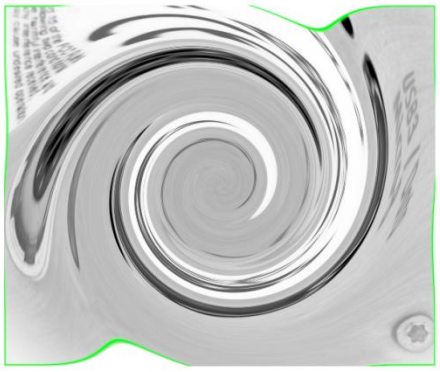
When purchased with a liquid lens, Hypel imaging can acquire images from multiple different focal planes. These images are then processed and combined, resulting in a single image having everything in focus.

Lens depth-of-field is no longer a problem.



Example: Intensity Enhancement





The Hypel imaging system acquires multiple images of an object, each captured using a different camera exposure duration. The brightest image reveals details inside of the electrical connectors, but other areas are lost in the saturated pixels. The darker images better capture the label content and brushed aluminum surface, although the connector detail is lost. The resulting image (shown at bottom) delivers detail of all object features.

More

Please call 651-400-7015, or visit HypelImaging.com, for additional information.

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