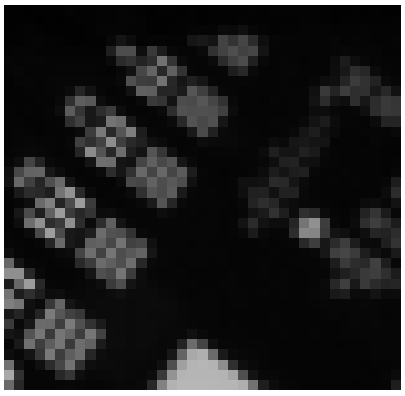
Lenore McMackin, PhD, President/CTO,
InView Technology Corporation,
6201 E. Oltorf St., Ste.400, Austin TX 78741

InView announces

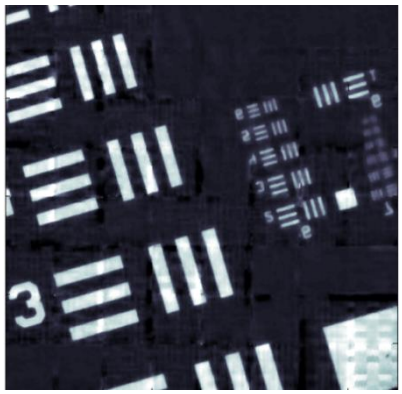
Higher frame rate Compressed Domain™ SWIR camera

High-resolution SWIR is now faster for applications in imaging and automated target recognition

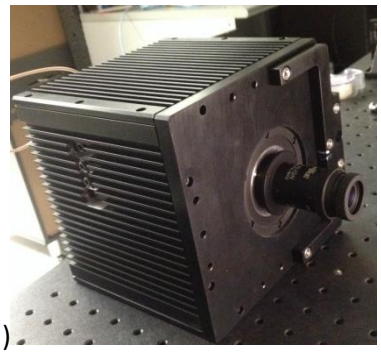
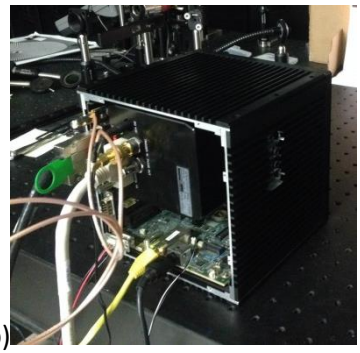
Having already harnessed the computational power of the famous *Single-Pixel-Camera* design, InView has now enhanced its speed and image processing capability by incorporating a small array of pixels and new compressive computational methods. InView takes advantage of parallel measurements, matrix processing and efficient reconstruction algorithms to produce the highest resolution SWIR images at rates of just a few seconds per frame. As shown in the camera images below, multi-pixel Compressive Sensing magnifies the resolution of a small pixel array. On the left, is a low-resolution image directly measured from a 64 x 64 InGaAs pixel array. When that same 64 x 64 array is used with compressive sensing, the image is transformed computationally into a detailed 512 x 512 image.



64 x 64 pixel SWIR mage



512 x 512 image constructed using multi-pixel compressive sensing from a 64 x 64 sensor.

(a)  (b)  (c) 

Multi-pixel CS operational prototype imager (a) Front view; (b) Rear view; (c) 512x512 outdoor image.

Using the multipixel camera InView is developing Compressed Domain™ pattern recognition using streamlined neural network training and testing that operates on sparse data directly from the camera without the computational burden of image reconstruction.

For more information contact InView today

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www.inviewcorp.com
info@inviewcorp.com

InView Technology Corporation, 6201 E Oltorf St, Austin, TX 78741
(512)243-8751 x105