

LSS-2404

Light Sequencing Switch

A low-cost programmable switch that synchronizes variable lighting and camera exposures to manage multi-shot image capture sequences for Computational Imaging.

Key Features

- ◆ Achieve multiple computational imaging techniques
- ◆ Easily trigger camera and variable lighting or optics at the same time
- ◆ Flexible trigger input & output to fit every machine (3.3-24V trigger input, switched ground; 5V,12V,24V selectable trigger output)
- ◆ Fully programmable with multiple recipe storage
- ◆ Flexible lighting options with external Ethernet control
- ◆ 4 channels for multiple lights or segments
- ◆ Open architecture, works with most imaging software

Includes FREE
Computational
Imaging Software
(SDK)



Benefits

- ◆ Better images that were previously impossible to achieve
- ◆ Shorter development time
- ◆ No more iterative attempts to perfect optics and lighting
- ◆ No more post processing to enhance images in software
- ◆ Directly outputs the image your vision algorithm needs
- ◆ More reliable MV solutions



Computational Imaging

Digital image capture and processing techniques that combine computation and optical encoding
Resulting in better images or images with unique characteristics

Typical Computational Imaging Functions

- ◆ **Photometric Stereo** — Generate edge and texture images using shape from shading
- ◆ **Ultra Resolution Color**— Create higher resolution color images with no interpolation artifacts
- ◆ **Bright Field + Dark Field** — Combine the advantages of two well-known lighting techniques
- ◆ **HDR** — Create images with higher contrast ratios
- ◆ **Extended Depth of Field** — Improve depth of field without losing light or reducing magnification
- ◆ **Multi Spectral** — Enhance images with maximum contrast from multiple spectral bands
- ◆ **360° object capture** — Panoramic imaging with singly triggered, multiple scene acquisition



**Computational
Imaging**

Basic Principles of CI

- ◆ Computation inherent in the image formation process
- ◆ Combines special lighting and/or optics along with image processing during image capture
- ◆ Typically involves a sequence of images with different illumination for each frame
- ◆ Covers a wide variety of techniques, all designed to output better images for your specific application
- ◆ Ends with the image acquisition process

**GET
THE
IMAGE
YOU
NEED™**