

Prototype IR Camera Software

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Category:
Prototype/Test

Products Used:
LabVIEW 8.5
Vision Toolkit

The Challenge:
Develop software that would prove the effectiveness of the customer developed IR camera. The system would be based on a USB connection and would perform many of the camera functions in software that were originally designed for the hardware.

The Solution:
The solution used NI's LabVIEW to do USB communication, efficient array manipulation, and image processing tools to produce a complete system that could be demonstrated to customers. The capabilities of LabVIEW allowed the customer to meet very tight deadlines without sacrificing camera features.

Abstract:
A sensor manufacturer was looking to expand its product line into the camera market. How could they leverage their IR technology to produce a camera that would compete with established vendors in a short period of time? The result needed to be done in a tight timeframe while maintaining a high level of functionality. The application input was raw sensor data that needed to be manipulated into a picture to be displayed on the PC. The resulting image was commercial quality and provided a host of customization features.

Defining the Requirements

Resource limitations forced hardware functions like calibration and bad pixel substitution to be done in the software instead of the hardware as originally designed.