

Title: FPGA Based Machine Vision

Abstract: The conventional view of machine vision is one or more cameras connected to a powerful computer for processing the images (or video) and using the results to control one or more actuators. Within machine vision, real time processing is essential, and latency is important, if not critical, for successful operation. By embedding an FPGA within a smart camera, the pixel stream from the camera may be directly processed, significantly reducing the latency and required compute power by providing processed data as output, rather than raw images. This presentation will illustrate some of the techniques that can be used for efficiently implementing machine vision using FPGAs.