

Project Proposal: Stereoscopic Camera and Gif Maker

Overview:

The goal of this project is to create a system that is able to quickly take multiple pictures from different cameras, process the images into stereoscopic gifs, and store the resulting file on an SD card on the LPC board.

Peripherals:

For our core project, we will be making use of one SPI port and one I2C bus on the development board to control the camera(s). The SPI ports will be used to send data and commands between the camera(s) and board and the I2C ports are for configuring the camera module(s). Then, the LPC board will also interface with the SD card slot on the development board to store the data on an SD card. This basic camera and storage functionality with one camera will be the base goal for our project.

As our stretch goals, we first would like to include 2 additional camera modules and a 3D printed case to enable us to capture images that can be used for a stereoscopic GIF. If this goal is achieved, we will also attempt to interface with a Raspberry Pi so that it can process the images, and return an animated GIF through the LPC to the SD card.

Materials:

- Camera module (x3) - [Arducam 2MP Camera](#)
- SD card
- Connector cables
- Raspberry Pi
- 3D printed rig (we will make this)

