

ECE 492 - Computer Engineering Design Project

Automated Receptionist System

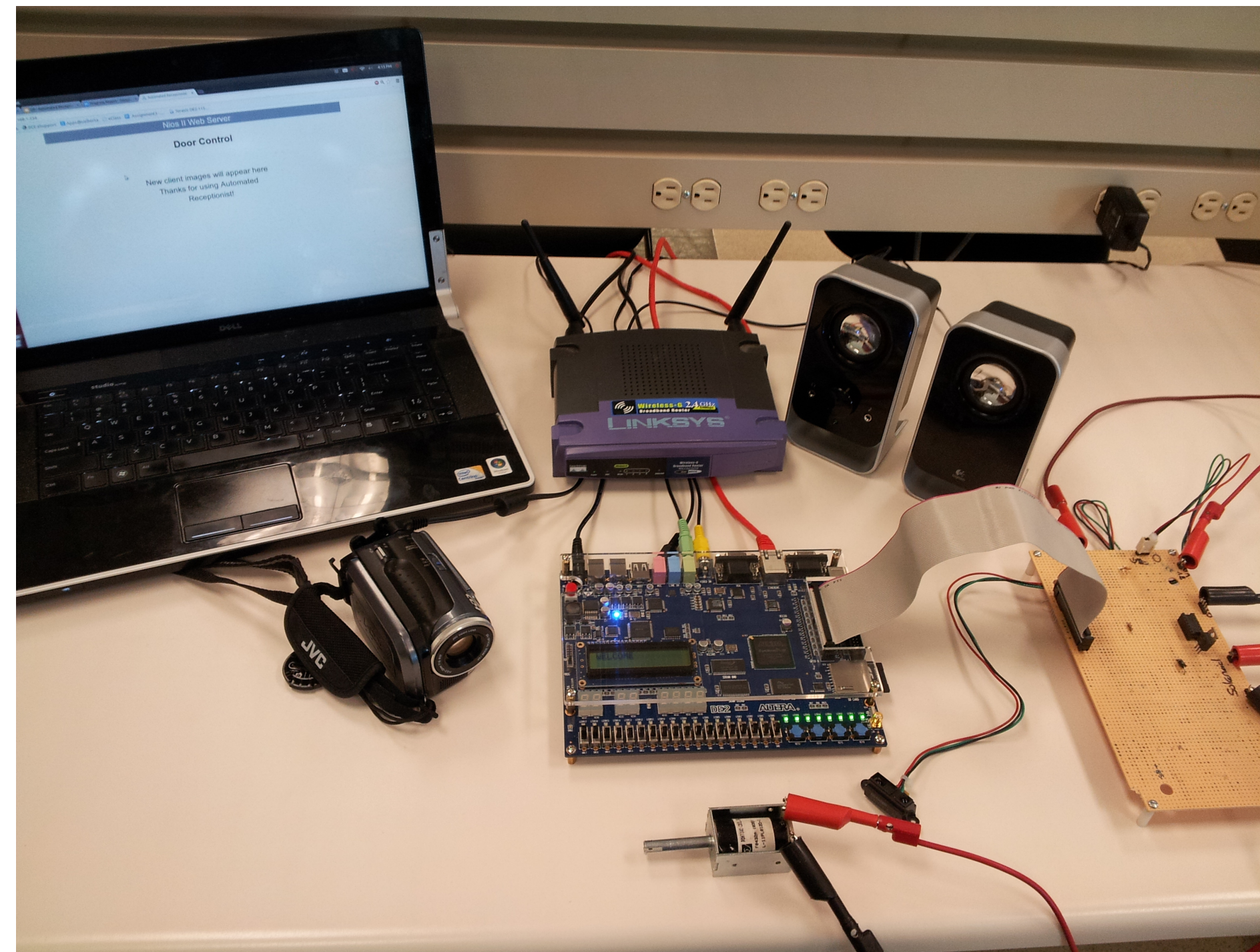
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Project Overview

The project automates the role of a receptionist of a building and implements the security that is required to grant access to guests. The basic functionalities implemented are meant to provide a convenient interface between the guest at the entrance and an authorized personnel.

- Detects via IR sensor and plays an automatic greeting upon the arrival guests
- Photographs an image of the guest and passes it to the on-board web-server
- Updates the authorized personnel-side browser to show guest image
- Prompts authorized personnel to grant/deny access within a designated time interval
- Unlocks door upon access approval through the actuation of a solenoid latch.



Motivation

- The current receptionist systems only allow voice communications.
- An Internet connection to the server would allow remote access to be controlled from **any** web-enabled device **anywhere** in the world.
- Future platform specific smart-phone applications could be developed for notifications creating a more modern approach to home security.

System Components

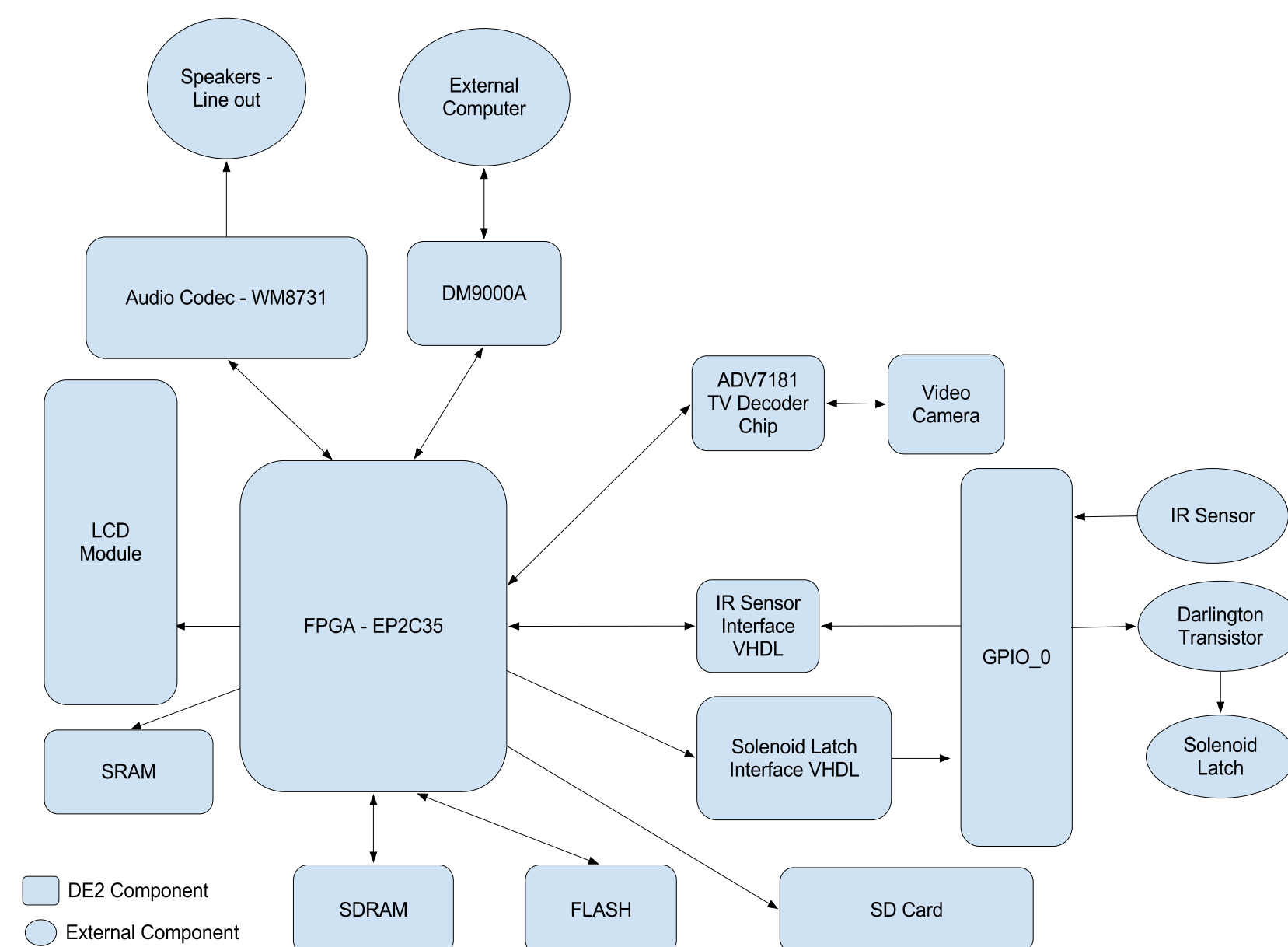
Implementation Platform:

- Altera DE2

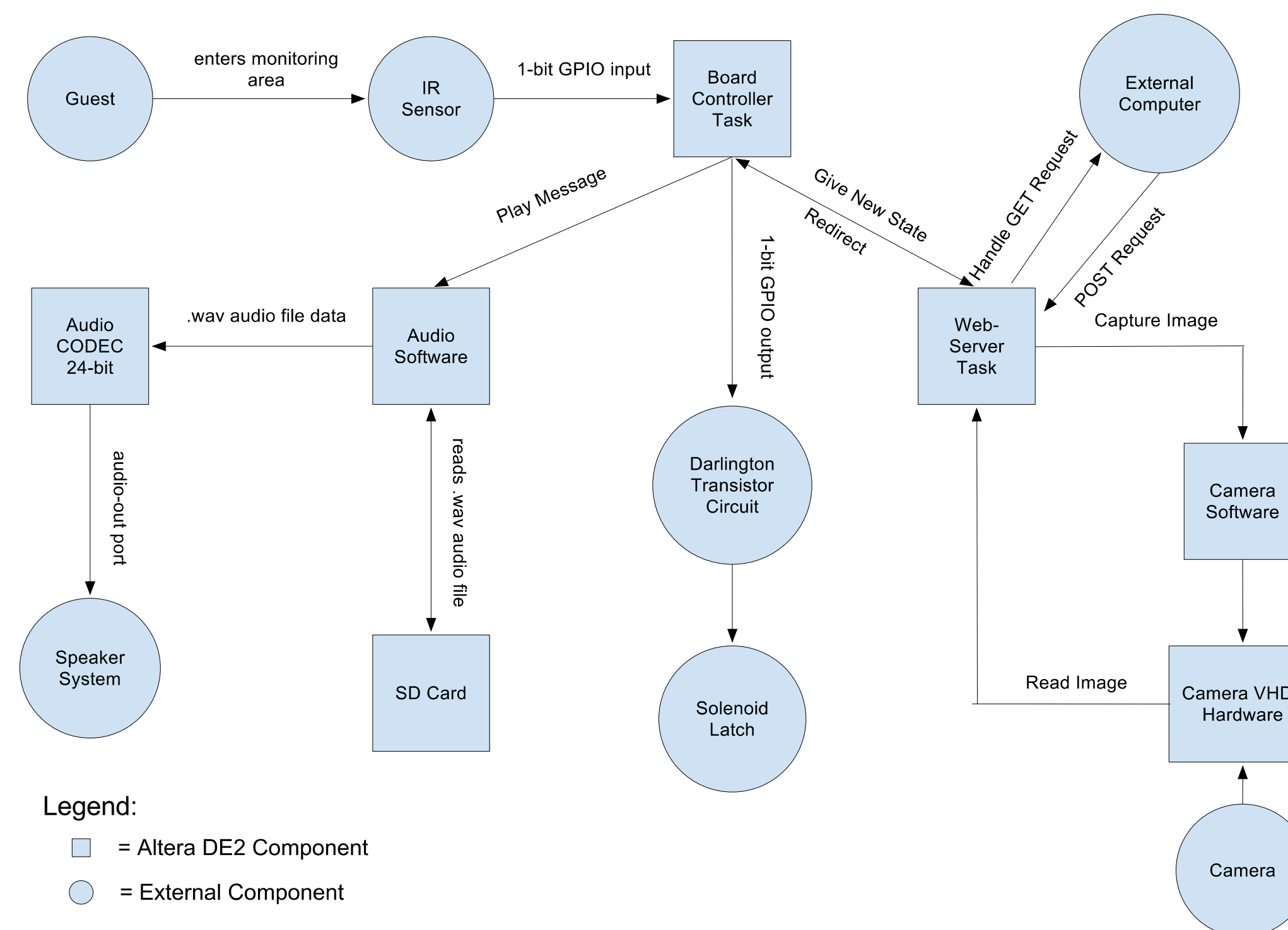
Hardware Components:

- Sharp - GP2Y0A02YK0F 15cm IR Sensor
- JVC Video Camera
- Kingston SD Card, Class 2, 2 GB
- Logitech Computer Loudspeaker

Hardware Description



Basic Operation



Easter Egg

We have hidden an 'Easter Egg' functionality in our system. Be sure to have a speaker connected to the Altera DE2's line-out.

- Hint: Check the web page.

Special Thanks

We would like to give special thanks to Nancy Minderman and Duncan Elliott for the equipment and technical support.