

Cypress Semiconductor: Arduino Friendly PSoC Shield

The purpose of this project is to provide a means to connect the PSoC to Arduino shields, in order for Cypress to expand its market base. The Programmable System on Chip (PSoC), made by Cypress Semiconductor, is a configurable piece of hardware which contains a CPU and programmable hardware. It is used by numerous companies to build embedded systems. Until recently Arduino was a hardware platform for hobbyists and students, but has recently been endorsed by Google as an Android Development Platform. Arduino includes a CPU and can be connected to one or more daughterboards, known as shields.

This project consists of interfacing the PSoC with the Arduino Ethernet Shield by physically connecting the pins. The PSoC general purpose IO pins are configured and routed using the PSoC Creator application. The firmware for the PSoC to interface with the Ethernet Shield was written by modifying parts of the existing Arduino libraries to integrate with the Cypress software libraries.

Several internet applications were developed to demonstrate the capabilities of the project. These demos include writing to an SD card on the Ethernet Shield as well as interfacing with other hardware to prove Ethernet capabilities. The team has also developed a custom printed circuit board as the final prototype which could be used with other Arduino shields.

<http://www.egr.msu.edu/classes/ece480/capstone/fall11/group01/>



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