

## Homework

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This assignment is due by our first meeting, which will probably be Saturday, January 25<sup>th</sup>, at around 3pm or 4pm. We'll confirm the date and time by e-mail.

1. Download and read the "Quick and EZ Guide to USB" application note from <http://www.cypress.com>.
2. Download the EZ-USB FX technical reference manual from <http://www.cypress.com>. Read chapters 1-4 and skim chapter 5.
3. Visit <http://www.4pcb.com/free/pc> and start thinking about what you might be interested in designing for a PCB. Be prepared to come to a class meeting where we will discuss various ideas. Do some research on 2 and 4 layer PCB manufacturing places; for instance, check out [www.pcdmag.com](http://www.pcdmag.com) (lots of links there under buyer's guide and advertiser info).
4. Explore <http://www.lvr.com/usb.htm>
5. Explore <http://www.usb-by-example.com>
6. Give some thought to the design of a small PCB (something like 2x3") which has a small EZ-USB FX controller, along with a USB connector, +3.3V regulator, a header to select between bus power and the regulator power, RS-232 connector and maybe a few LEDs and GPIOs. We'll follow this design with a more complex design later.
7. Get your electronic key programmed for access to ECEE 1B24 and ECEE 1B28B for the semester.
8. Make sure that the licensed version of Orcad schematic capture (Capture CIS) and Orcad Layout are installed on the computers in 1B28B and 1B24.
9. I've asked the department to install the Cypress development tools on the computers. As soon as they are installed, try them out and ensure that they work.

One of the goals this semester will be exploring the web and creating a list of good web sites related to USB, PCB design and manufacturing, FPGAs, and signal integrity. I will start a web page within the next week, and as you find good sites, please send me URLs.