

PSoC Tutorial Notes

1. Information about components:
Right click on component→Datasheet→Application Programming Interface
2. General Purpose I/O: All GPIO (general purpose input/output pins) can be used for any standard digital/analog I/O. However, if you would like to use special functions such as I2C, etc. these require specific pins. These are labeled when you choose physical pins on your Designwide Resources page.
3. Clock tree:
Click .cydwr file→Clocks tab→Edit Clocks
4. Interrupts: Priorities in .cydwr “Interrupts” tab. You may write ISR code in auto-generated ISR.c file, but if part is deleted or reconfigured your code may be deleted. Instead, put your ISR code in main.c as shown in the RS232 example code on the 6.115 website.
5. Debugger: This is very powerful. Click the bug icon to pull up the debug tool. You can hover over variables to see their values in realtime, insert breakpoints in your code, etc.
6. General Purpose Reminders and FAQ:
 - If you get errors like “can’t find these components” or notice large X’s where your components should be on your schematic, this means you are porting a design from a different version of PSoC Creator. To convert components to their appropriate versions: Project→Update Components→Click “Update all to latest” and click “Next”→Click Finish.
 - If you get an error when programming your device, check two things. First, that your USB cable is plugged in (unplug and replug both ends). Second, that you have selected the correct device to program. Project→Device Selector→Filter by PSoC 4 under architecture→Find -042 device (chip on dev board)→Click ok.
 - If you have questions about the kit itself, consult the kit schematic! I have included the pdf here for those who need it.
 - Always start hardware components like PWMs, etc. in software. There will be an API PWM_Start() that must be called before the component is used.

I will try to update these notes as new FAQ come up. Please let me know if you remember something else that may be useful to the rest of the class :)

-Lizi