

Introduction

Microchip recently bought Atmel. From the Microchip website: “Atmel® Studio 7 is the integrated development platform (IDP, also known as an integrated development environment ofsr IDE) for developing and debugging AVR® and SAM (ARM) microcontroller applications. The Atmel Studio 7 IDP gives you a seamless and easy-to-use environment to write, build and debug your applications written in C/C++ or assembly code. It also connects seamlessly to the debuggers, programmers and development kits that support AVR and SAM devices. ... Atmel Studio 7 supports all 500+ AVR (8- and 32-bit), SAM3 and SAM4 microcontroller.”

Procedure

0. Note: Several students have said that they could not install Atmel Studio when they already had Visual Studio install. They had to uninstall Visual Studio before installing Atmel Studio.
1. Go to <https://www.microchip.com/avr-support/atmel-studio-7>
2. At the bottom of the page, download the **Atmel Studio 7.0 (build 2397 [or higher]) web installer**.
3. Select either the web installer (recommended) or offline installer.
 - a. Run the downloaded installer. **Agree** to the terms and conditions and select "**Next**".
 - b. You now have the option to install software for 8-bit, 32-bit, and ARM MCUs. For this class you only need to install the **8-bit AVR** architecture. You may install the others if you would like. Select the one(s) you want to install and click "**Next**".
 - c. You don't need the Atmel Software Framework and Example Projects extension. Deselect it and click "**Next**".
4. After the installed validates your system, click "**Next**", then click "**Install**".
5. Allow Atmel Studio to make changes to your computer.
6. During the installation of Atmel Studio, you may be prompted to install additional device software/drivers. Choose to **install** these as well. (This process may take up to an hour, depending on your connection speed.)
7. If you don't do a lot of programming outside of the class, it is recommended that you use Atmel Studio as the default program to open **.asm**, **.c**, and **.h** files.
8. Get the following files from our class website (below) or from Atmel.
 - [XMEGA AU Manual](#) (Atmel doc8331)
 - [XMEGA128A1U Manual](#) (Atmel doc08385)
 - [Instruction Set](#) (Atmel doc0856)

The first two documents above are also available from Microchip's website at the following URL: <http://www.microchip.com/wwwproducts/en/atxmega128a1u> (under Documentation) and are called *Atmel AVR XMEGA AU - Complete Datasheet* and *ATxmega64A1U/128A1U Datasheet*, respectively. The last document is available from Microchip at <http://ww1.microchip.com/downloads/en/devicedoc/atmel-0856-avr-instruction-set-manual.pdf>.

Note for Mac and Linux Computer Users

If you have a Mac (i.e., a Macintosh computer from Apple) or if you use Linux, you will need an alternate Windows installation or you will need to install a Windows virtual machine in order to then install and run Atmel Studio. We suggest that you install *Boot Camp* (free and the best); *Parallels* (not free) or possibly *VMware* (not free) may also work. UF offers free copies of Windows 10 Software. We do **not** recommend *Virtual Box*. *Wine* is another alternative, but this has not been verified to work. (Note: My best students use *Boot Camp*!)

If you are having problems installing this software, the UF help desk (www.helpdesk.ufl.edu and 352-392-HELP [4357]); you can visit them at the HUB Mon-Thur from 7:30am-10pm, Fri from 7:30am-5:00, and Sat-Sun from noon-6:00pm. The help desk is available by phone and email 24/7!