Department of Engineering

EE 3710 Lab 0

Title: Installing the Integrated Development Environment (IDE)

Objective: The student should prepare his computer for the process of building, downloading, debugging and running programs on a microcontroller using an IDE

Parts: 1-C8051FX20-TB Evaluation Board
1-USB Debug Adapter

Software: Silicon Laboratories IDE version 3.50.00 or greater

Preparation: Although the computers in the lab should have the Silicon Labs IDE installed, it recommended that you install it on your own computer so that you may work on your projects when you are away from the campus.

Install the silicon labs IDE by inserting the development kit tools disk included in the C8051F020DK development kit into your computer. Select “Install Development Tools”. Choose your platform (C8051F020-DK) and click “Install”. Make sure the boxes for (a) Silicon Labs IDE, (b) the documentation and (c) the wizard are checked. Also make sure either the Keil or the Raisonance toolset is selected. (If one of the tool sets does not appear, it can probably be installed from the third-party tools disk.)

The Keil toolset (compiler, assembler and linker) generate better code, but your programs are limited to 2kb in size, which may not be large enough for the projects we have to do this semester. (There is a procedure on the course website that you may follow to double it to 4kb) The Raisonance toolset is not as efficient, but you are allowed programs up to 8K in size.

Once you have chosen your toolset (you can choose both), click Install. IMPORTANT: Each program uses its own installer, and your system will likely pause between installations. It will appear that the whole installation is complete and you will be tempted to remove the disk. Do not do so until you are positive that each installation you selected has finished.

Using your computer (or a lab computer if you do not have one, or if you have chosen not to install the IDE on it). Follow the instruction

sheet in your C8051F020-DK Evaluation kit to build, download and run the sample (assembly) program called “blinky”.

Remove the USB adapter from your evaluation board, reset it and make sure that “blinky” runs stand-alone.

Students who can demonstrate building, downloading and running the blinky program to the lab instructor will receive 5 lab points. (A normal laboratory exercise is worth 20 points.)