

Microcontroller Prototyping

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The microcontroller board (aka mainboard) consists of all of the interfacing and other components which actually make up the “digital thermostat” part of the module. With the arrival of my LCD module, I had all the parts I needed to begin serious prototyping of the mainboard.

The mainboard prototype was built off of the initial schematic I presented in my earlier “Mainboard (Microcontroller) Design” post. The components are laid out on two large breadboards and one small breadboard (used for the LCD components). The “peripherals” currently installed on the mainboard include the temperature sensor, humidity sensor, five switches, five LEDs, and the LCD module.

Photos of the current mainboard prototype are shown below. In addition to the mainboard and peripherals, there are two other boards shown in the photos. The large board towards the upper left of the photos is an Atmel STK500 development board. This board is being used only as a programmer for the microcontroller. The other small circuit board is the power supply sub-module discussed in my previous post “Power Supply 0.3.”





