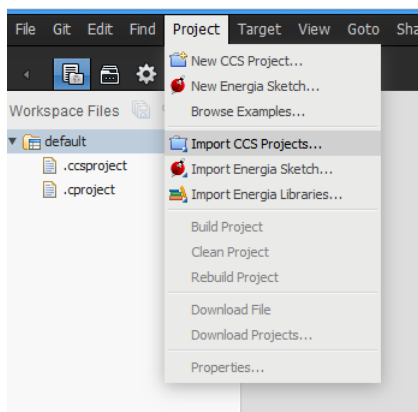


Software upload manual

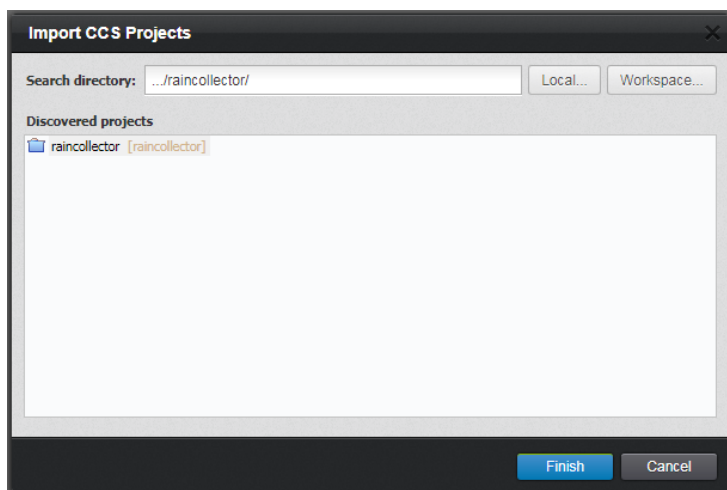
Upload of Raincollector Software to MSP430 via CCS Cloud

Uploading the software from a browser works only in Chrome. Other browsers do not allow importing whole project folders to the cloud. You could still upload the files individually in another browser; when doing so, make sure to upload also the hidden project files “.project”, “.cproject” and “.ccsproject”.

In Chrome, visit <https://dev.ti.com/> and select CCS Cloud. You need to register (free of charge) to use CCS Cloud. In CCS Cloud, select *Project* -> *Import CCS Projects*

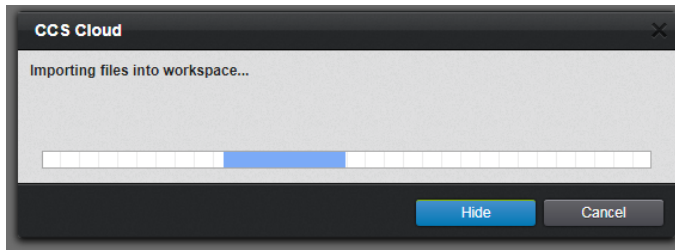


Select *Local* and browse to the software folder on your computer. If you do not see the *Local* button, your browser does not support uploading whole folders. In this case, we recommend using CCS Desktop. If you selected the correct folder, it will show the *Discovered Project*.

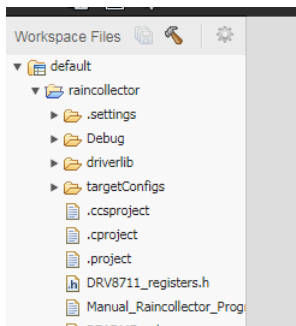


Press *Finish*.

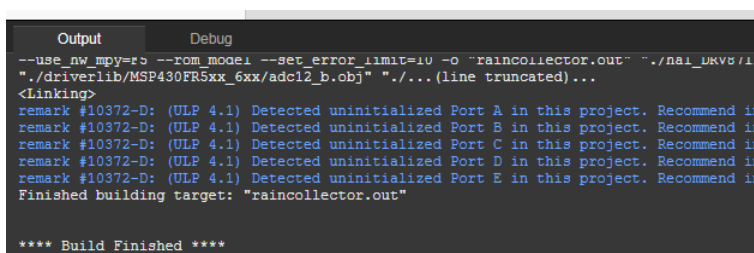
An import window appears. Unfortunately, import warnings like “Overwrite file” etc. do not appear as long as the import window is open. Technically, you should not see any import warnings, but just to be on the safe side, *Hide* the window, to check for warnings.



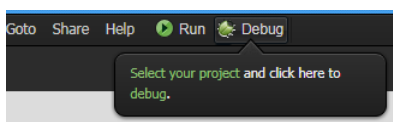
Once the project is imported, press the *hammer* symbol to build the project.



The build process should end with ****** Build Finished ******. You can ignore any blue remarks. Red errors should not appear; if they appear, you need to solve them.

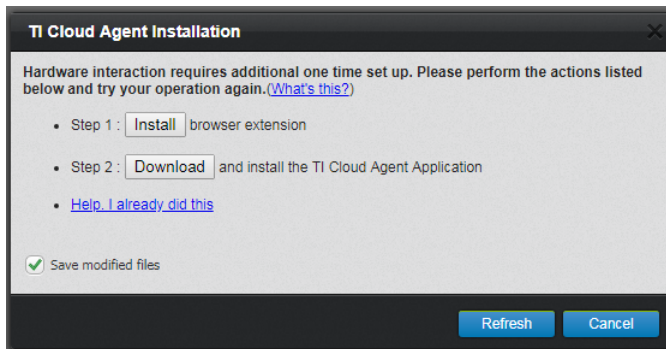


Without the two AA batteries installed, connect the micro-USB cable. The microcontroller draws energy from USB now (this would conflict with the power supply via batteries). With the project folder selected, hit the green *run* arrow. The run button uploads the program to the microcontroller and starts the microcontroller right away. Alternatively, the green *debug* bug uploads the program, keeps the microcontroller on halt, and waits for your interaction

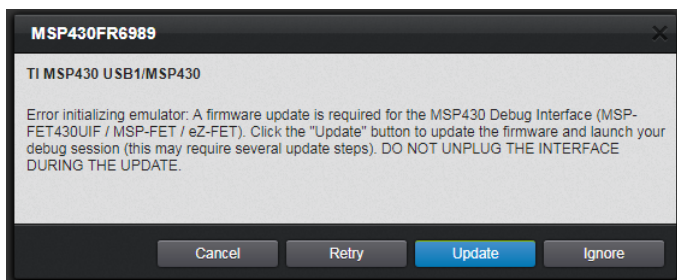


(F8, resume button) to start. Either one works, if you just want to upload the program, use *run*.

On the first run, you will need to install a browser extension and the TI Cloud Agent Application.



When done, hit *refresh* and hit *run* again. The debugger part of the microcontroller board occasionally (especially if new from the shelf) needs a software update. This software update has nothing to do with our project but only with the USB capabilities of the board. If you see a message like the following, hit *update*.



You might need to hit *run* again after such an update, if the code is not uploaded automatically. A successful upload is terminated with a message similar to "Flash/FRAM usage is 14598 bytes. RAM usage is 351 bytes."

You should now see the message "TURN WHEEL TO DRIVE MOTOR TO REFERENCE POSITION PRESS RIGHT TO START AND AGAIN TO CONFIRM" running over the LCD of the microcontroller board, which means you are done. Unplug the USB cable, put in the batteries, and check functionality.

For replication on another (or the same) board, just connect the new board to the micro-USB cable and hit *run* again. You might need to update the debugger and hit *run* again, if the upload does not start after updating the debugger.