POWR Rocket Upload Portal Manual

Updated April 28, 2022

The POWR Rocket project is actively being developed, as it is not in full development. The project GitHub docs has the most recent version of this document.

I. Receiver setup

The arduino receiver that is required for compliance with the upload portal must follow a stepwise pattern. Upon connecting to the correct serial port in the portal, the Windows form writes to the port with the string “ID\n”, expecting to read 8 bytes that are stored as a global in the Arduino C script. The Arduino C script on the microcontroller will wait to read that string, as well as the string “DA\n”. The Windows form will send “DA\n” after the *Upload to Storage/Database* buttons have been pressed, since it is requesting to read from the Arduino’s SD Card adapter.

II. Connection via USB or other serial port

Before being able to upload to storage or to the database, you must make a connection to the correct COM port. Upon selecting the incorrect port, one that does not follow the expected protocol, the app will print a timeout message and you should be able to try again. If the connection is successful following the expected protocol then, after a couple seconds, the ID should print the 8 byte ID saved in the Arduino C script of the receiver.

III. Uploading to storage

After a successful connection is made to the serial port with the receiving arduino, the *Upload to Storage* button should be visible. Click the *Upload to Storage* button to generate a csv file with field names at the top of each column. The field names are not yet allowing user-input and are hardcoded in the C# code. The csv file will go to the user-specified directory location written in the text box above the button. This box will check the validity of this directory. The csv file generated will be called “datalog” + current 24-hour time.

IV. Uploading to database

The *Upload to Database* button will only be available to press under certain conditions: (1) A connection has been established with the database with space with specified credentials, (2) The credentials have not been edited since last successful connection (3) A connection has been made to the serial port.