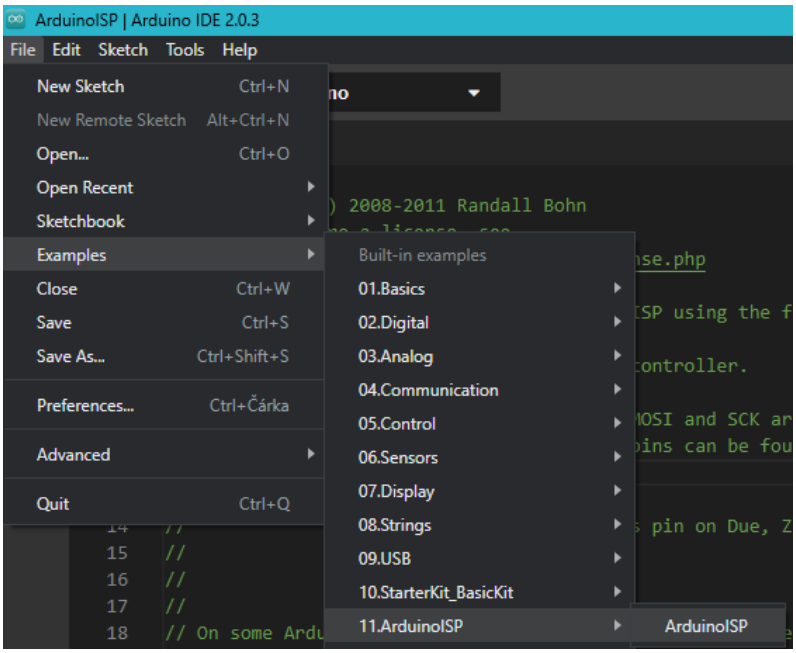
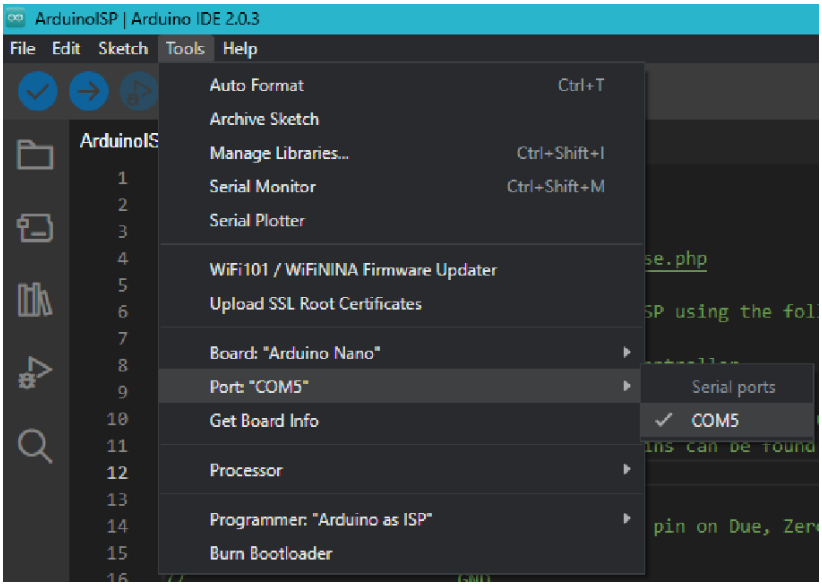
QUAAD flashing tutorial

This is a step-by-step guide for flashing the atmega328p chip on MŽOURACK – QUAAD.

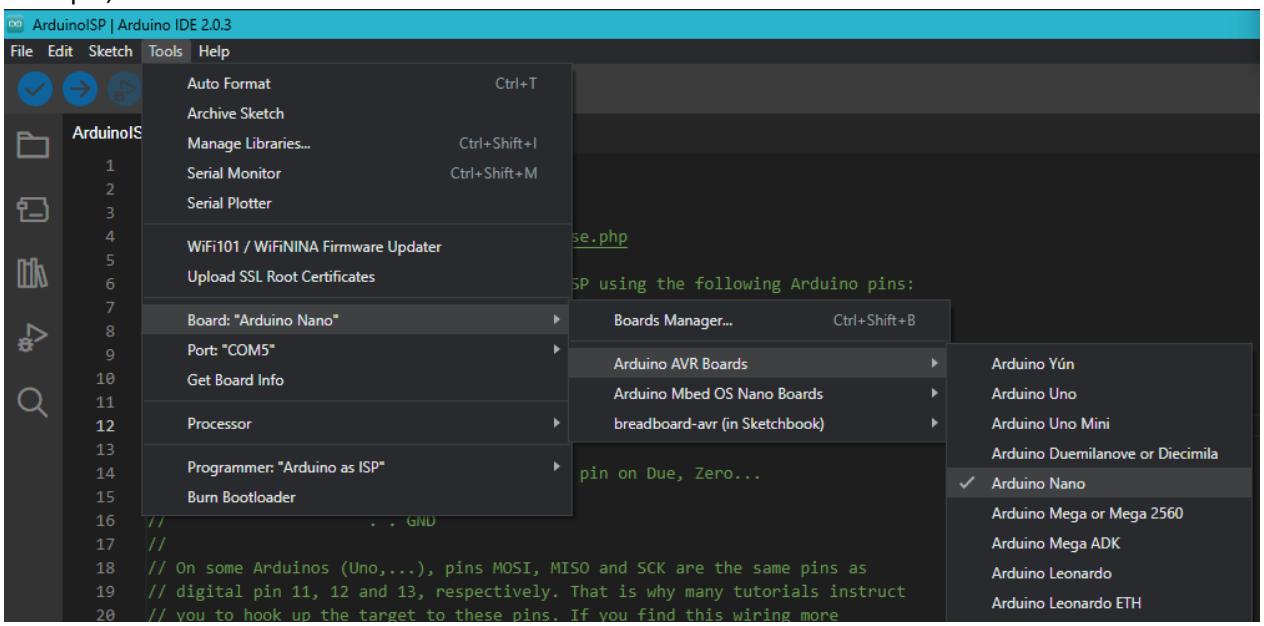
1) Install Arduino IDE software on your computer (version 2.0.3 running on Windows 11 used for this guide) - https://www.arduino.cc/
2) Connect an Arduino board (Nano used here, UNO should work the same way) to your computer via USB.
3) In the Arduino IDE, go to *File -> Examples -> 11.ArduinoISP -> ArduinoISP*.
   This script will turn your Arduino board into a programming tool for flashing the atmega328p on the QUAAD.



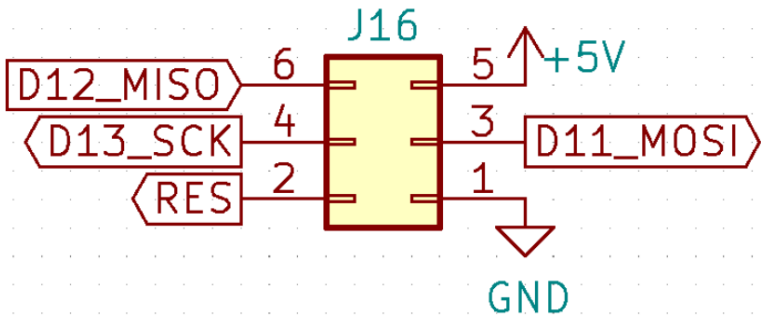
Go to *Tools -> Port* and select the port to which the Arduino board is connected. If you only have one Arduino board connected to your computer, you should only see one option.



Go to *Tools -> Board -> Arduino AVR Boards* and select the Arduino board you are using. In this example, it is the Nano.



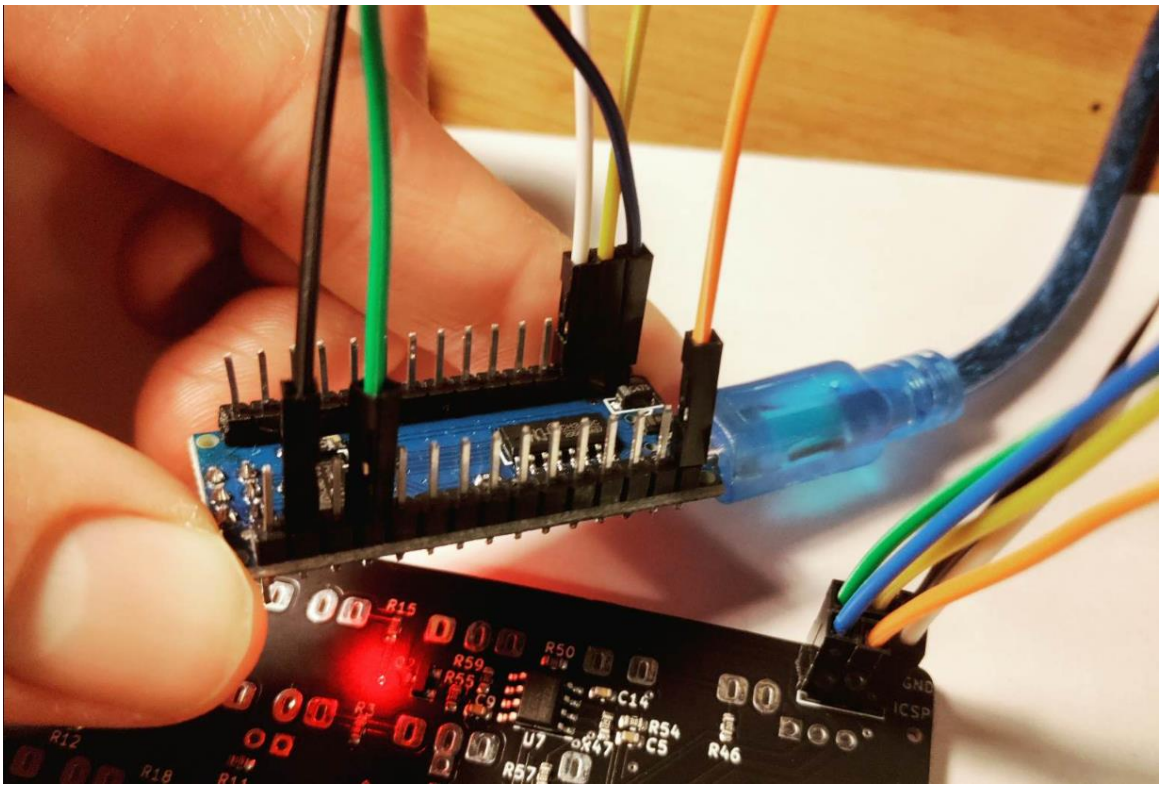
4) Unplug the Arduino board from your computer. Now connect the Arduino board to the 2x3 header on the QUAAD board. The module **IS NOT** connected to your eurorack power supply.
Below, you see the pinout of the header on the QUAAD board.
Connect the RES pin to the SS pin on your Arduino board (marked D10 on the Arduino Nano).



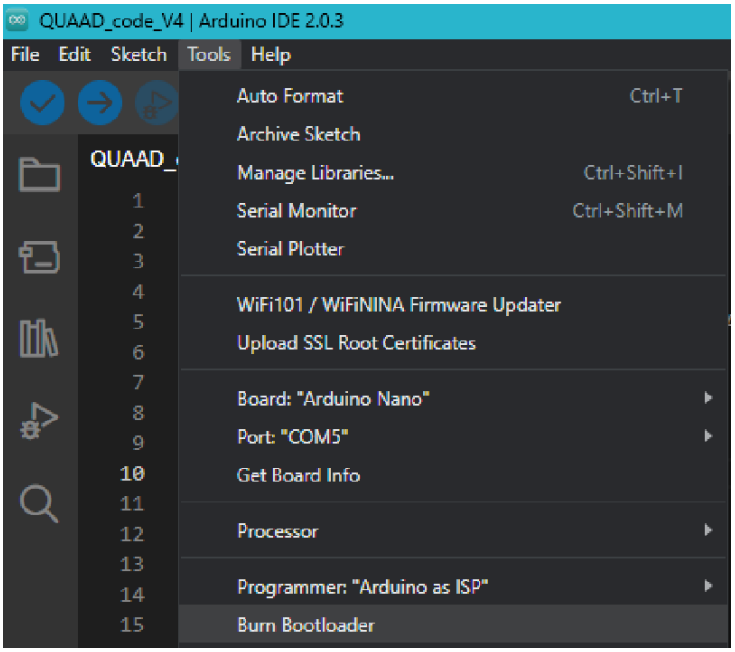
Connect the rest of the pins on the QUAAD 2x3 header to the same respective pins on the Arduino board. The Pinout is summarized in the table below.

QUAAD Pin	Arduino Pin	Arduino Nano pin name
GND	GND	GND
RES	SS	D10
MOSI	MOSI	D11
SCK	SCK	D13
+5V	5V	5V
MISO	MISO	D12

Below is an example of the connection.



5) Connect the Arduino board back to your computer via USB.
6) Download the QUAAD firmware https://github.com/mzourack/QUAAD (it is an .ino file) and open it using Arduino IDE – *File -> Open...*
7) Burn the Arduino Bootloader to the Atmega328p on the QUAAD board by going to *Tools -> Burn Bootloader*. You should get a confirmation message after this is done – *Done burning bootloader*.



8) Finally, with the QUAAD .ino file still open, go to *Sketch -> Upload Using Programmer*. This should result in the *Done uploading* confirmation message.