Guide to Use GST PCB

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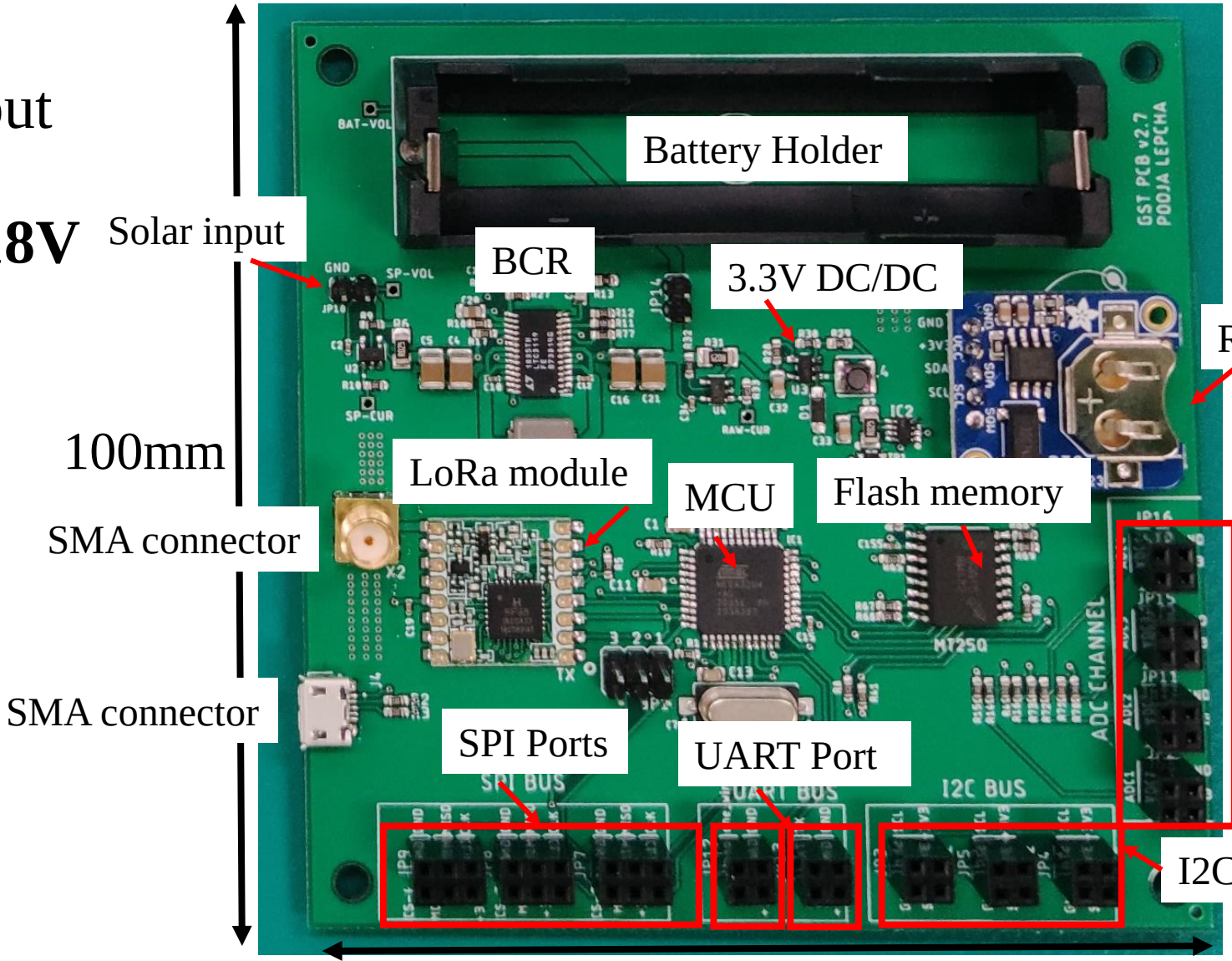
What makes the GST PCB?

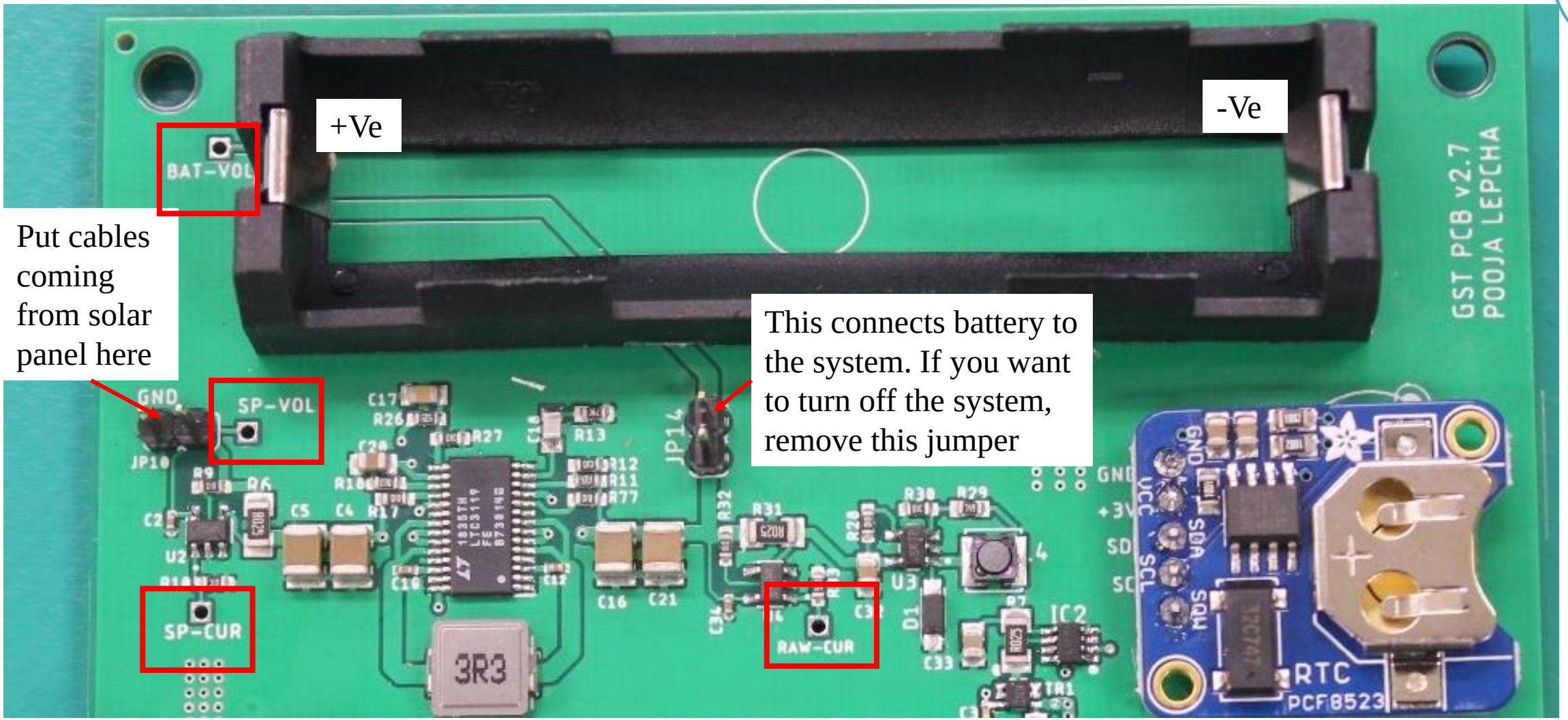
Solar Input Voltage
- Up to 18V



Battery size to be used:
18650 Lithium Ion
Nominal Voltage = 3.7V

Nominal power consumption ~ **35mA**

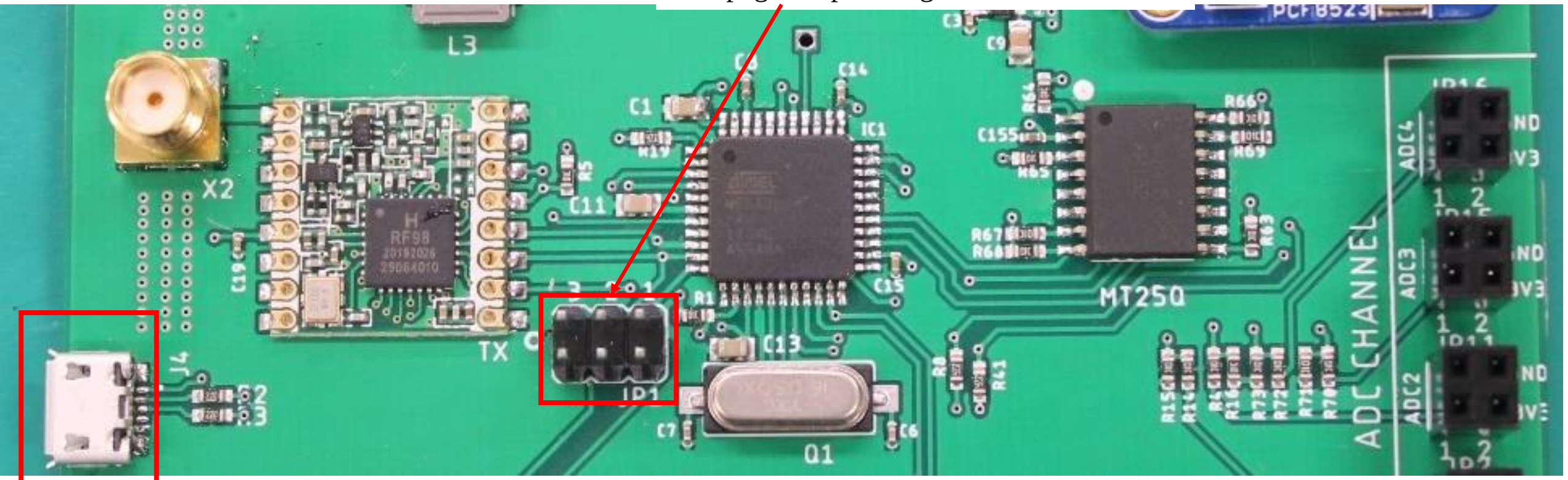
Lets look deeper…



The red marked points are places you can measure the analog voltage

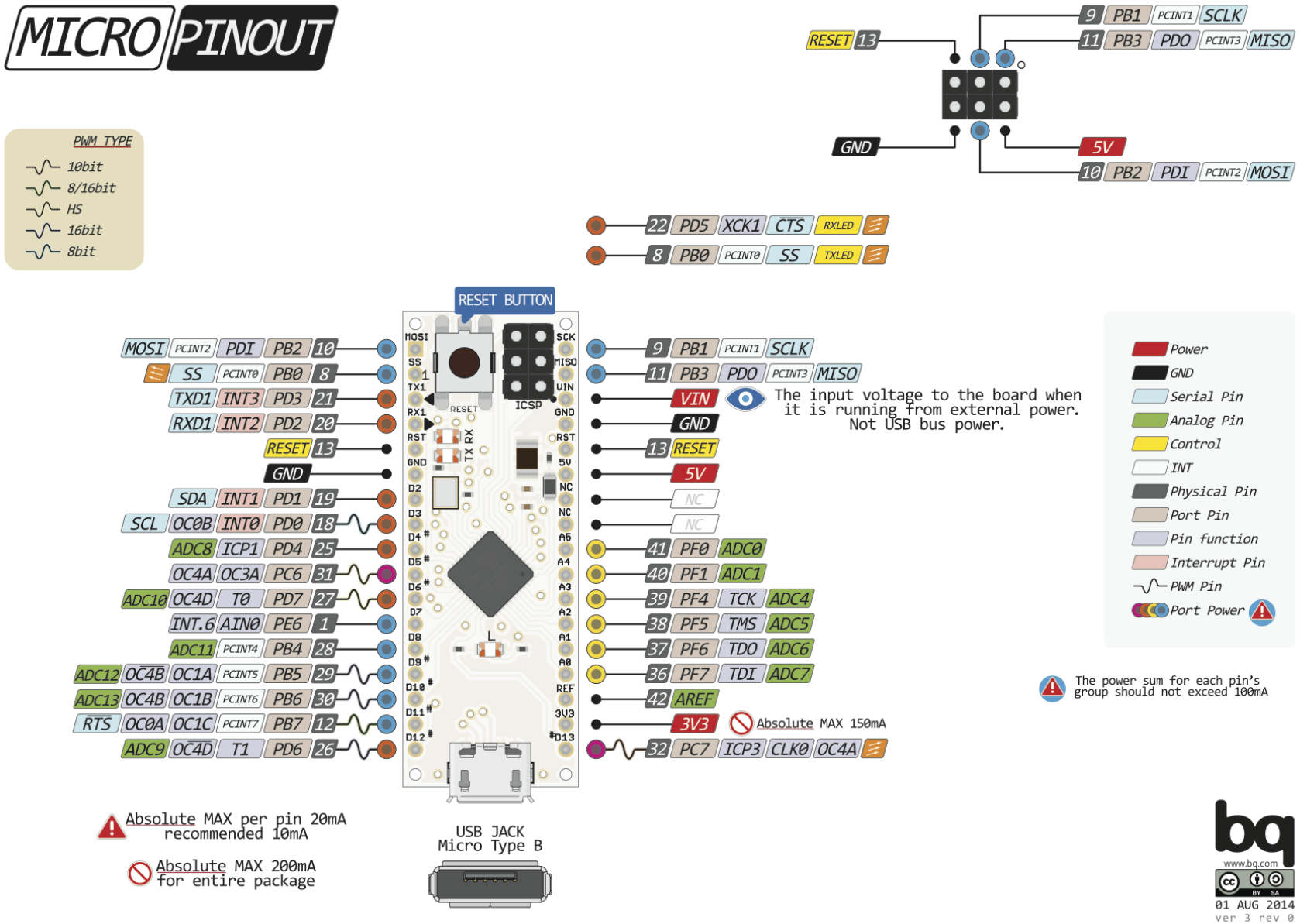
Lets look deeper…

These are boot loading pins for Atmega, the bootloader is already uploaded. Check next page for pin assignment



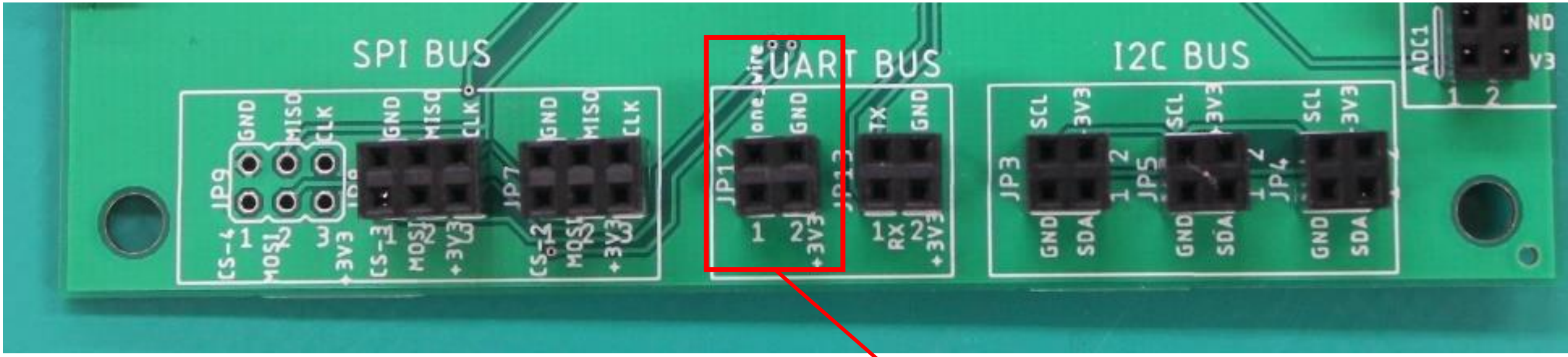
You can program the atmega directly from here.

Boot loaded Pin Assignment



Please use this pin assignment for the Atmega. It follows the Arduino Micro Pin assignment

Lets look deeper…

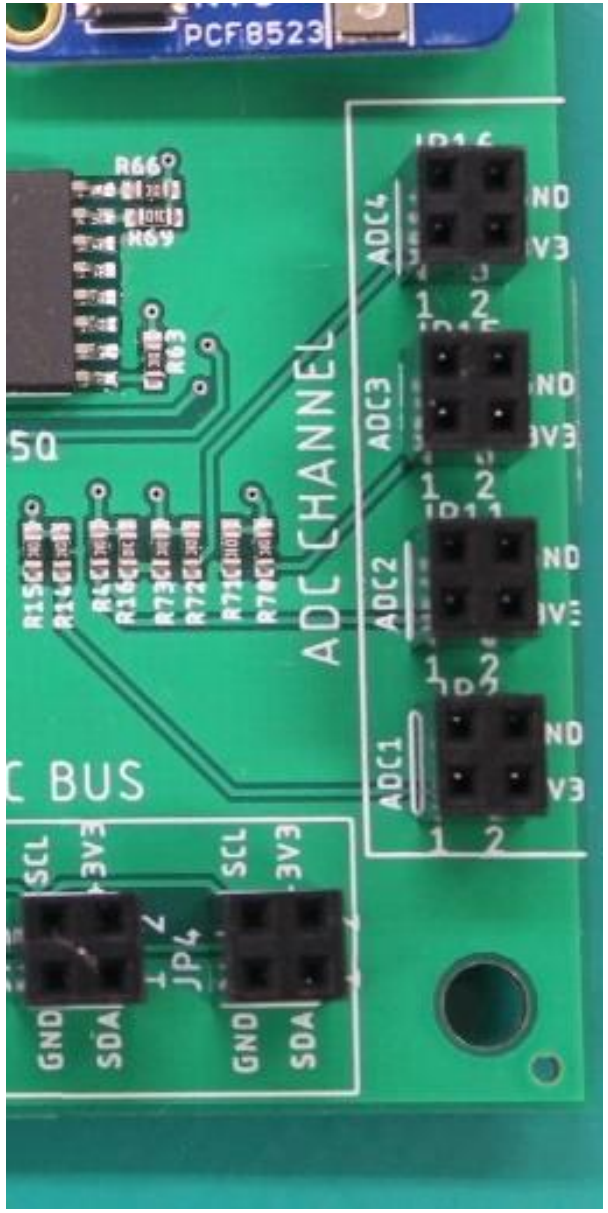


Please check the silk print for the pin assignment.

This one is not UART pin. It is for connecting one wire temperature sensor (DS18B20). The circuit for getting the data has already been implemented.

https://create.arduino.cc/projecthub/TheGadgetBoy/ds18b20-digital-temperature-sensor-and-arduino-9cc806

Lets look deeper…



Pin 1 of every ADC port is fed to the atmega for taking analog measurements. There is a voltage divider for every ADC channel. Make sure to multiply the voltage by 2

You can even connect using jumpers the analog readings from current and voltage measurements from the third page to these ports to measure solar panel voltage, battery voltage, solar panel current and raw current