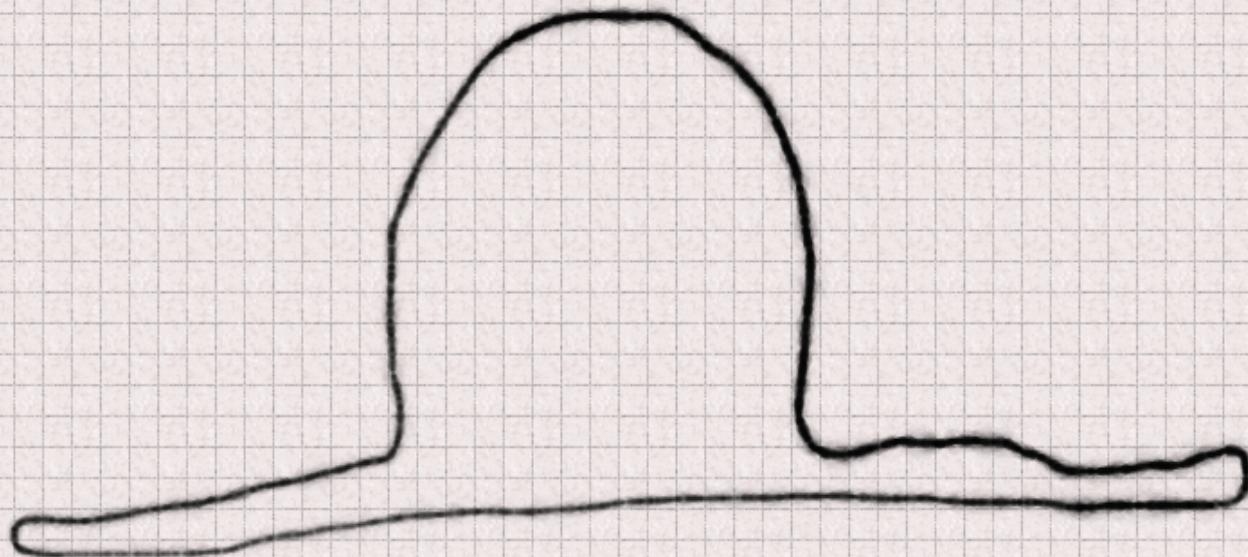


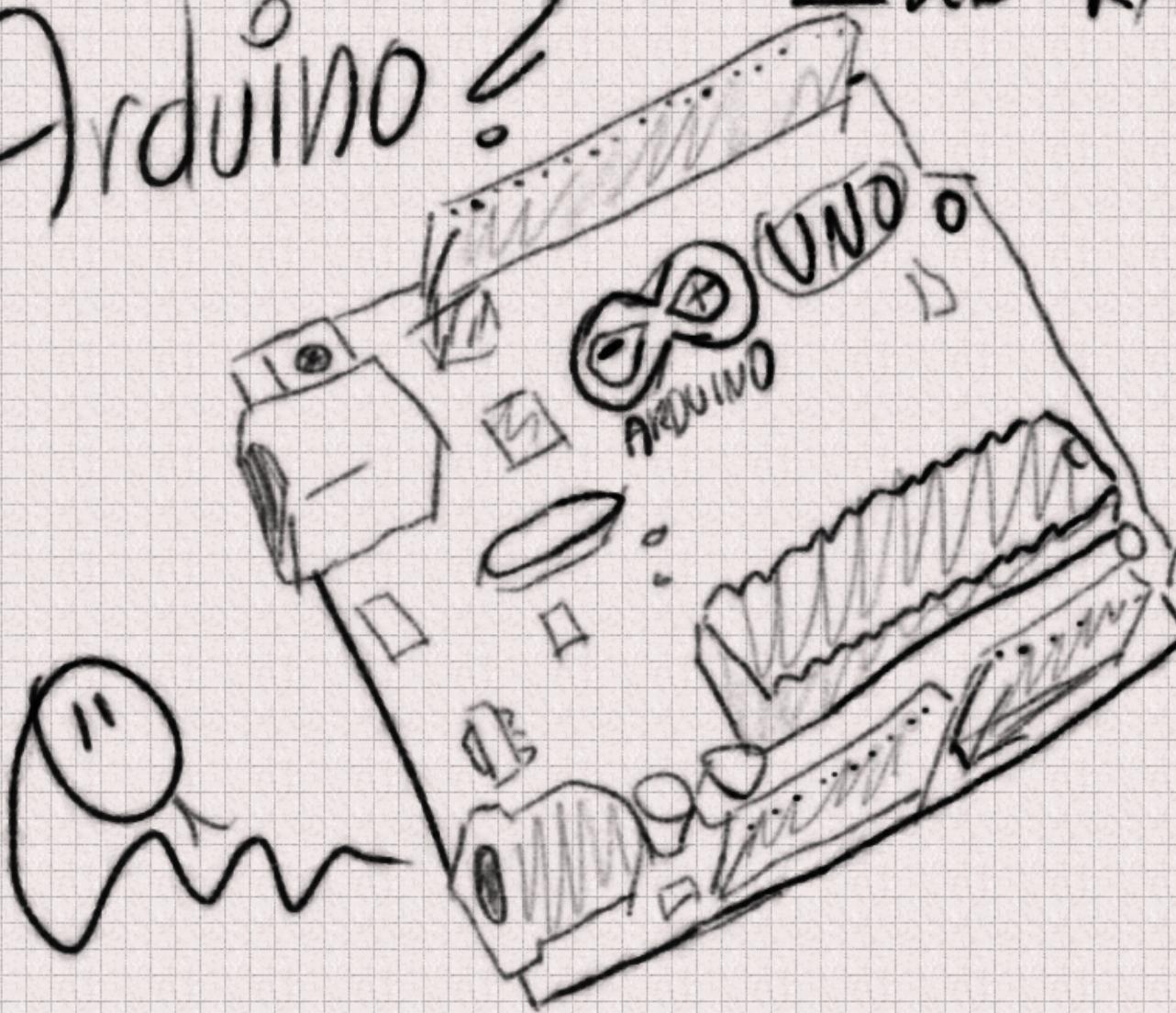
(Micro)Python
in hobby electronics.

What is this?

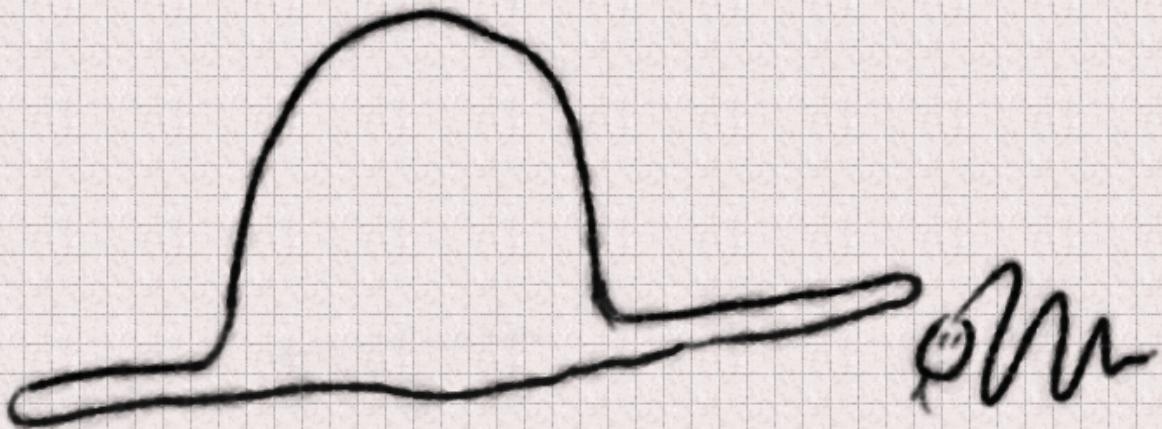


Remember
Arduino?

16 MHz
32 kB Flash
2 kB RAM

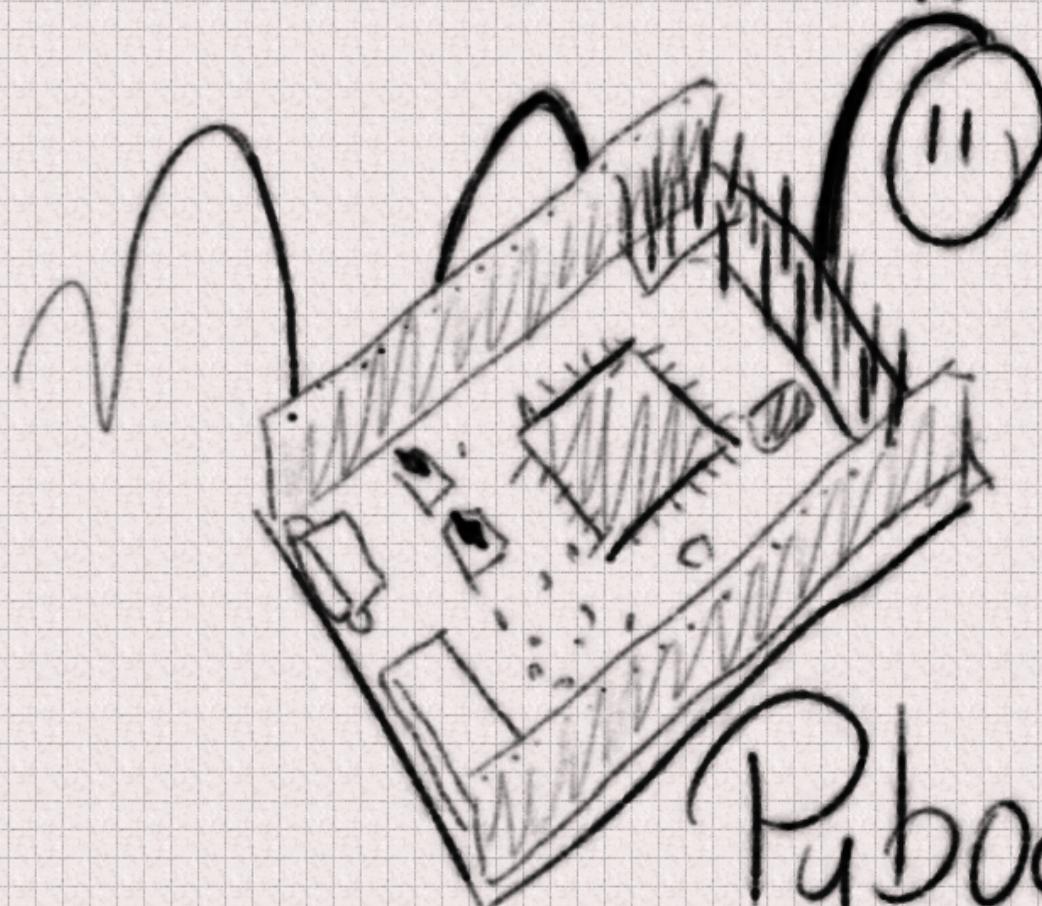


~~Python II~~ 16 Mb disk
10 Mb RAM
+ operating system

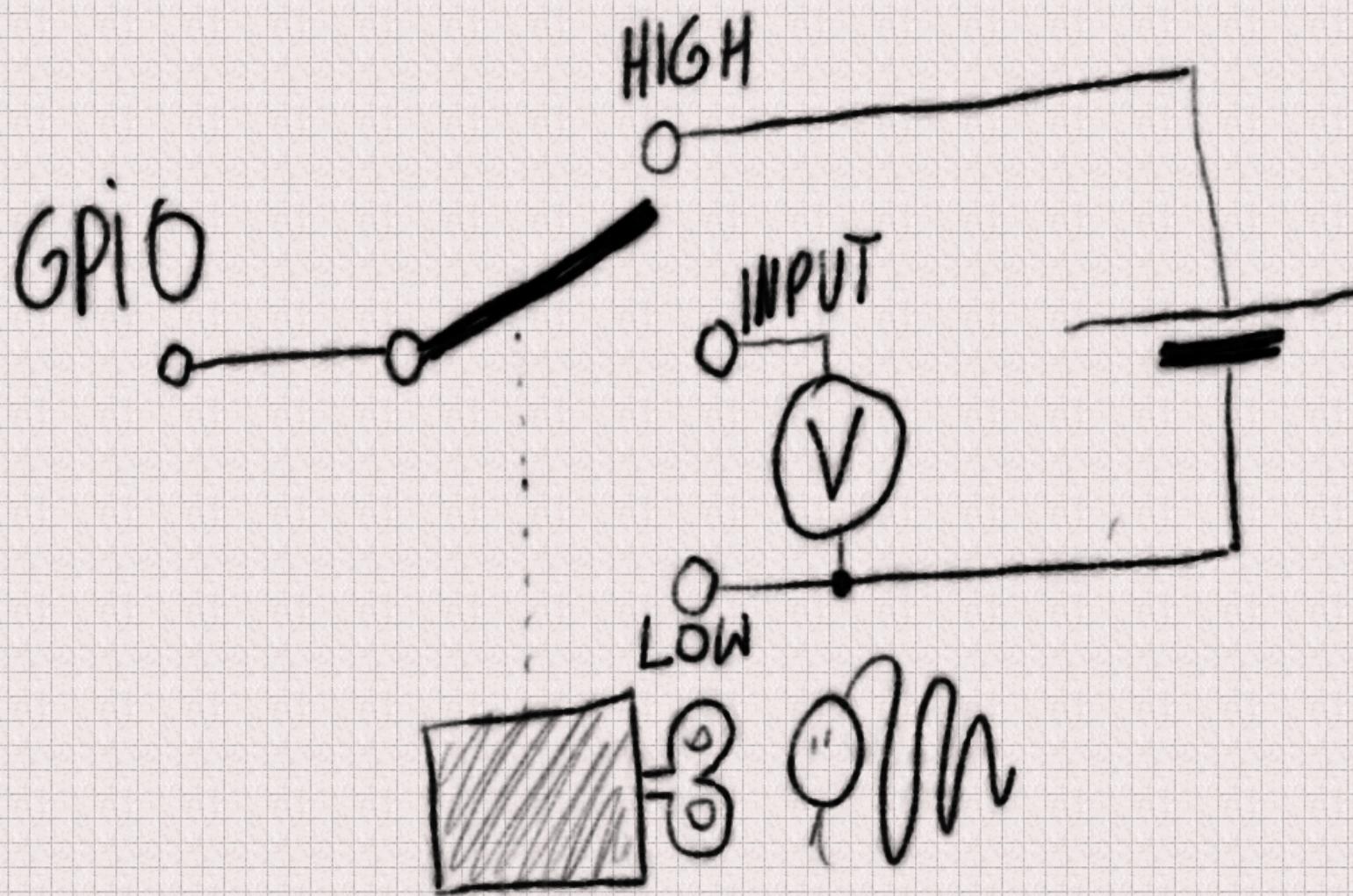


ARM CORTEX M4 168MHz

1024kB Flash
192 kB RAM



Pyboard

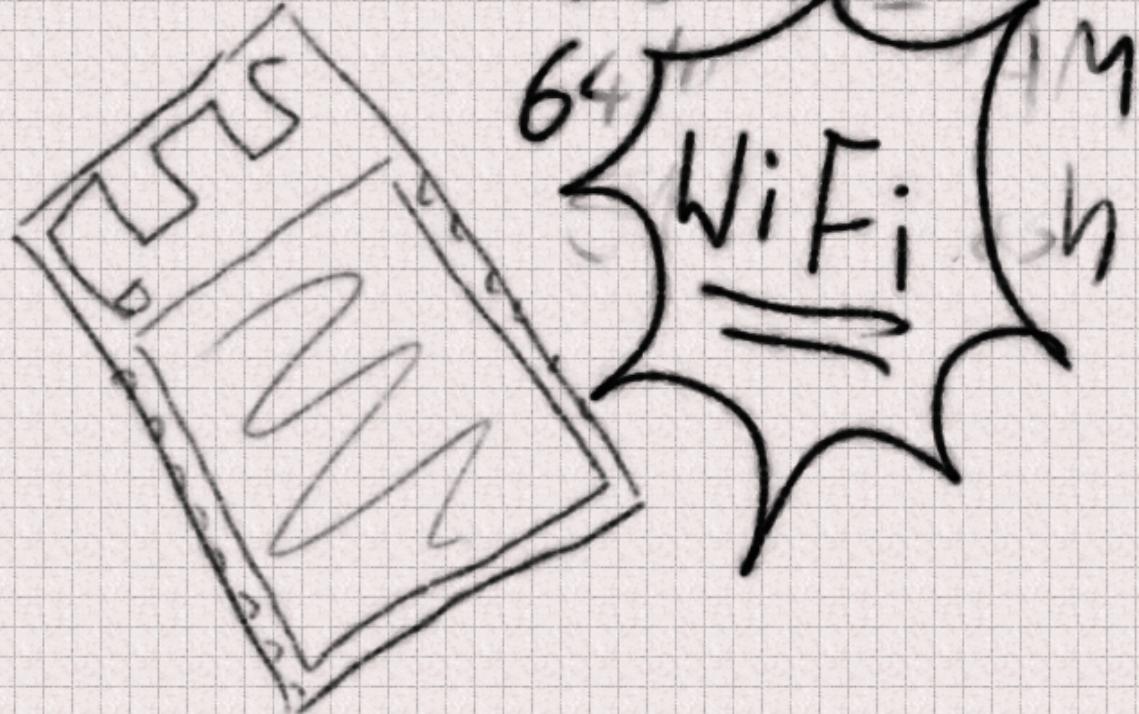


ESP8266

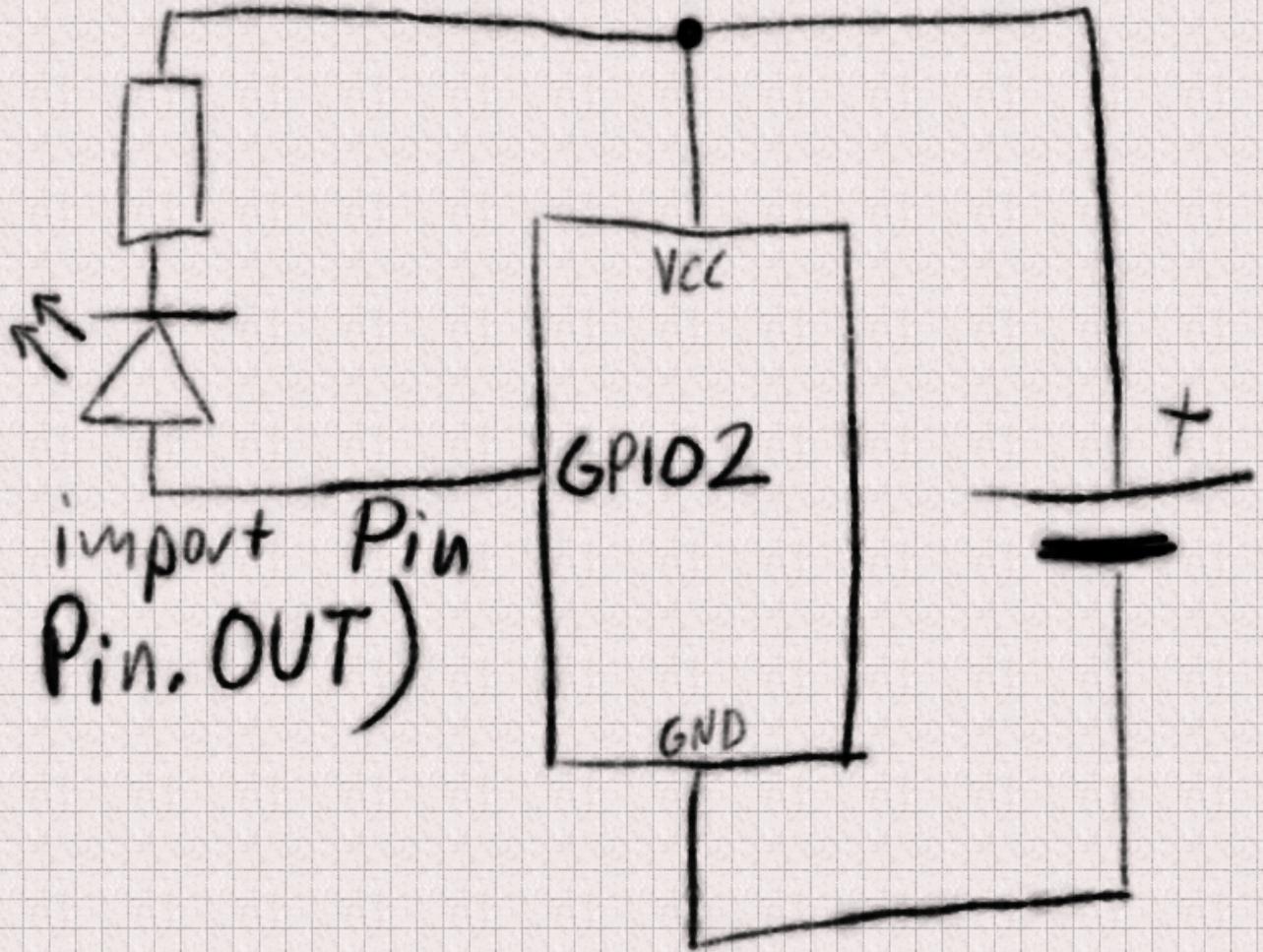
80MHz

64

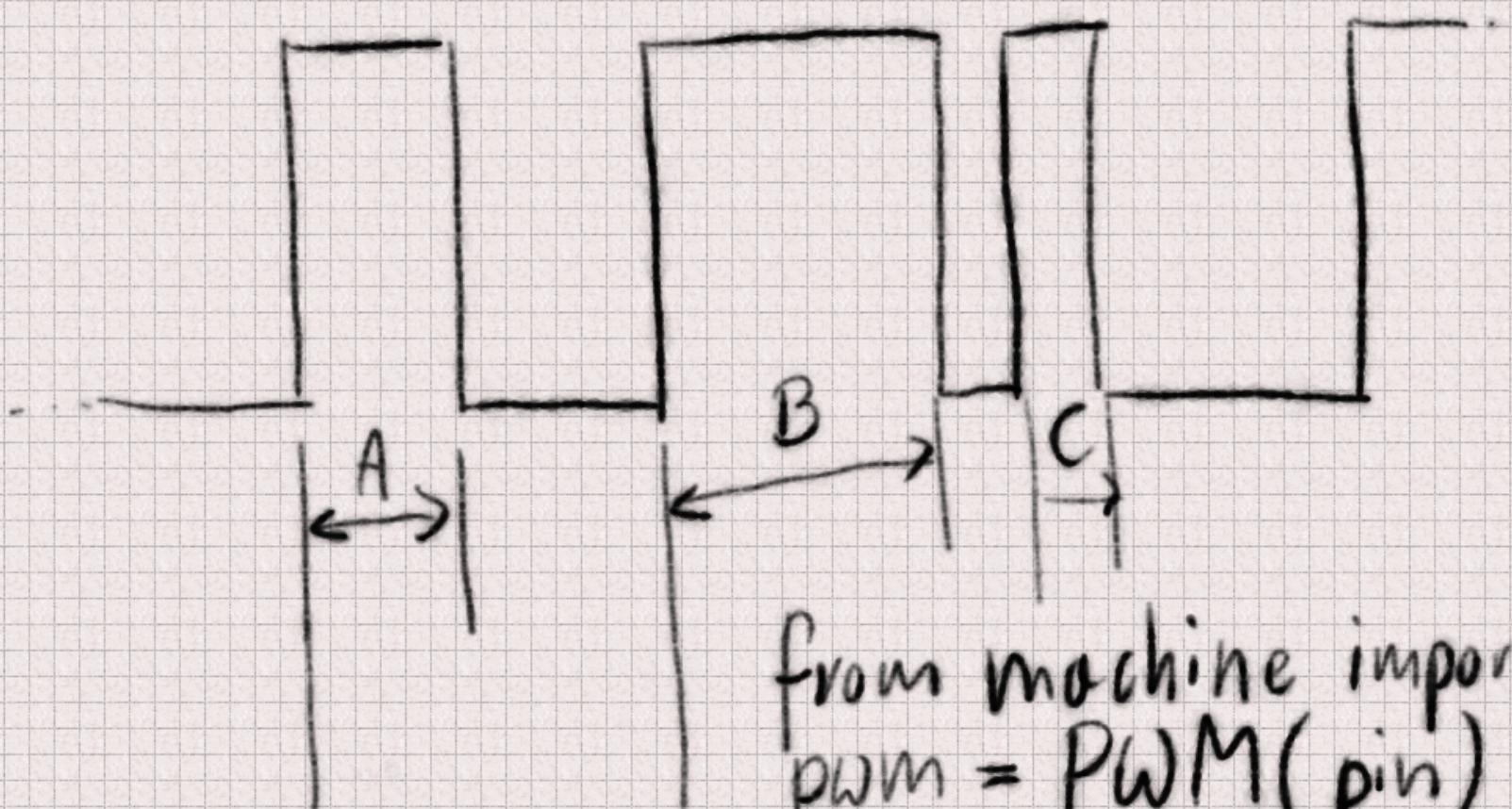
WiFi



```
from machine import Pin  
pin = Pin(2, Pin.OUT)  
pin.low()  
pin.high()
```

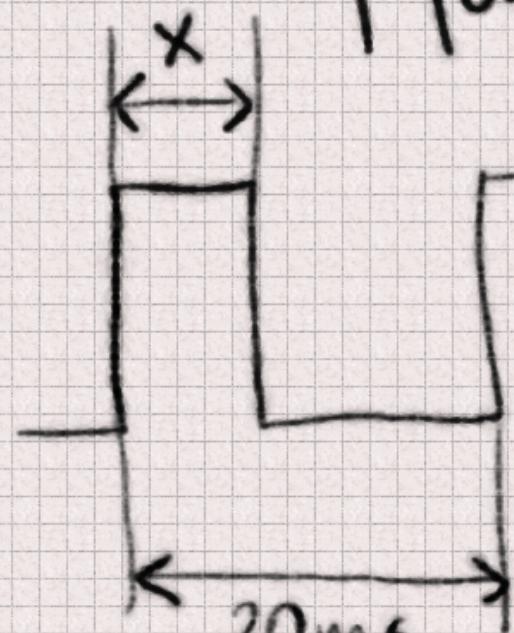


Pulse Width Modulation



from machine import PWM
pwm = PWM(pin)
pwm.duty(512)

Hobby Servo



50Hz

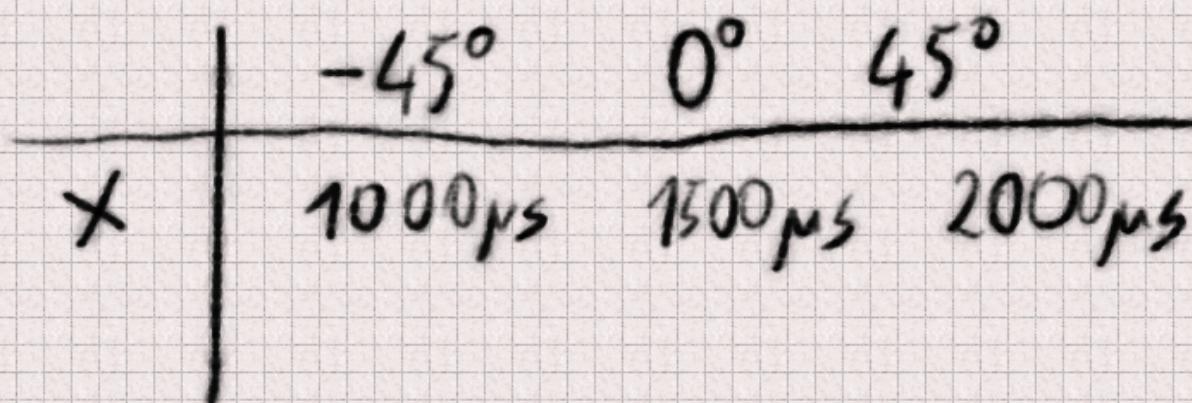
HIGH

LOW

yellow
signal

red
+

brown
-



WiFi

```
import urequests  
response=urequest.get("http://...")  
json = response.json()  
print(json['AbstractText'])
```

WebSockets

HTTPS

UART

I²C

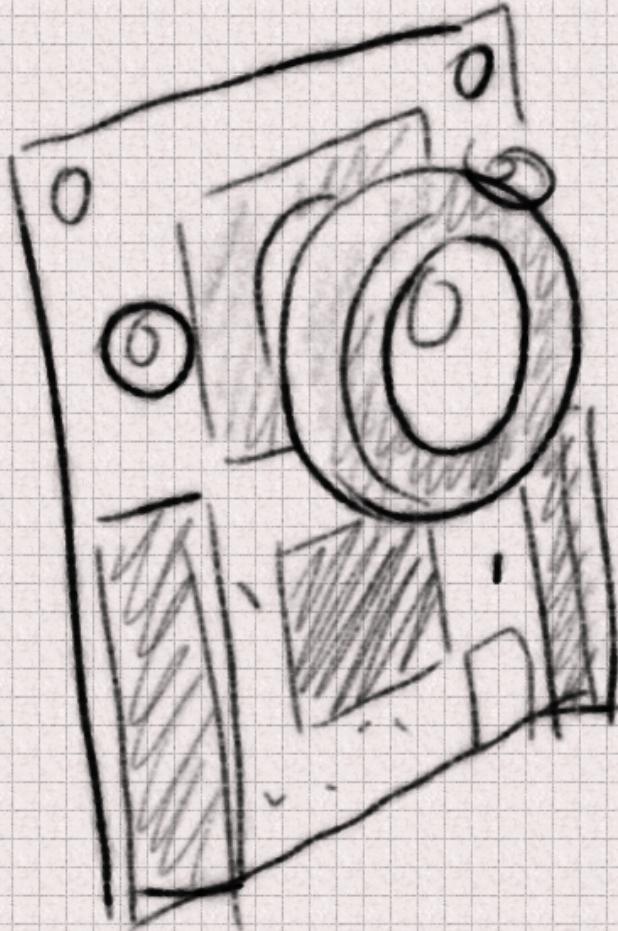
SPI

CAN
BUS

1-WIRE

WS2812B

MQTT



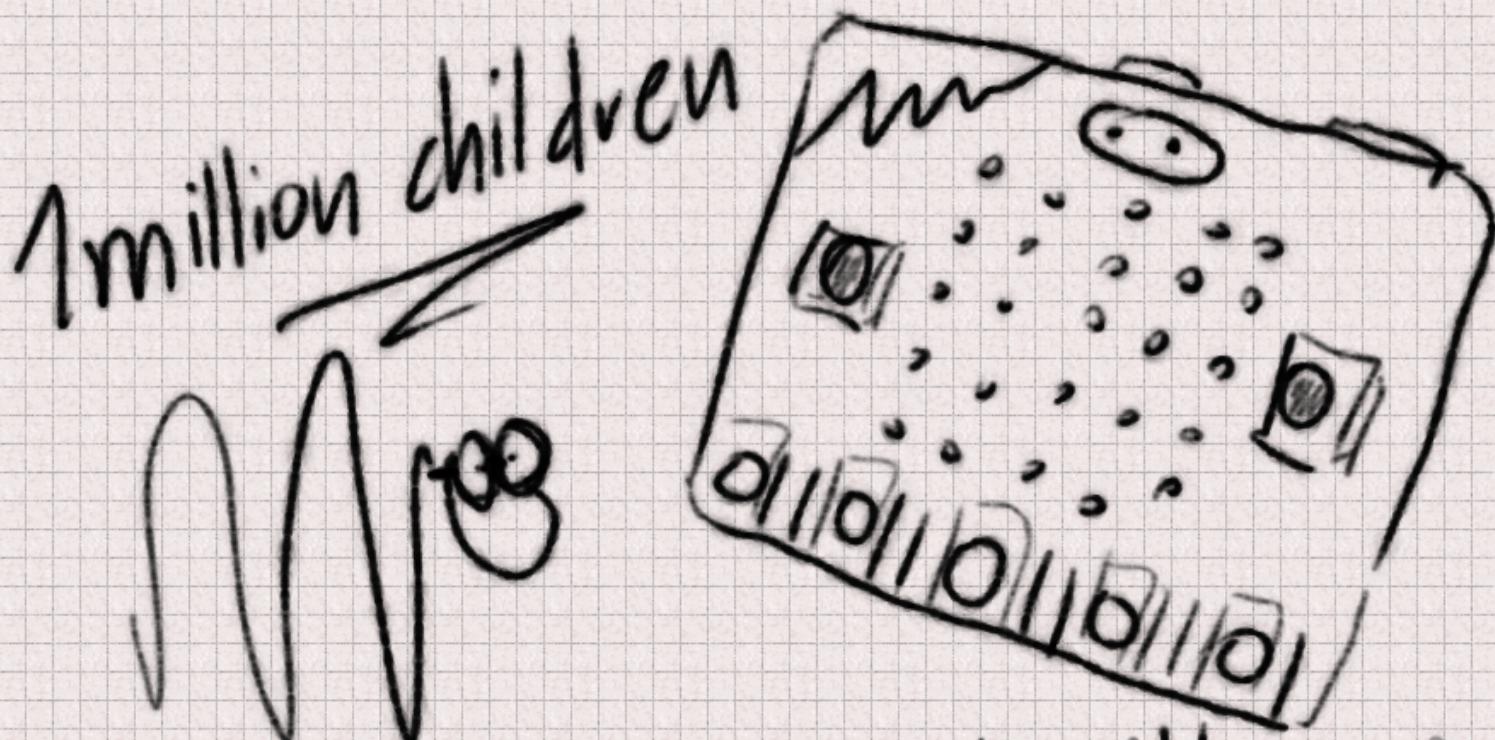
OpenMV

216MHz

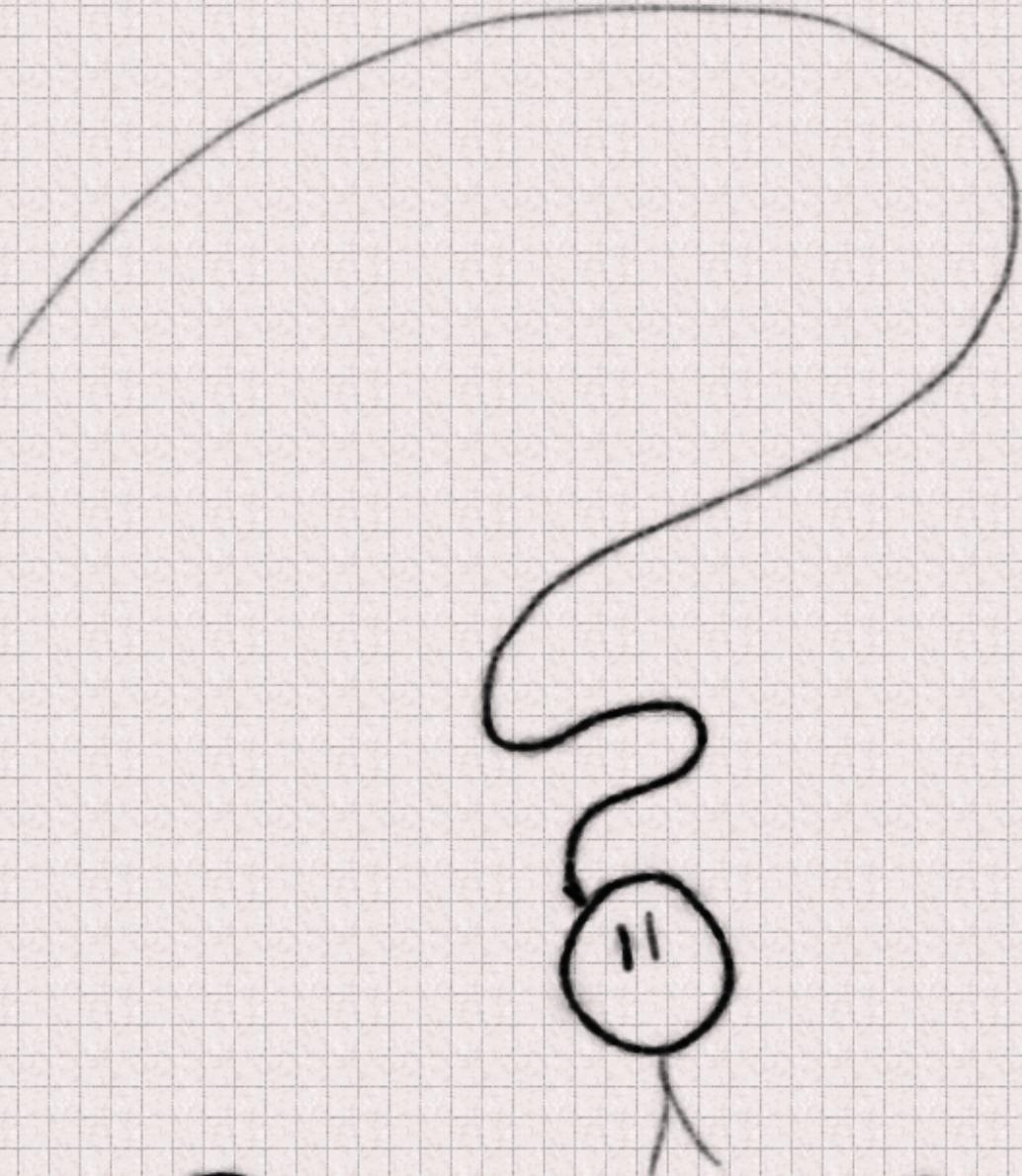
CAMERA

ARM Cortex M7

BBC Micro Bit



<http://codewith.mu>



Questions?