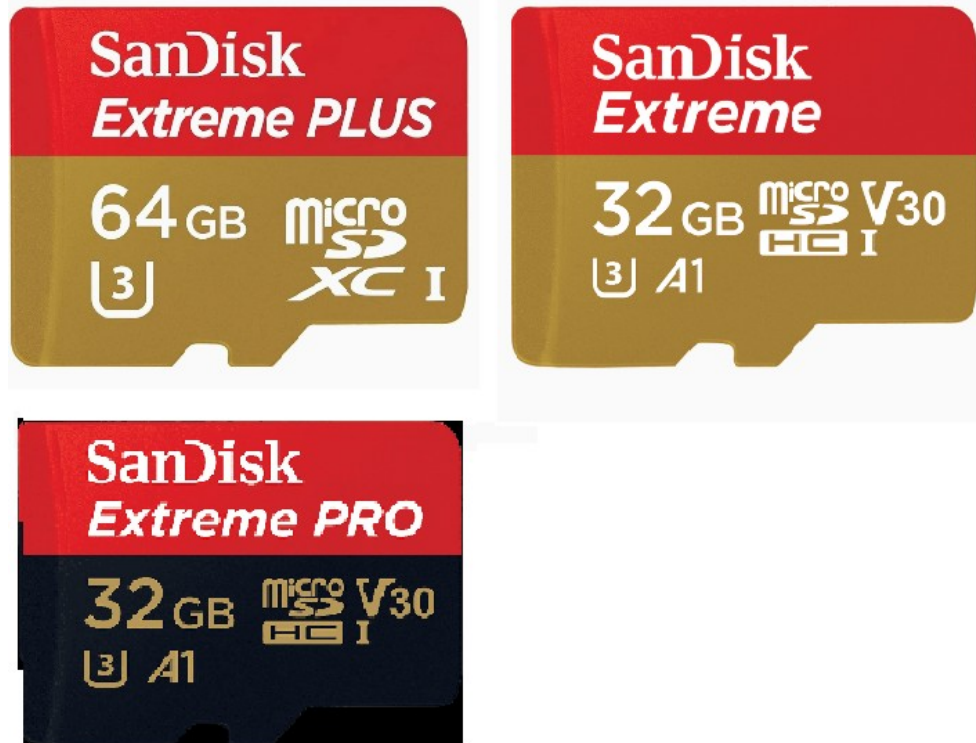


# Raspberry PI introduction

- Getting started. Procure a Raspberry pi 3 or 4 with a case that has a fan. Heat is not a good thing.  
Get the kit with the power supply and cables. There are preloaded SD cards available. Assemble the board into the case connect the fan and put on the cover
- Get a good quality micro SD card This should come with an adapter to standard SD card



- download raspian from <https://www.raspberrypi.org/software/> This is an imager which loads the sd card with no mus no fuss. I will have a laptop with this installed just bring a SD card.
- Install the micro sd card in to the raspberry pi. It will not go in reversed. It should take lite pressures to seat the sd card.



# Raspberry Pi introduction

- Connect the monitor, mouse, power supply, keyboard and either-net.
- Power up the a few minutes of setup will have you up and running
- The GPIO connector is a means to connect the computer to control external hardware.

SPI WITH 2 ENABLES

I2C

PWM OUTPUTS SOME OF WHICH ALSO GENERATE AUDIO

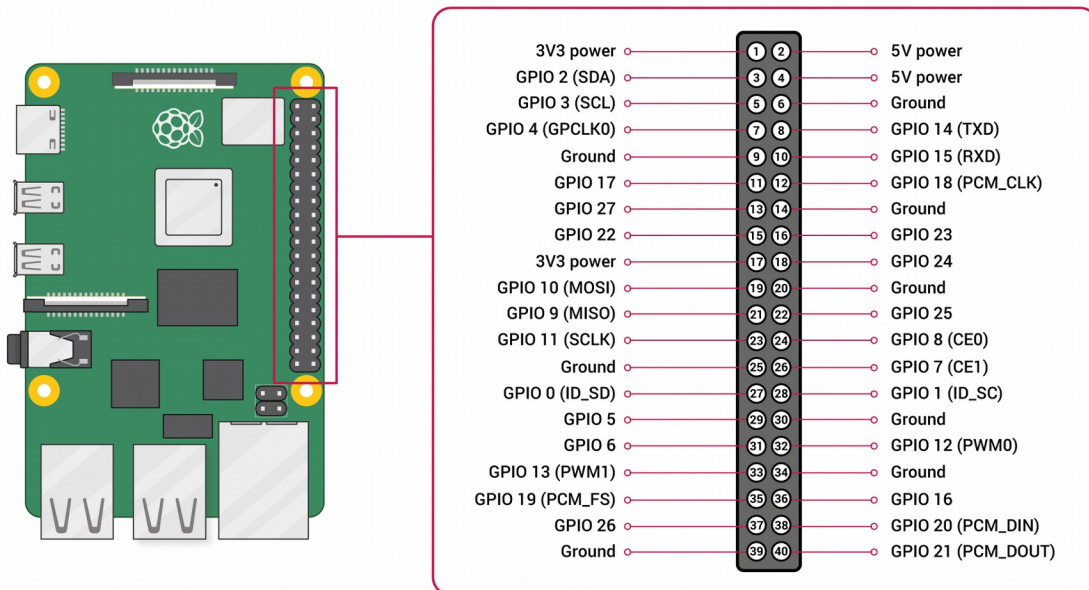
Software PWM available on all pins Hardware PWM available on GPIO12, GPIO13, GPIO18, GPIO19

PARALLEL OUTPUTS

ONE WIRE

SERIAL OUTPUT FOR DRIVING A RS232 BUFFER.

**ALL THESE PINS HAVE A 3.3V MAX.  
MAXIMUM PIN CURRENT IS 16mA**



# Raspberry PI introduction

- PYTHON  
IDLE 3 runs on multable platforms. It is portable across platforms. This is the language of choice for the raspberry pi. Down load from:  
python development enviroment  
<https://www.python.org/downloads/>  
  
python tutorials  
<https://www.tutorialsteacher.com/python>