

# KLM Meeting

# update - Pi connected to ADC

Sayan Mitra, 22nd November, 2022

- The Pi is connected to ADC MCP3008
- Need to modify counter code to work with ADC

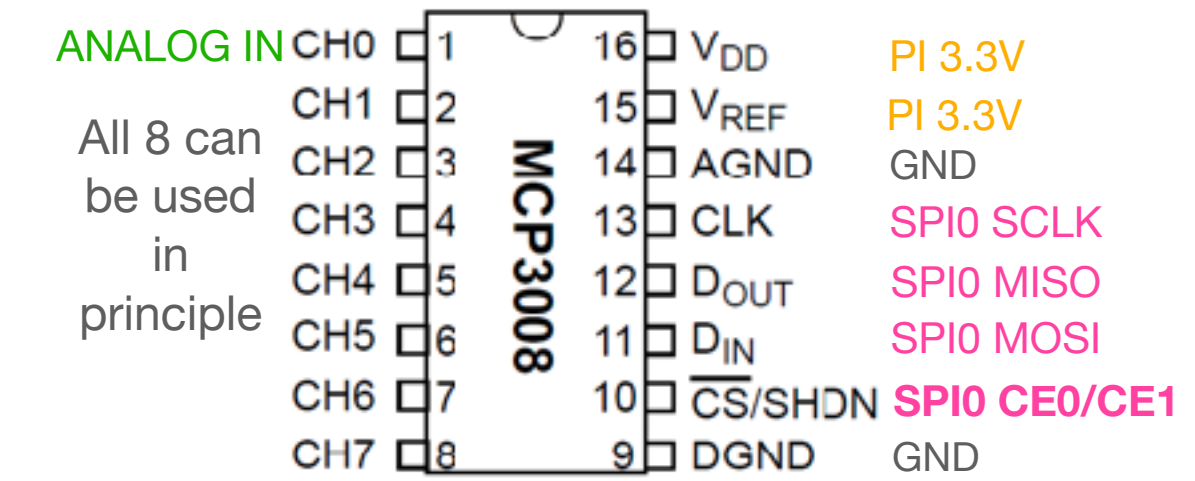


Raspberry Pi Pinout		
3v3 Power	1	2 5v Power
GPIO 2 (I2C1 SDA)	3	4 5v Power
GPIO 3 (I2C1 SCL)	5	6 Ground
GPIO 4 (GPCLK0)	7	8 GPIO 14 (UART TX)
Ground	9	10 GPIO 15 (UART RX)
GPIO 17	11	12 GPIO 18 (PCM CLK)
GPIO 27	13	14 Ground
GPIO 22	15	16 GPIO 23
3v3 Power	17	18 GPIO 24
GPIO 10 (SPI0 MOSI)	19	20 Ground
GPIO 9 (SPI0 MISO)	21	22 GPIO 25
GPIO 11 (SPI0 SCLK)	23	24 GPIO 8 (SPI0 CE0)
Ground	25	26 GPIO 7 (SPI0 CE1)
GPIO 0 (EEPROM SDA)	27	28 GPIO 1 (EEPROM SCL)
GPIO 5	29	30 Ground
GPIO 6	31	32 GPIO 12 (PWM0)
GPIO 13 (PWM1)	33	34 Ground
GPIO 19 (PCM FS)	35	36 GPIO 16
GPIO 26	37	38 GPIO 20 (PCM DIN)
Ground	39	40 GPIO 21 (PCM DOUT)

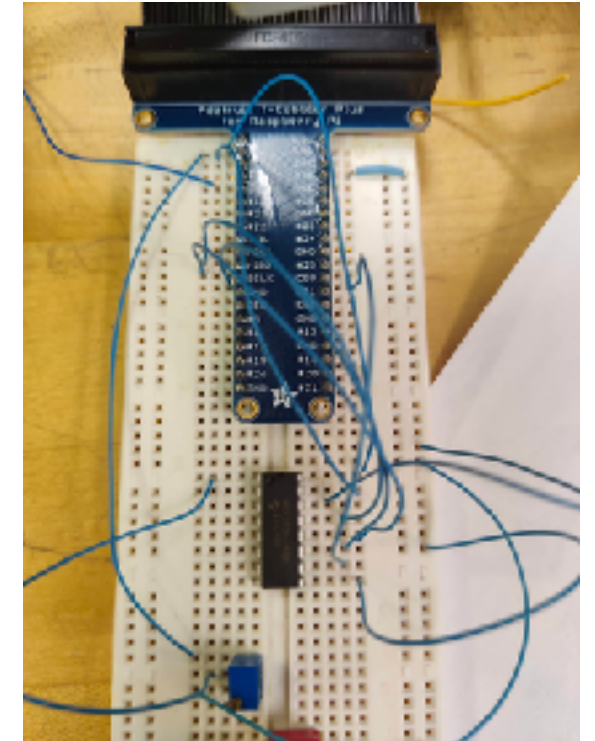
**Legend**

Orientate your Pi with the GPIO on the right and the HDMI port(s) on the left.

- GPIO (General Purpose IO)
- SPI (Serial Peripheral Interface)
- I<sup>2</sup>C (Inter-integrated Circuit)
- UART (Universal Asynchronous Receiver/Transmitter)
- PCM (Pulse Code Modulation)
- Ground
- 5v (Power)
- 3.3v (Power)



<https://learn.adafruit.com/mcp3008-spi-adc/python-circuitpython>



```
ADC Voltage: 2.2301121538109405V
Raw ADC Value: 44288
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ADC Voltage: 2.2301121538109405V
Raw ADC Value: 44288
ADC Voltage: 2.2726073243365103V
Raw ADC Value: 45120
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ADC Voltage: 2.2726073243365103V
Raw ADC Value: 45120
ADC Voltage: 2.2726073243365103V
Raw ADC Value: 45120
ADC Voltage: 2.2752368297550923V
Raw ADC Value: 46880
ADC Voltage: 2.2752368297550923V
Raw ADC Value: 46880
ADC Voltage: 2.320347895699245V
```