

SW4  
K2-1102SP-C3SC-04

5V

1 3

2 4

BUTTON\_1

SW1  
K2-1102SP-C3SC-04

5V

1 3

2 4

BUTTON\_2

SW2  
K2-1102SP-C3SC-04

5V

1 3

2 4

BUTTON\_3

The figure displays four circuit diagrams, each showing a different sensor connected to a 3.3V supply and a jumper (JP1, JP2, JP3, JP4) to a specific input of the FDC6330L comparators. The comparators are labeled U8, U7, U9, and U10.

- U8 FDC6330L:** Connected to V\_OLED. The input is connected to the VOUT\_C1 pin (pin 1) via a 100nF capacitor (C4) and a 100Ω resistor (R2). The output is connected to the ON\_OFF pin (pin 6) via a 100kΩ resistor (R3). The input is also connected to the VIN\_R1 pin (pin 4) via a 4.7kΩ resistor (R1). The output is connected to the OLED\_GPIO pin (pin 5) via a 100nF capacitor (C3).
- U7 FDC6330L:** Connected to V\_PWM. The input is connected to the VOUT\_C1 pin (pin 1) via a 100nF capacitor (C5) and a 100Ω resistor (R5). The output is connected to the ON\_OFF pin (pin 6) via a 100kΩ resistor (R4). The input is also connected to the VIN\_R1 pin (pin 4) via a 4.7kΩ resistor (R6). The output is connected to the PWM\_GPIO pin (pin 5) via a 100nF capacitor (C6).
- U9 FDC6330L:** Connected to V\_MPU. The input is connected to the VOUT\_C1 pin (pin 1) via a 100nF capacitor (C7) and a 100Ω resistor (R8). The output is connected to the ON\_OFF pin (pin 6) via a 100kΩ resistor (R7). The input is also connected to the VIN\_R1 pin (pin 4) via a 4.7kΩ resistor (R9). The output is connected to the MPU\_GPIO pin (pin 5) via a 100nF capacitor (C8).
- U10 FDC6330L:** Connected to V\_BARO. The input is connected to the VOUT\_C1 pin (pin 1) via a 100nF capacitor (C9) and a 100Ω resistor (R11). The output is connected to the ON\_OFF pin (pin 6) via a 100kΩ resistor (R10). The input is also connected to the VIN\_R1 pin (pin 4) via a 4.7kΩ resistor (R12). The output is connected to the BARO\_GPIO pin (pin 5) via a 100nF capacitor (C10).

The image displays four circuit diagrams for the Raspberry Pi 4B, each showing the connection of a specific peripheral to the Pi's pins.

- IMU:** The diagram shows the connection of the MPU-6050 (U3) to the Raspberry Pi. The IMU is connected to the I2C bus (SCL to SCL, SDA to SDA) and the INT pin to the INT\_MPU pin. Power is provided via V\_MPU and ground.
- Barometer:** The diagram shows the connection of the LPS25HBTR (U1) to the Raspberry Pi. The barometer is connected to the I2C bus (SCL to SCL, SDA to SDA) and the INT pin to the INT\_BARO pin. Power is provided via V\_BARO and ground.
- PWM Driver:** The diagram shows the connection of the PCA9635PW,118 (U5) to the Raspberry Pi. The PWM driver is connected to the I2C bus (SCL to SCL, SDA to SDA) and the INT pin to the INT\_PWM pin. Power is provided via V\_PWM and ground.
- Current Sensor:** The diagram shows the connection of the ACS712ELCTR-20A-T (U4) to the Raspberry Pi. The current sensor is connected to the I2C bus (SCL to SCL, SDA to SDA) and the INT pin to the INT\_CS pin. Power is provided via V\_CC and ground.