

Raspberry Pi 4B - Pinout

1. Power Pins

- **5V Power Pins:** Pins 2 and 4 provide a 5V power supply.
- **3.3V Power Pins:** Pins 1 and 17 provide a 3.3V power supply.
- **Ground Pins:** Pins 6, 9, 14, 20, 25, 30, 34, and 39 are ground pins.

2. GPIO Pins

- **General Purpose I/O Pins:** There are 26 GPIO pins that can be used for various input and output operations. These pins can be programmed to read or write digital signals.

3. Communication Pins

- **I2C Pins:**
 - SDA (Data): Pin 3
 - SCL (Clock): Pin 5
- **SPI Pins:**
 - MOSI (Master Out Slave In): Pin 19
 - MISO (Master In Slave Out): Pin 21
 - SCLK (Clock): Pin 23
 - CE0 (Chip Enable 0): Pin 24
 - CE1 (Chip Enable 1): Pin 26
- **UART Pins:**
 - TXD (Transmit Data): Pin 8
 - RXD (Receive Data): Pin 10

4. Special Function Pins

- **PWM Pins:** Pins 12 and 35 can be used for Pulse Width Modulation (PWM) to control devices like LEDs and motors.
- **EEPROM Pins:** Pins 27 and 28 are reserved for ID EEPROM.

5. Miscellaneous Pins

- **ID_SD and ID_SC:** Pins 27 and 28 are used for ID EEPROM, which is used to identify HATs (Hardware Attached on Top).

These pins allow the Raspberry Pi 4 B to interface with a wide range of sensors, actuators, and other devices, making it a versatile tool for various projects.