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Roll-22

ESP-32 is a powerful low-cost microcontroller with built-in WiFi and Bluetooth. It can be used in so many development works.

IOT Application : It can be used for home atomation, sensor monitoring and remote control.

Robotics : motor control, wifi signal communication.

portable devices : fitness trackers, smartwatches.

Web server : control devices through mobile app.

Networking project : WiFi access point, Bluetooth device.

Multimedia projects : audio streaming, wide display control

Uses of PINs

1. Power pin -

3V3 3V3, VIN/5V, GND

2. GPIO (General Purpose Input/Output)

~ 25 usable GPIO configurable as digital I/O.

3. Analog pins (ADC)

Upto 18 ADC channels (GPIO 32-39)

4. DAC Pins

GPIO 25, 26

5. PWM Pins ⟶ used for motor speed, LED brightness.

6. Communication Pins ⟶

UART (GPIO 1, 3) I2C, I2S

SPI (GPIO 18,

7. Special Pins ⟶ EN (enable), BOOT

8. Touch Pins

Capacitive touch-input. (GPIO 0, 2, 4, 12-15, 27, 32, 33)