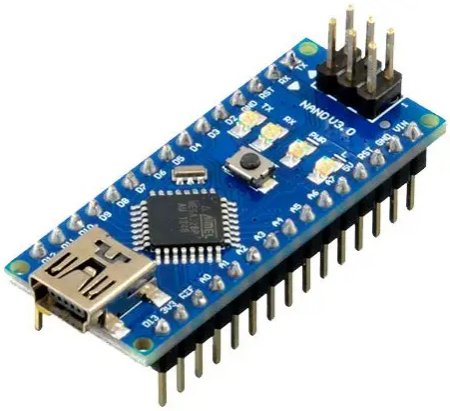
Arduino Nano

ATmega328P Compact Development Board



The Arduino Nano is a compact ATmega328P development board designed for electronics, robotics, sensors and embedded projects. Its small 18 x 45 mm size makes it ideal for breadboards and space-limited applications.

TOP USES

- Electronics and embedded projects
- Robotics and automation
- Sensors and data collection
- Breadboard prototyping

KEY FEATURES

- ATmega328P
- 14 Digital I/O
- 8 Analog Inputs
- 6 PWM Outputs
- 16 MHz / 5 V

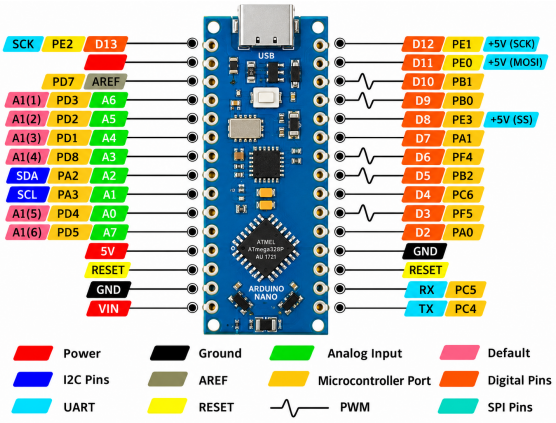
Technical Specifications

Arduino Nano

Parameter	Value
Microcontroller	ATmega328P
Operating Voltage	5 V
Input Voltage	7 - 12 V
Digital I/O	14
Analog Inputs	8
PWM	6 pins
Flash	32 KB
SRAM	2 KB
EEPROM	1 KB
Clock	16 MHz
Communication	UART / SPI / I2C
USB	Mini-B
Dimensions	18 x 45 mm

Pinout

Arduino Nano



PIN FUNCTIONS

Pin	Function	Notes
D0 / D1	UART	Serial
D3 / D5 / D6 / D9 / D10 / D11	PWM	PWM output
D10-D13	SPI	SPI communication
A0-A7	Analog	10-bit ADC
A4 / A5	I2C	SDA / SCL
5V / 3V3	Power	Power output
VIN / GND	Power	Input / Ground

WIRING NOTES

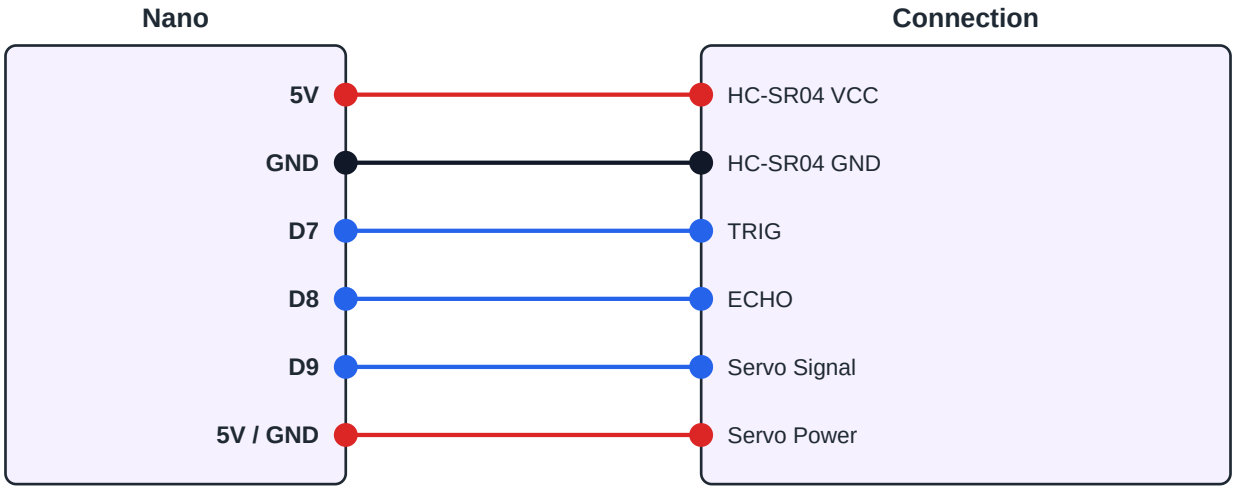
- A6 and A7 are analog-only.
- Use external power for motors and servos.

Example Project

Ultrasonic Sensor + Servo

The HC-SR04 measures distance and the Nano moves an SG90 servo according to the distance.

CIRCUIT



EXAMPLE CODE

```
#include <Servo.h>

Servo servo;
const int trig = 7;
const int echo = 8;

void setup() {
  pinMode(trig, OUTPUT);
  pinMode(echo, INPUT);
  servo.attach(9);
}

void loop() {
  digitalWrite(trig, LOW);
  delayMicroseconds(2);
  digitalWrite(trig, HIGH);
  delayMicroseconds(10);
  digitalWrite(trig, LOW);

  long t = pulseIn(echo, HIGH);
  int d = t * 0.034 / 2;

  servo.write(constrain(map(d, 5, 50, 180, 0), 0, 180));
  delay(100);
}
```

EXPECTED RESULT

- The sensor measures object distance.
- The servo position changes with distance.

Useful Links

Arduino Nano

Resource	Link
Arduino Nano Documentation	https://docs.arduino.cc/hardware/nano/
Arduino IDE	https://www.arduino.cc/en/software

COMPATIBLE COMPONENTS

- HC-SR04
- DHT22
- MPU6050
- SG90 Servo
- I2C LCD
- HC-05

Need this component?

Buy Arduino Nano >>

https://techzoneegypt.com/p/arduino-nano-plus-cable