

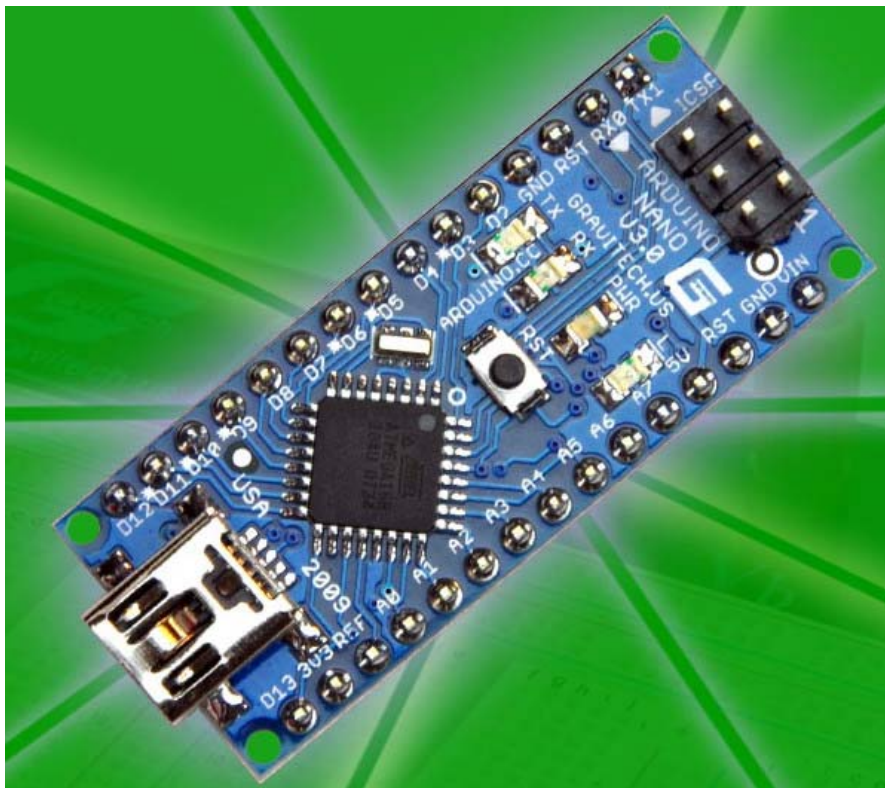
Atmel 8-bit AVR microcontroller 328P

Reference:

<https://www.theengineeringprojects.com/2018/06/introduction-to-arduino-nano.html>

Arduino Nano (V3.0)

User Manual



Released under the Creative Commons Attribution Share-Alike 2.5 License

<http://creativecommons.org/licenses/by-sa/2.5/>

More information:

www.arduino.cc

Rev 3.0

Summary overview of Nano, including PinNames:
<https://components101.com/microcontrollers/arduino-nano>

Arduino Nano Pin Layout

30-DIP chip

22 I/O PINS

* 14 Digital I/O pins (D0-D13)
of which 6 provide PWM output
(simulated 8-bit analog out)

* 6 Digital I/O & Analog Input pins (A0-A5)
* 2 Analog Input only pins (A6-A7)

16 I/O lines unreserved

D2-D13

A0-A3

Reserved: D0/D1, A4/A5, A6/A7

ex. #define LED 2

PWM pins @ 490Hz: 9,10 (Timer 1)
@ 490Hz: 3,11 (Timer 2)

PWM pins @ 980Hz: 5,6 (Timer 0) ** shared

```

=====
|| Frequency [Hz] || Prescaler || Setting ||
=====
|| 31373.55      || 1      || 0x01  ||
|| 3921.57       || 8      || 0x02  ||
|| 980.39        || 32     || 0x03  ||
|| 490.20        || 64     || 0x04  ||
|| 245.10        || 128    || 0x05  ||
|| 122.55        || 256    || 0x06  ||
|| 30.64         || 1024   || 0x07  ||
=====

```

```
TCCR2B = TCCR2B & 0b11111000 | setting;
```

4 LED indicators: Rx, Tx, Pwr, LED (pin 13)
Green, Red, Red, Red

I/O instructions

digitalRead()

digitalWrite()

analogRead()

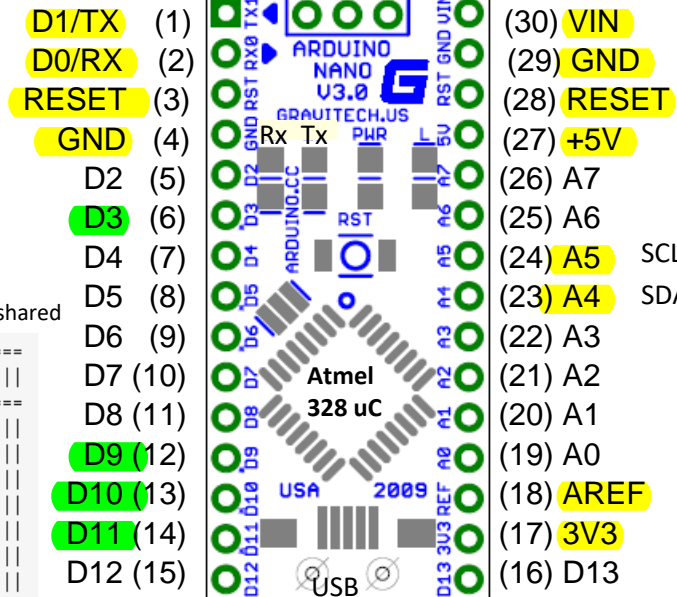
analogWrite()

Analog Read is 10-bits (0-1023)
On 5V ref, each count is 4.9mV

A6/A7 are analogRead only
A0-A5 are digital or analog I/O

ex. #define SDA A4

A0 starts at pin 14



Source:

Pinout Diagram (annotated):

<http://mathscitech.org/articles/microcontrollers-nano>

Original:

https://www.mouser.com/pdfdocs/Gravitech_Arduino_Nano3_0.pdf

Pin Specification & User Guide

<https://components101.com/microcontrollers/arduino-nano>

Pin No.	Name	Type	Description
1-2, 5-16	D0-D13	I/O	Digital input/output port 0 to 13
3, 28	RESET	Input	Reset (active low)
4, 29	GND	PWR	Supply ground
17	3V3	Output	+3.3V output (from FTDI)
18	AREF	Input	ADC reference
19-26	A0-A7	Input	Analog input channel 0 to 7
27	+5V	Output or Input	+5V output (from on-board regulator) or +5V (input from external power supply)
30	VIN	PWR	Supply voltage

Pin No.	Name	Type	Description
1-2, 5-16	D0-D13	I/O	Digital input/output port 0 to 13
3, 28	RESET	Input	Reset (active low)
4, 29	GND	PWR	Supply ground
17	3V3	Output	+3.3V output (from FTDI)
18	AREF	Input	ADC reference
19-26	A0-A7	Input	Analog input channel 0 to 7
27	+5V	Output or Input	+5V output (from on-board regulator) or +5V (input from external power supply)
30	VIN	PWR	Supply voltage

Arduino Nano Mechanical Drawing

