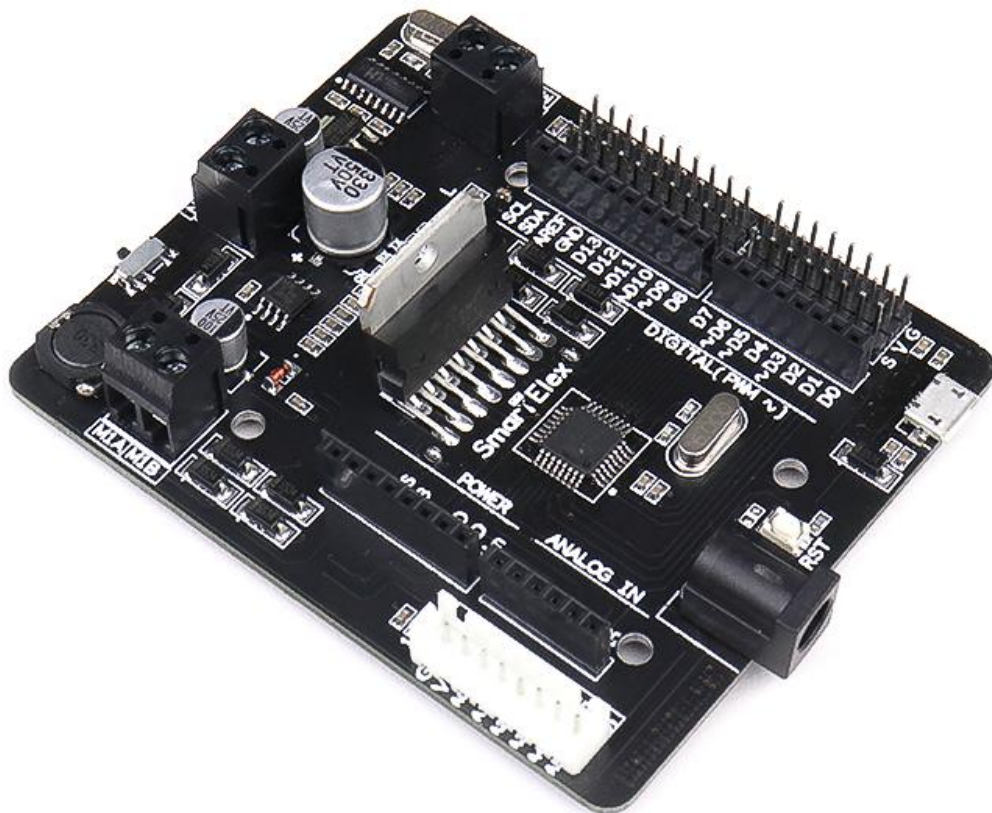


SmartElex L298N Motor Driver with Arduino UNO





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1. Description:-

We understand our maker's needs and consequently adding the most improved and powerful motor drivers with the latest features to provide a great utility that makes it useful for a wide variety of mechatronics. Here is all new **SmartElex L298N Motor Driver with Arduino Uno** specifically designed for mobile robots. It can be used in a wide range of applications such as in racing robots Combat robot, Line sensor robot and many more.

ARDUINO UNO + L298N MOTOR DRIVER which has the same microcontroller on official Arduino UNO where you can select Arduino/Genuino UNO in Arduino IDE to develop the program. With **onboard 5V 3A buck converter** power supply and a wide range of motor operating Voltage, the driver performs very dynamically in small brushed motor applications as well as **1.2A continuous current** motors per channel which can be raised up to Total **4A**.

SmartElex L298N Motor Driver with Arduino Uno has 3 pin connector (Sig V G) at all digital pin of Arduino. You can connector here to use servo motor or any sensor which 5v signal. Additionally it has On-board connector for SmartElex RLS-06 Line sensor.

2. Features :-

- ❖ Recommended Input Voltage: 12V
- ❖ Min-Max Input Voltage: 9-15V
- ❖ 5 mm standard DC plug-in jack for Input supply
- ❖ On-Board Arduino UNO with USB Port
- ❖ On-Board DC motor Driver L298N.
- ❖ On-board 5V 3A SMPS circuit.
- ❖ On-Board power supply on-off switch
- ❖ Power Status LED.
- ❖ 16MHz crystal.
- ❖ Port extensions for all ports with detailed pin labelling for easy identification of pins
- ❖ Four 3mm mounting hole for easy mounting

3. ATmega328 Pin Diagram , Features & Specification

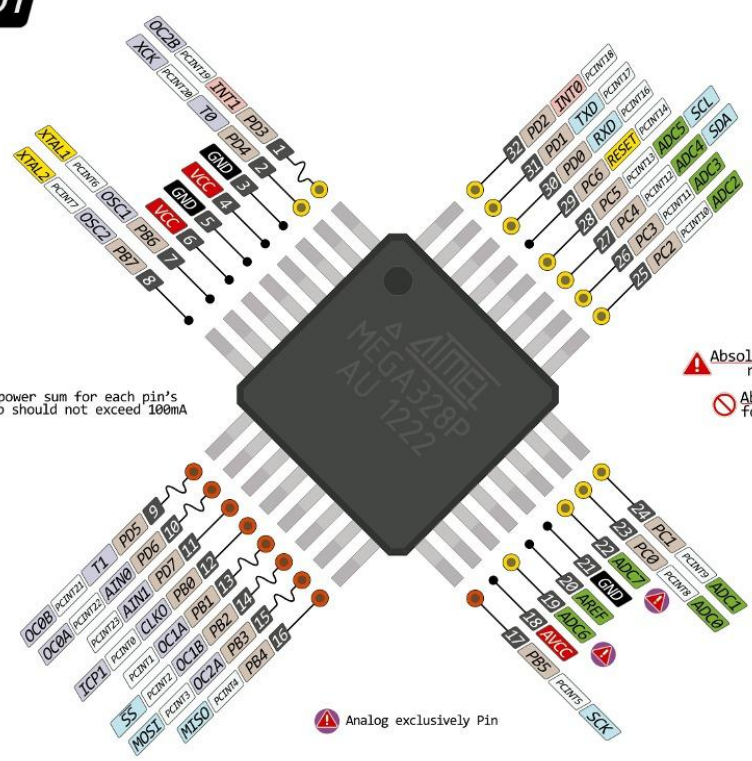
ATMEGA328 PINOUT

- Power
- GND
- Serial Pin
- Analog Pin
- Control
- Pin Change Int
- Physical Pin
- Port Pin
- Pin function
- Ext Interrupt
- ~ PWM Pin
- Port Power

⚠ The power sum for each pin's group should not exceed 100mA

- ⚠ Absolute MAX per pin 40mA recommended 20mA
- ⊘ Absolute MAX 200mA for entire package

⚠ Analog exclusively Pin



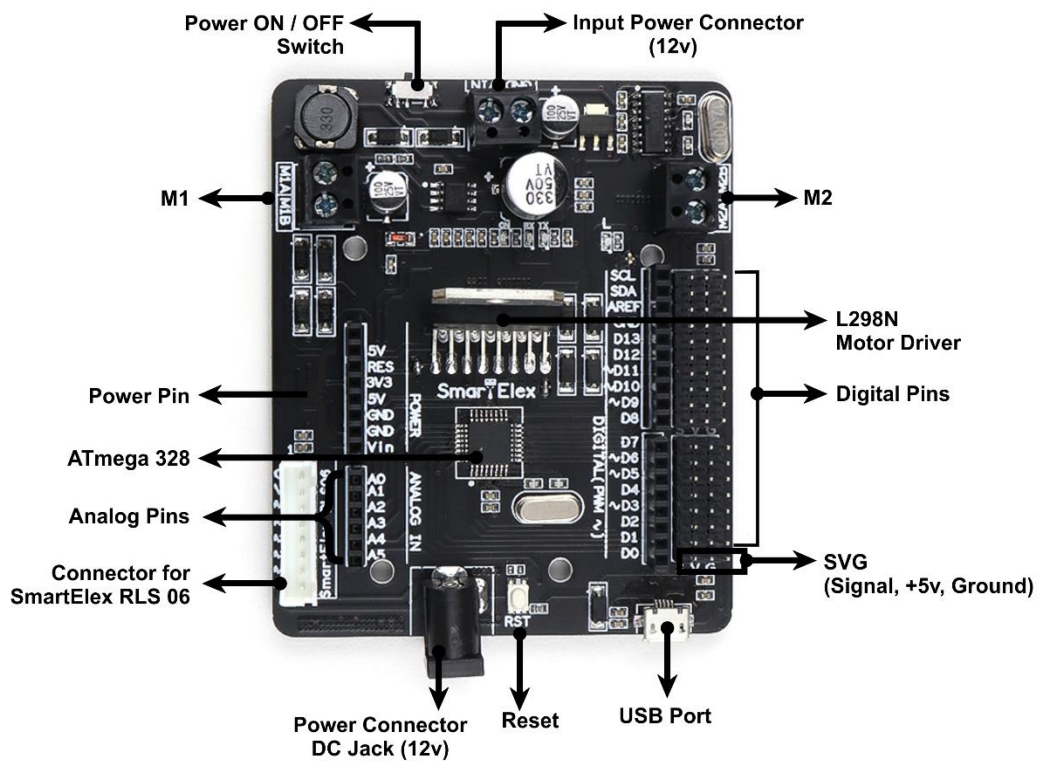
ATmega328 Features:-

- High Performance, Low Power AVR® 8-Bit Microcontroller
- Advanced RISC Architecture
- High Endurance Non-volatile Memory Segments
- Peripheral Features
 - Two 8-bit Timer/Counters with Separate Prescaler and Compare Mode
 - One 16-bit Timer/Counter with Separate Prescaler, Compare Mode, and Capture Mode
 - Real Time Counter with Separate Oscillator
 - Six PWM Channels– 8-channel 10-bit ADC in TQFP and QFN/MLF package
 - Temperature Measurement
 - Programmable Serial USART
 - Master/Slave SPI Serial Interface
 - Byte-oriented 2-wire Serial Interface (Philips I2C compatible)
 - Programmable Watchdog Timer with Separate On-chip Oscillator
 - On-chip Analog Comparator
 - Interrupt and Wake-up on Pin Change
- Special Microcontroller Features
 - Power-on Reset and Programmable Brown-out Detection
 - Internal Calibrated Oscillator
 - External and Internal Interrupt Sources
 - Six Sleep Modes: Idle, ADC Noise Reduction, Power-save, Power-down, Standby, and Extended Standby

4. Product Layout:-



L298N Motor Driver with Arduino Uno



5. Pin configuration

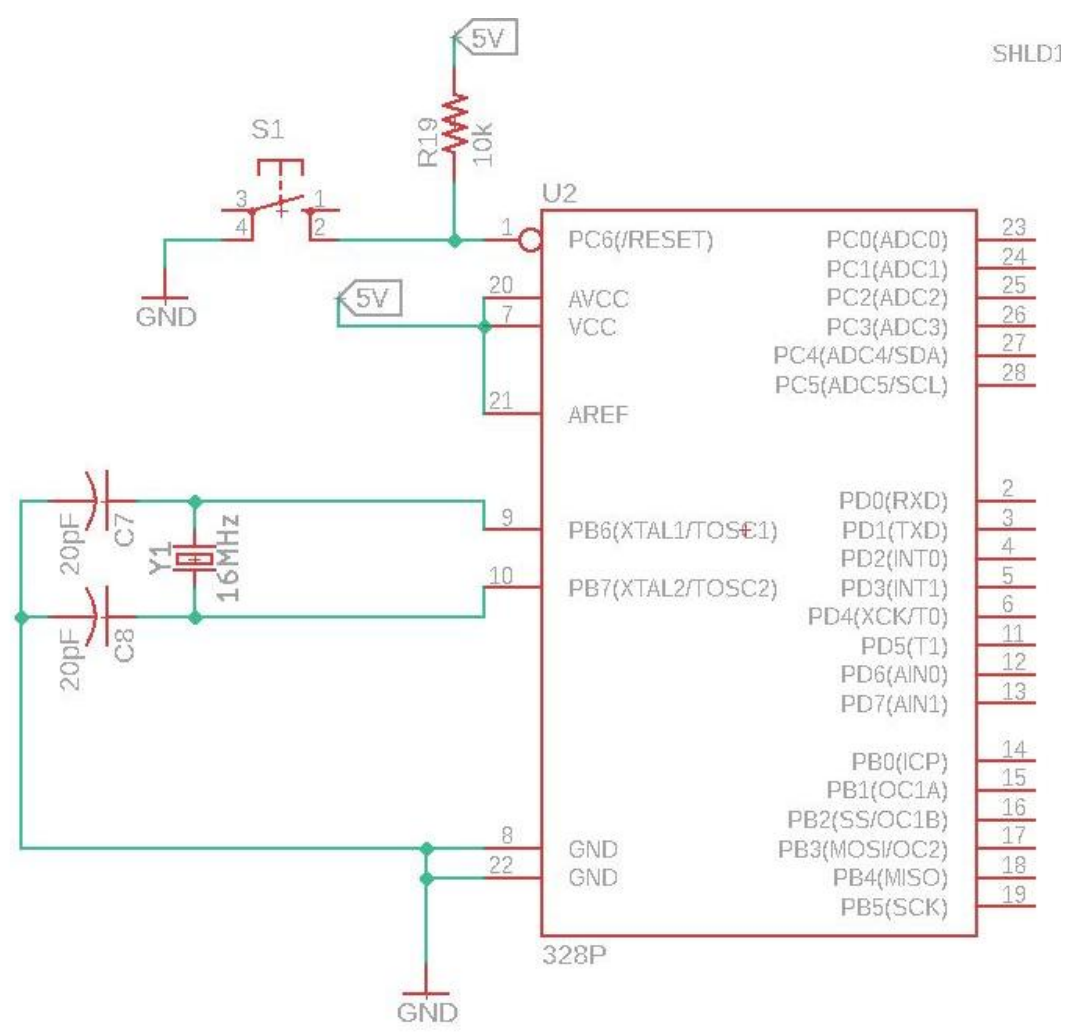
L298N

Sr.no.	SmartElex Arduino UNO	L298N
1	D8	IN1
2	D9	IN2
3	D10	EN1
4	D11	EN2
5	D12	IN3
6	D13	IN4

SmartElex RLS06 Line sensor

Sr.no.	SmartElex Arduino UNO	SmartElex RLS06
1	A0	A0/D0
2	A1	A1/D1
3	A2	A2/D2
4	A3	A3/D3
5	A4	A4/D4
6	A5	A5/D5

6. RESET AND CRYSTAL CIRCUIT:-



7. Example of LED BLINKING

CODE :-

```
*****START*****

// the setup function runs once when you press reset or power the board

void setup()

{

  // initialize digital pin LED_BUILTIN as an output.
  pinMode(LED_BUILTIN, OUTPUT);
}

// the loop function runs over and over again forever

void loop() {

  digitalWrite(LED_BUILTIN, HIGH); // turn the LED on (HIGH is the voltage level)
  delay(1000); // wait for a second
  digitalWrite(LED_BUILTIN, LOW); // turn the LED off by making the voltage LOW
  delay(1000); // wait for a second
}

*****END*****
```

Note: - Other Sample code will available on website.

8. Warranty

1. Standard warranty of product is 6 months.
2. Warranty only applies to manufacturing defect.
3. No warranty will apply if the Product has been subject to misuse, static discharge, neglect, accident, modification, or has been soldered or altered in any way.