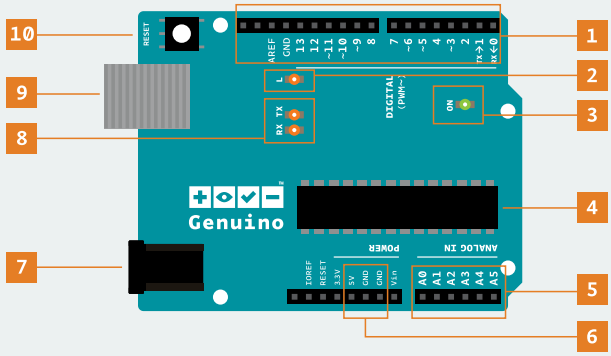
Arduino/Genuino Uno Board Anatomy

Arduino/Genuino boards senses the environment by receiving inputs from many sensors, and affects their surroundings by controlling lights, motors, and other actuators. Arduino/Genuino boards are the microcontroller development platform that will be at the heart of your projects. When making something you will be building the circuits and interfaces for interaction, and telling the microcontroller how to interface with other components. Here the anatomy of Arduino/Genuino Uno.



- 1. **Digital pins** Use these pins with digitalRead(), digitalWrite(), and analogWrite(). analogWrite() works only on the pins with the PWM symbol.
- 2. **Pin 13 LED** The only actuator built-in to your board. Besides being a handy target for your first blink sketch, this LED is very useful for debugging.
- 3. **Power LED** Indicates that your Genuino is receiving power. Useful for debugging.
- 4. **ATmega microcontroller** The heart of your board.
- 5. **Analog in** Use these pins with analogRead().
- 6. **GND and 5V pins** Use these pins to provide +5V power and ground to your circuits.
- 7. **Power connector** This is how you power your Genuino when it's not plugged into a USB port for power. Can accept voltages between 7-12V.
- 8. **TX and RX LEDs** These LEDs indicate communication between your Genuino and your computer. Expect them to flicker rapidly during sketch upload as well as during serial communication. Useful for debugging.
- 9. **USB port** Used for powering your Genuino Uno, uploading your sketches to your Genuino, and for communicating with your Genuino sketch (via Serial. println() etc.).

10. **Reset Button** - Resets the ATmega microcontroller.

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