

# METRO 328

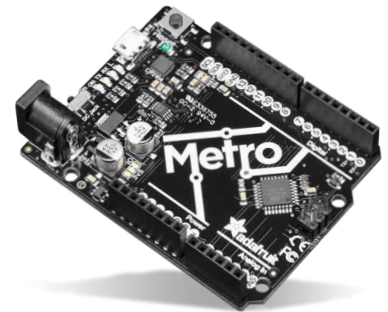
## Product Overview

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## Description

Adafruit METRO 328 ATmega328 (Fully Assembled) is an Arduino Uno R3 compatible and equivalent board, with a few extra Adafruit tweaks. Like the Uno R3, the METRO 328 is based on the 16MHz Microchip Technology ATmega328P 8-Bit AVR® microcontroller, with 32KB of flash and 2KB of RAM. The METRO 328 shares the same footprint of the Uno R3 and it is compatible with all R3 Arduino Uno compliant shields. Designed to be easy-to-use and hacker friendly, the METRO 328 has the Optiboot Bootloader already installed, which is supported by the Arduino IDE.



The METRO 328 can be powered either by 7V to 9V polarity protected DC voltage, or by the micro USB connector from any 5V USB source. The 2.1mm DC jack has an on/off switch next to it for simple configuration, and the METRO will automatically switch between USB and DC. The METRO 328 has 19 GPIO pins, 6 of which are analog in as well, and 2 of which are reserved for the USB-serial converter. There are 6 PWMs available on 3 timers (1x 16-bit and 2x 8-bit). The METRO 328 also features a hardware SPI port, hardware I<sup>2</sup>C port, and hardware UART to USB. The Logic Level is preset to 5V, but can be configured to 3.3V via jumper.

## Features

- Microchip Technology ATmega328 8-Bit AVR microcontroller with Optiboot (Uno) Bootloader
- Silicon Labs CP2104 USB-to-UART bridge
- 7V to 9V input voltage (9V DC power supply recommended)
- 5V regulator can supply peak ~800mA as long as the die temp of the regulator does not exceed 150°C
- 3.3V regulator can supply peak ~150mA as long as the die temp of the regulator does not exceed 150°C
- 5V logic with 3.3V compatible inputs, can be converted to 3.3V logic operation
- 20 Digital I/O pins with 6 PWM outputs, 6 analog inputs
- 6-pin ICSP header for reprogramming

- 32KB Flash memory - 0.5K for bootloader, 31.5KB available after bootloading
- 16MHz clock speed
- Compatible with Arduino Classic and Arduino R3 Shields
- Adafruit black PCB with gold plate on pads
- Includes 4 rubber bumpers for stability
- Derivative of "Arduino UNO R3 reference design"
- Open source hardware files on github
- 53mm x 71mm / 2.1" x 2.8"
- Height (w/ barrel jack): 13mm / 0.5"
- Weight: 19g

## Mouser Part Number(s)

[View All Parts](#)

To learn more, visit <https://www.mouser.com/new/adafruit/adafruit-metro-328-atmega328/>