

Adafruit MetroX Classic Kit – Experimentation Kit for Metro 328

PRODUCT ID: 3588

Interested in making neat stuff with an Arduino-compatible board but not sure where to start? This kit includes all the pieces needed to complete over 20 different circuit and projects. Basically everything you need to be playing within minutes of its arrival. No soldering required, works with Mac, Windows and Linux!

This item is the same exact kit as [https:// www.adafruit.com/product/170](https://www.adafruit.com/product/170)

This pack includes the Adafruit Metro. METRO is the culmination of years of playing with AVRs: we wanted to make a development board that is easy to use and is hacker friendly. At the heart is an ATmega328P, with 32KB of flash and 2KB of RAM, running at 16 MHz. It is fully compatible with the Arduino IDE (select "Arduino UNO" in the board-type menu)

- Power the METRO with 7–9V polarity protected DC or the micro USB connector to any 5V USB source. The 2.1 mm DC jack has an on/off switch next to it so you can turn off your setup easily. The METRO will automatically switch between USB and DC.
- METRO has 19 GPIO pins, 6 of which are Analog in as well, and 2 of which are reserved for the USB–serial converter. There's also 6 PWMs available on 3 timers (1 x 16–bit, 2 x 8–bit). There's a hardware SPI port, hardware I2C port and hardware UART to USB. Logic level is 5V but by cutting and soldering closed a jumper, you can easily convert it to 3.3V logic
- USB to Serial converter, there's a hardware USB to Serial converter that can be used by any computer to listen/send data to the METRO, and can also be used to launch and update code via the bootloader
- Four indicator LEDs, on the front edge of the PCB, for easy debugging. One green power LED, two RX/TX LEDs for the UART, and a red LED connected to pin PB5
- Easy reprogramming, comes pre–loaded with the Optiboot bootloader, which is supported by avrdude and only uses 512 bytes.
- Fully compatible with the Arduino IDE (select "Arduino UNO" in the board–type menu)
- Works with all Adafruit shields!

If you're an educator looking to order more of this product than we have in stock, please email educators@adafruit.com!

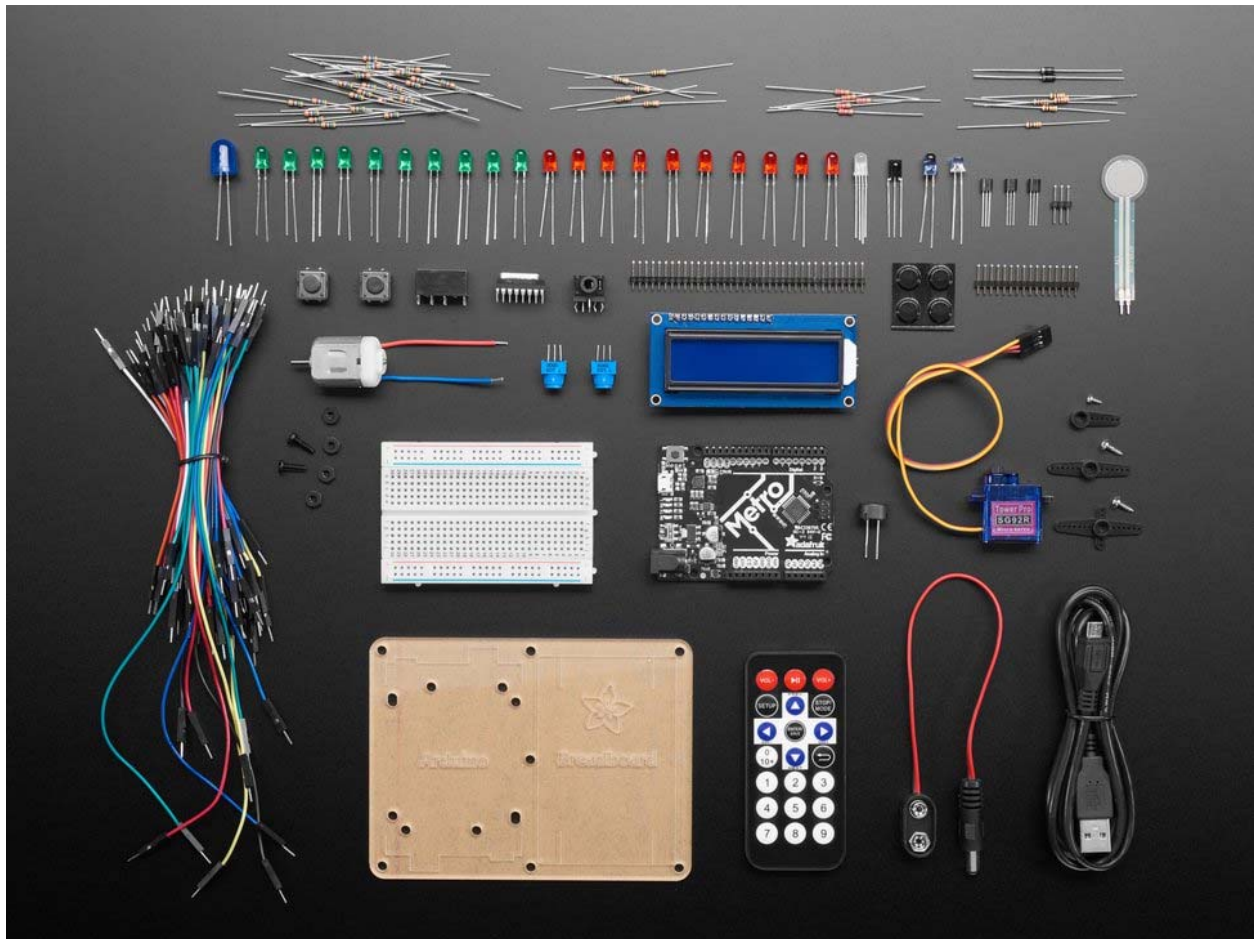
Features:

- 20+ online circuits to explore microcontroller basics. Covering LEDs, transistors, motors, integrated circuits, pushbuttons, variable resistors, photo resistors, temperature sensors & relays.
- Comes with an Adafruit Metro prototyping bundle to make constructing your circuits and future projects easy.

Includes:

- Arduino Prototyping Bundle (the latest Adafruit Metro, half size breadboard & acrylic holder)
- 65 Piece Jumper Wire Bundle
- Full color printed 32-page Experimenter's Guide
- 13 color Breadboard Layout Sheets
- USB Cable
- 9V battery clip
- Micro Servo
- DC Toy Motor
- Mini Remote Control
- 16x2 LCD + extras
- Force Sensitive Resistor
- Loads of components:
 - 1x 10K Pot
 - 1x Piezo Buzzer
 - 3x 10K 5% Resistors
 - 3x 2.2K 5% Resistors
 - 2x IN4001 Diode
 - 1x 5V Relay
 - 1x TMP36 Temperature Sensor
 - 25x 560ohm 5% Resistors
 - 1x 74HC595 Chip
 - 3x Extra-long Servo Pin
 - 1x Headphone Jack
 - 2x PN2222
 - 1x 220uF / 6.3V Electrolytic Capacitor

- 16-pin Male Header
- 2x 12mm Tactile Switch
- 1x IR Sensor
- 1x HW-5P-1 Light Sensor
- 1x 5mm IR LED
- 1x Diffused RGB LED
- 1x Diffused 10mm Blue LED
- 10x Diffused Red 5mm LED
- 10x Diffused Green 5mm LED



<https://www.adafruit.com/product/3588> 4-3-18