Adafruit METRO 328 without Headers - ATmega328

PRODUCT ID: 2466

3 IN STOCK

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DESCRIPTION

TECHNICAL DETAILS

DESCRIPTION

We sure love the ATmega328 here at Adafruit, and we use them *a lot* for our own projects. The processor has plenty of GPIO, Analog inputs, hardware UART SPI and I2C, timers and PWM galore - just enough for most simple projects. When we need to go small, we use a Pro Trinket 3V or 5V, but when size isn't as much of a concern, and a USB-serial converter is required, we reach for an **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.

- **ATmega328 brains** - This popular chip has 32KB of flash (1/2 K is reserved for the bootloader), 2KB of RAM, clocked at 16MHz
- **Power the METRO** with 7-9V polarity protected DC or the micro USB connector to any 5V USB source. The 2.1mm DC jack has an on/off switch next to it so you can turn off your setup easily. The METRO will automagically switch between USB and DC.
- **METRO has 20 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.
- **GPIO 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.
- **Beautiful styling** by PaintYourDragon and Bruce Yan, in Adafruit Black with gold plated pads.
- **Works with all Adafruit designed shields!**

This version of the METRO 328 comes as a fully assembled and tested development board but without any headers attached. We do include some through-hole headers that you can solder on if you like, or you can solder wires or header directly to the breakout pads. We also include 4 rubber bumpers to keep it from slipping off your desk.

Mac & Windows People! Don't forget to grab & install the FTDI VCP drivers from FTDI to make the COM/Serial port show up right! The default drivers may not support this FTDI chip!

TECHNICAL DETAILS

Detailed specifications:

- ATmega328 microcontroller with Optiboot (UNO) Bootloader
- USB Programming and debugging via the well-supported genuine FTDI FT231X
- Input voltage: 7-9V (a 9VDC power supply is 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: 6 are also PWM outputs and 6 are also 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 "Classic" and "R3" Shields
- Adafruit Black PCB with gold plate on pads
- 53mm x 68.5mm / 2.1" x 2.7"
- Height (w/ barrel jack): 13mm / 0.5"
- Weight: 16.5g
- Derivative of "Arduino UNO R3 Reference design"
- Open source hardware files on github!
- Fritzing object in the Adafruit Fritzing Library
- ATmega328P product page

RoHS

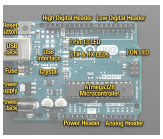
LEARN

Arduin-o-Phone

Ring, Ring! Who's that callin'? It's your Arduino!

BlueLive: Livestream Studio switcher controller

Mapped for Livestream Studio, switch streams with big ole buttons



Ladyada's Learn Arduino - Lesson #0

Hi There!

Ladyada's Learn Arduino - Lesson #1

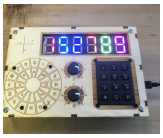
Hello, World! I am an Arduino and I am here to BLINK!

Ladyada's Learn Arduino - Lesson #2

Venture deep into the Blink sketch...

Experimenter's Guide for Metro

Harness the power of the Adafruit Metro by making 18 Circuits!

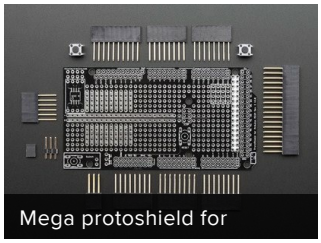


Mystery Box: NeoMatrix Mk I

Interface of Infinite Possibilities: Matrix keypad and NeoSegment display

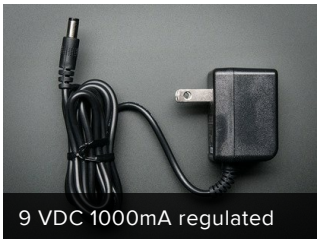
MAY WE ALSO SUGGEST...

2.8" TFT Touch Shield for



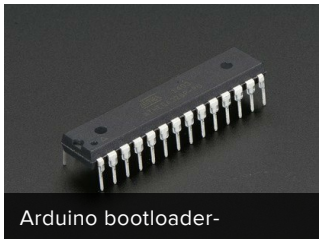
Mega protoshield for

Adafruit Ultimate GPS



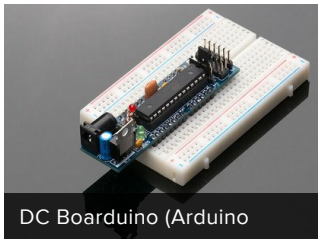
9 VDC 1000mA regulated

USB cable - USB A to Micro-



Arduino bootloader-

Adafruit MetroX Classic Kit -

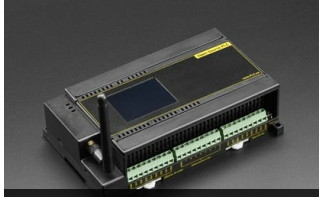


DC Boarduino (Arduino

Adafruit PN532 NFC/RFID

Adafruit METRO 328 Fully

Clear Enclosure for Arduino



Digital Loggers PLDuino -

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"All labor that uplifts humanity has dignity and importance and should be undertaken with painstaking excellence" - Martin Luther King, Jr.