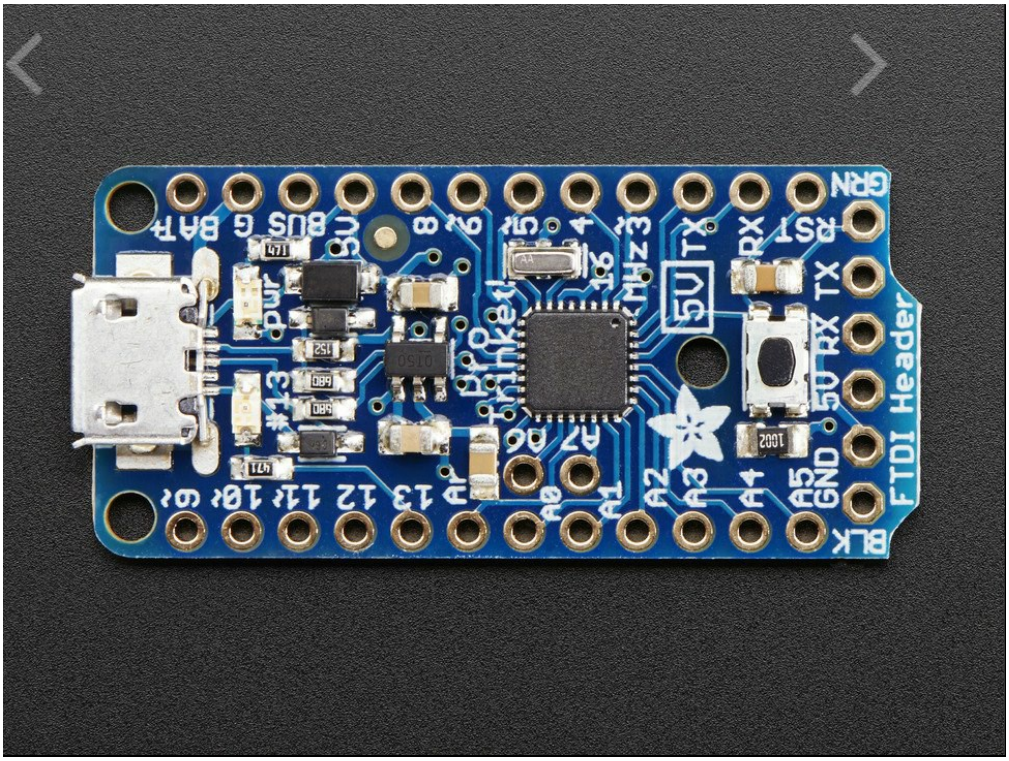
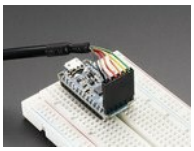




Adafruit Pro Trinket - 5V 16MHz

PRODUCT ID: 2000

IN STOCK

1 ADD TO CART

☐ **Also include 1 x Adafruit LiIon/LiPoly Backpack Add-On for Pro Trinket/ItsyBitsy ()**

☐ **Also include 1 x Adafruit CP2104 Friend - USB to Serial Converter ()**

1-9

10-99

100+

ADD TO WISHLIST

DESCRIPTION

TECHNICAL DETAILS





DESCRIPTION

We still love the Pro Trinket but the bit-bang USB technique it uses doesn't work as well as it did in 2014. So while we still *carry* the Pro Trinket, we really recommend using the Metro Mini (ATmega328 @ 5V 16 MHz), ItsyBitsy 32u4 5V 16MHz, ItsyBitsy 32u4 @ 3.3V 8MHz or ItsyBitsy M0 @ 3V 48MHz. All have built-in USB and are comparable in price! The ItsyBitsy's especially are about the same size and have native USB and tons of pins, so they're a very close compatible.

Trinket's got a big sister in town - the **Pro Trinket 5V**! Pro Trinket combines everything you love about Trinket with the familiarity of the common core Arduino chip, the ATmega328. It's like an Arduino Pro Mini with more pins and USB tossed in, so delicious.

Trinket's a year old now, and while its been great to see tons of tiny projects, sometimes you just need more pins, more FLASH, and more RAM. That's why we designed Pro Trinket, with 18 GPIO, 2 extra analog inputs, 28K of flash, and 2K of RAM.

Like the Trinket, it has onboard USB bootloading support - we opted for a MicroUSB jack this time. We also added Optiboot support, so you can either program your Pro Trinket over USB or with a FTDI cable just like the Pro Mini and friends.

The Pro Trinket PCB measures only 1.5" x 0.7" x 0.2" (without headers) but packs much of the same capability as an Arduino UNO. So it's great once you've finished up a prototype on an official Arduino UNO and want to make the project smaller.

The Pro Trinket 5V uses the Atmega328P chip, which is the same core chip in the Arduino UNO/Duemilanove/Mini/etc. at the same speed and voltage. So you'll be happy to hear that not only is Pro Trinket programmable using the Arduino IDE as you already set up, but 99% of Arduino projects will work out of the box!

For tons more details, check out the Introducing Pro Trinket tutorial

Here's some things you may have to consider when adapting Arduino sketches:

- Pins #2 and #7 are not available (they are exclusively for USB)
- The onboard 5V regulator can provide 150mA output, not 800mA out
- You cannot plug shields directly into the Pro Trinket
- There is no Serial-to-USB chip onboard. This is to keep the Pro Trinket small and inexpensive, you can use any FTDI cable to connect to the FTDI port for a Serial connection. The USB connection is for uploading new code only.
- The bootloader on the Pro Trinket use 4KB of FLASH so the maximum sketch size is 28,672 bytes. The bootloader does not affect RAM usage.

Here's some handy specifications:

- ATmega328P onboad chip in QFN package
- 16MHz clock rate, 28K FLASH available
- USB bootloader with a nice LED indicator looks just like a USBtinyISP so you can program

it with AVRdude and/or the Arduino IDE (with a few simple config modifications).

- Also has headers for an FTDI port for reprogramming
- Micro-USB jack for power and/or USB uploading, you can put it in a box or tape it up and use any USB cable for when you want to reprogram.
- On-board 5.0V power regulator with 150mA output capability and ultra-low dropout. Up to 16V input, reverse-polarity protection, thermal and current-limit protection.
- Power with either USB or external output (such as a battery) - it'll automatically switch over
- On-board green power LED and red pin #13 LED
- Reset button for entering the bootloader or restarting the program.
- Works with 99% of existing Arduino sketches (anything that doesn't use more than 28K, and doesn't require pins #2 and #7)
- **Mounting holes! Yeah!**

Once headers are installed they can be fitted into 0.6" wide sockets

TECHNICAL DETAILS

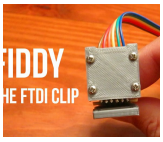
Dimensions:

- 38mm x 18mm x 2mm / 1.5" x 0.7" x 0.08"
- Height with MicroUSB: 4mm / 0.16"
- Weight: 2.6g

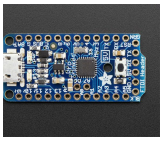
Datasheets, documents, Fritzing objects, PCB files and more are in the tutorial

RoHS

LEARN



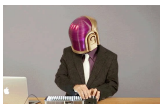
Fiddy - the FTDI Clip
With rainbow hair and pogo-pin teeth, Fiddy gobbles up FTDI



Introducing Pro Trinket
Trinket's got a big sister in town - the Pro Trinket 5V!

Color Balancing Video Camera Light feat. DotStars
Sometimes you need warm white, and sometimes you need cool white, so why not have both?

Glowing Viking Rune wayFinder
Create ancient magic with modern science



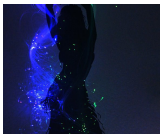
3D Printed Daft Punk Helmet
Build a wearable LED Helmet!

Introducing the iTapStick: Video Game USB Mouse Stick for Wii Nunchuk Controllers
Play One Finger Death Punch Martial Arts PC Game with Wii Nunchuks using a Nunchucky + Pro Trinket

Pro Trinket Tachometer
Do you know how fast you were going?

DIY Pocket LED Gamer - Tiny Tetris!
Fun with 16x8 pixels!

Portable Trellis Sound Board
Push a button, it plays a sound!

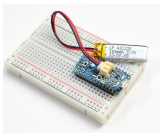


Fiber Optic Whip
Dance in a Cloud of Fiber Optic Lights

Wireless Game Show Poppers for the Classroom!
Pro Trinket + Hacked Duo

Pop Game = Game Show Fun!

Adafruit Arduino IDE Setup
Setup the Arduino IDE to work with Trinket, Gemma, Flora, and more!



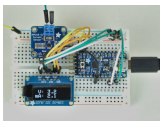
Adafruit Pro Trinket LiPoly/LiIon Backpack
Add a rechargeable battery to your Pro Trinket

Roll-up Video Light
Portable, on-the-go lighting!

Animated Flying Toaster OLED Jewelry
It's like a screen saver for your heart <3

Adding Third Party Boards to the Arduino v1.6.4+ IDE
Easily add support for Adafruit boards to Arduino v1.6.4!

Animated Scrolling "Mario Clouds" TFT Jewelry
The peaceful background of your favorite game, now for you to wear



Pro Trinket Power Meter
Build a small meter to display voltage, current, and power usage.

Using NeoPixels and Servos Together
An introduction to AVR peripherals.

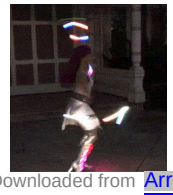
NeoMatrix 8x8 Word Clock
using the NeoPixel NeoMatrix 8x8 to power a word clock!

Ray Gun Blaster
Make a prop replica with sound FX and NeoPixel LEDs!

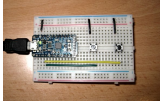
Talking d20 20-Sided Gaming Die
“Greetings, adventurer!”

Bike Wheel POV Display
Light up your ride!

Wizzy: A Needle Felted Cat
Create animatronic animals with attitude.

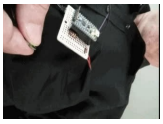


Morning Star POV Double Staffs
288 points of twirling, programmable lights



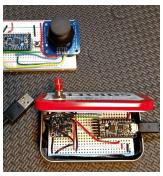
Pro Trinket Keyboard

Use Pro Trinket as a USB keyboard device on your PC



Your Pulse Displayed with NeoPixels

Visualize your heartbeat in colorful ways



Pro Trinket as a USB HID Mouse

Use Pro Trinket as a USB mouse device on your PC

Adafriend the Virtual Pet Cube

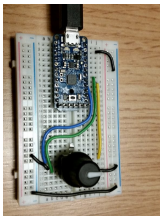
Need a friend or a workbench buddy for long hacking sessions? Build one that responds to your interactions, sings, and shows emotion!

DotStar Belly Dance Fans

Dance like the Magical Stardust Pixie You Are

LED Campfire

Because it's not camping without a fire

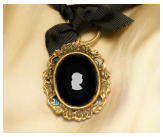


Pro Trinket Rotary Encoder

Use Pro Trinket as a combination keyboard and mouse device

Mindfulness Clock OF DOOM

A grim reminder that time is priceless



Steampunk Cameo Necklace with OLED Display

Make a vampire happy with this cameo-meets-OLED-screen.

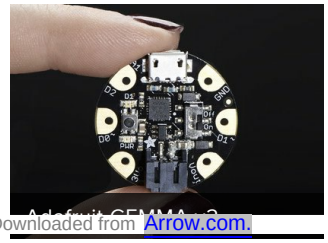
Tent Lantern

For when you don't want to go bump in the night

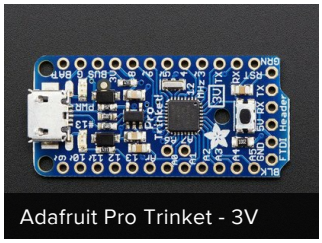
ReBoots Animated LED Boot Laces

These boots are made for dancing, and that's just what they'll do

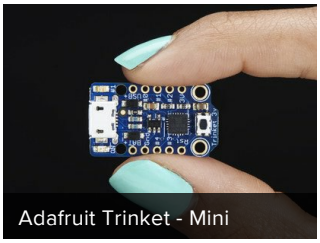
MAY WE ALSO SUGGEST...



USB cable – USB A to Micro-

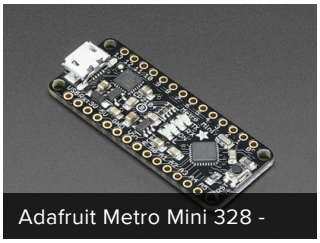


Adafruit Pro Trinket - 3V

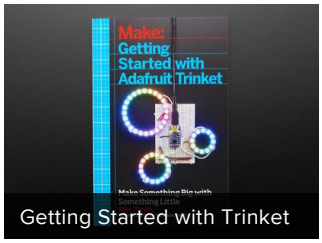

Adafruit Trinket - Mini


Adafruit Trinket - Mini


Teensy (ATmega32u4 USB


Adafruit Metro Mini 328 -

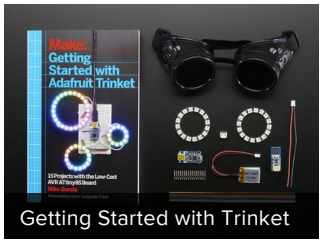

Arduino Pro Mini 328 -



Getting Started with Trinket


Adafruit Trinket M0 - for use


Adafruit NeoPixel LED Strip



Getting Started with Trinket

DISTRIBUTORS EXPAND TO SEE DISTRIBUTORS

"I'm an engineer. I see myself as a toolmaker and the musicians are my customers... They use my tools" - Robert Moog