



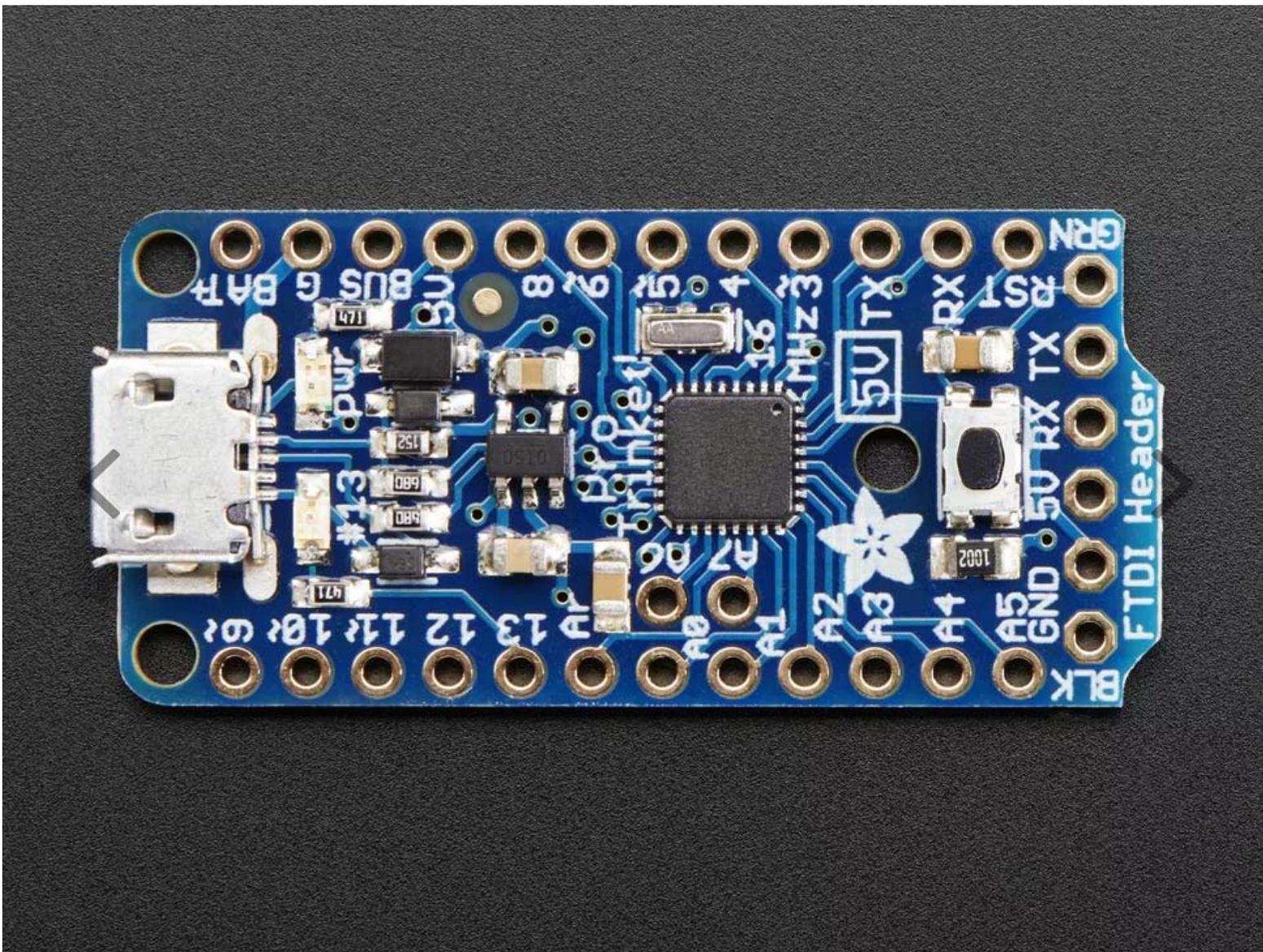
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# Adafruit Pro Trinket - 5V 16MHz

PRODUCT ID: 2000

**\$9.95**



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**Also include 1 x Adafruit Pro Trinket Lilon/LiPoly Backpack Add-On**  
**(<http://www.adafruit.com/products/2124>) (\$4.95)**

QTY	DISCOUNT
1-9	\$9.95
10-99	\$8.96
100+	\$7.96

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## DESCRIPTION

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 (<https://learn.adafruit.com/introducing-pro-trinket>)

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 onboard 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!**