



iPad Pro Bumper

Created by Ruiz Brothers



<https://learn.adafruit.com/ipad-pro-bumper>

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Table of Contents

[Overview](#) 3

[3D Printing](#) 5

- [Slice Settings](#)
- [Flexible Filament](#)
- [Bed Adhesion](#)
- [3D Printer & Slice Setting](#)
-
- [Print Hotter](#)
- [Clean up](#)

Overview

In this project we'll 3d print a bumper for the 11" iPad Pro (2018).



This bumper is 3D printed with flexible filament and will protect the edges and rear facing camera.

The design features a cutout for the USB-C port. Beveled buttons on the side allow easy press of the volume controls.



The frame is padded for protection and allows the tablet to be flush when placed on a flat surface. No more camera bump on the back!

NinjaFlex colors are available in the Adafruit Shop!



[USB C to Micro B Cable - 1 ft 0.3 meter](https://www.adafruit.com/product/3879)

As technology changes and adapts, so does Adafruit! Rather than the regular USB A, this cable has USB C to Micro B plugs! USB C is the latest...

<https://www.adafruit.com/product/3879>



[Adafruit NeoTrellis M4 with Enclosure and Buttons Kit Pack](https://www.adafruit.com/product/4020)

So you've got a cool/witty name for your band, a Soundcloud account, a 3D-printed Daft Punk...

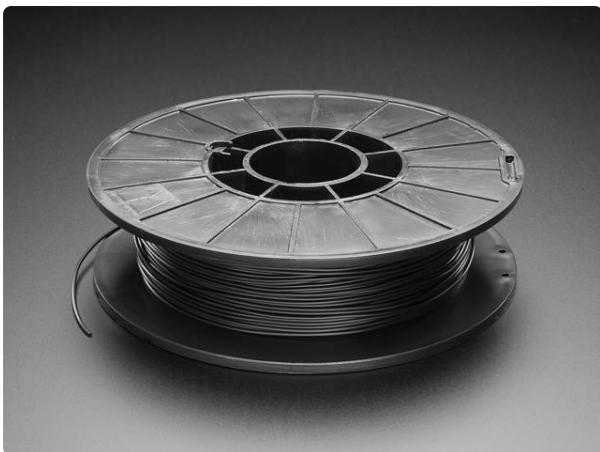
<https://www.adafruit.com/product/4020>



[Cheetah 3D Printer Filament - 3mm Diameter 1kg - Snow](https://www.adafruit.com/product/3186)

Looking beyond ABS? Tired of PLA? Open a world of possibilities, limited only by your imagination. NinjaTek's Cheetah series, a cutting-edge filament for 3D...

<https://www.adafruit.com/product/3186>



[Cheetah NinjaFlex Filament - 1.75mm - Midnight - 0.5 Kg](https://www.adafruit.com/product/3222)

Looking beyond ABS? Tired of PLA? Open a world of possibilities, limited only by your imagination. NinjaTek's Cheetah series, a cutting-edge filament for 3D...

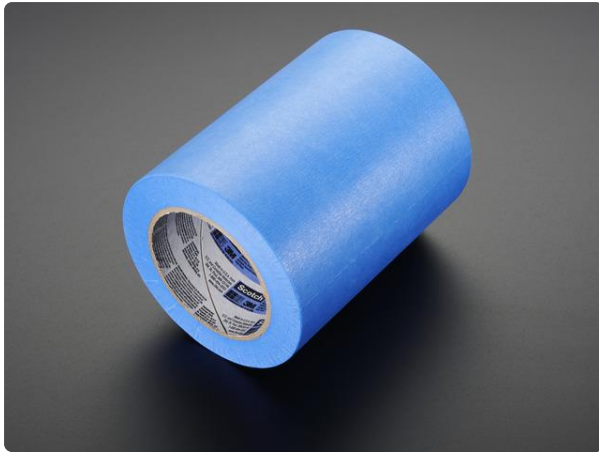
<https://www.adafruit.com/product/3222>



[Ultimaker 3 - 3D Printer](https://www.adafruit.com/product/3300)

The Ultimaker 3 is one of our favorite 3D printers on the market. It's a well-built open-source compact machine with an excellent UX. Every inch of the...

<https://www.adafruit.com/product/3300>



Blue Masking Tape for 3D Printing Plates

OK yes, it's just masking tape. A big honkin' roll of I'm blue da-ba-dee-da-ba-die masking tape. Removing 3D printed parts can be tough. Sometimes pieces get stuck to...

<https://www.adafruit.com/product/2416>

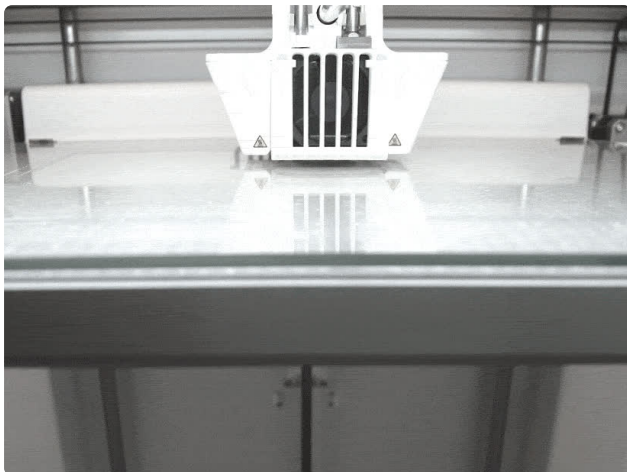


Flush diagonal cutters

These are the best diagonal cutters, large super-comfortable grip to use and have strong nippers for perfect trimming of wires and leads. I've used my pair every day for years.

<https://www.adafruit.com/product/152>

3D Printing



The 3D printed bumper is fairly easy to make with most common FDM style 3D printers that on the market.

And if you don't have access a 3D printer, you can order our parts by visiting our Thingiverse page and have a local maker 3D print the parts and ship them to you.

This bumper is specifically designed for flexible material only! It will not fit the device if printed in hard plastic!

[Edit iPad Pro Design](#)

<https://adafru.it/D4O>

Download from Thingiverse

<https://adafru.it/D4P>

Slice Settings

Download the STL file and import it into your 3D printing slicing software. You'll need to adjust your settings accordingly if you're using material different than PLA.

CURA 3.X Slice Settings

- 225C Extruder Temp
- 60C for heated
- .4mm Nozzle
- 0.38 Line Width
- 2 shell count
- .2mm Layer Height
- 10% infill
- Support Material On
- 25mm/s default print speed
- 8mm retraction distance (bowden)



Flexible Filament

TPU (thermoplastic polyurethane) filament is a flexible material that's ideal for gaskets, plugs, leveling feet, and mobile device cases!

There's different types of TPU, some which more elasticity than others and others with more grip.



Bed Adhesion

60C temperatures for heated beds. For non-heated beds, PEI sheet and blue tape works well.

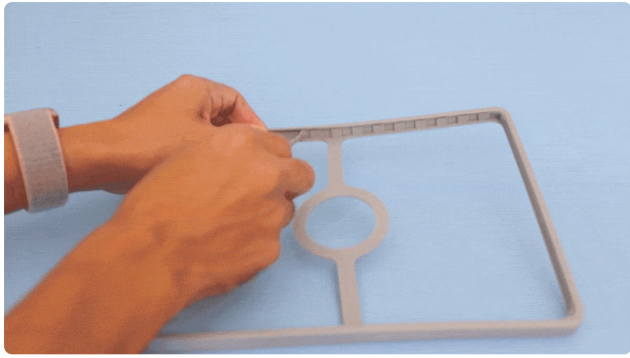


3D Printer & Slice Setting

Follow your printers recommended settings below for a good starting point.

Print Hotter

TPU extrudes best at 220C-225C temperatures. It has a higher melting point and requires more heat than regular PLA.



Clean up

We used a flush diagonal cutters to clean up support material around the inner edges.



Make sure the openings for the mute switch and USB-C ports are cleaned before plugging in cable. Use a hobby knife to help cut away stringing that could block the volume switch.