



# NeoTrellis M4 Bumper

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<https://learn.adafruit.com/neotrellis-m4-bumper>

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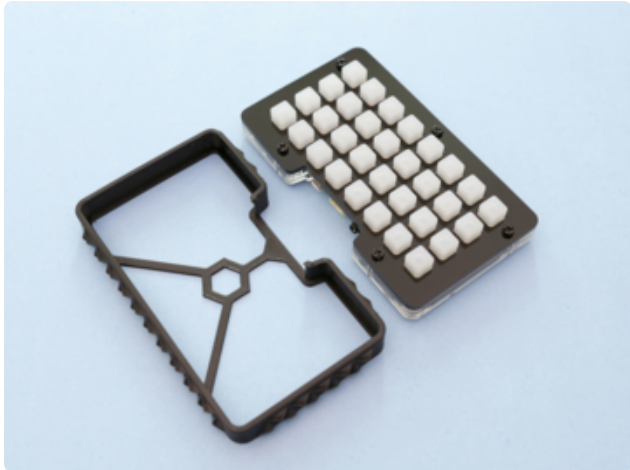
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## 3D Printing



### 3D Printed Bumper

This is a simple 3d printed bumper for the Adafruit NeoTrellis M4 designed for flexible filaments. This provides protection and comfort to the acrylic case.



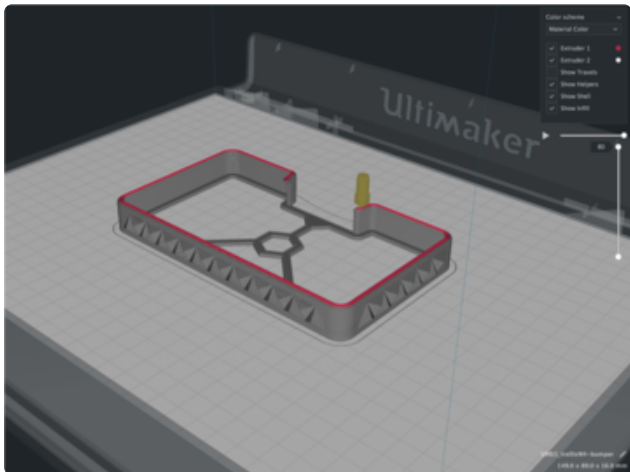
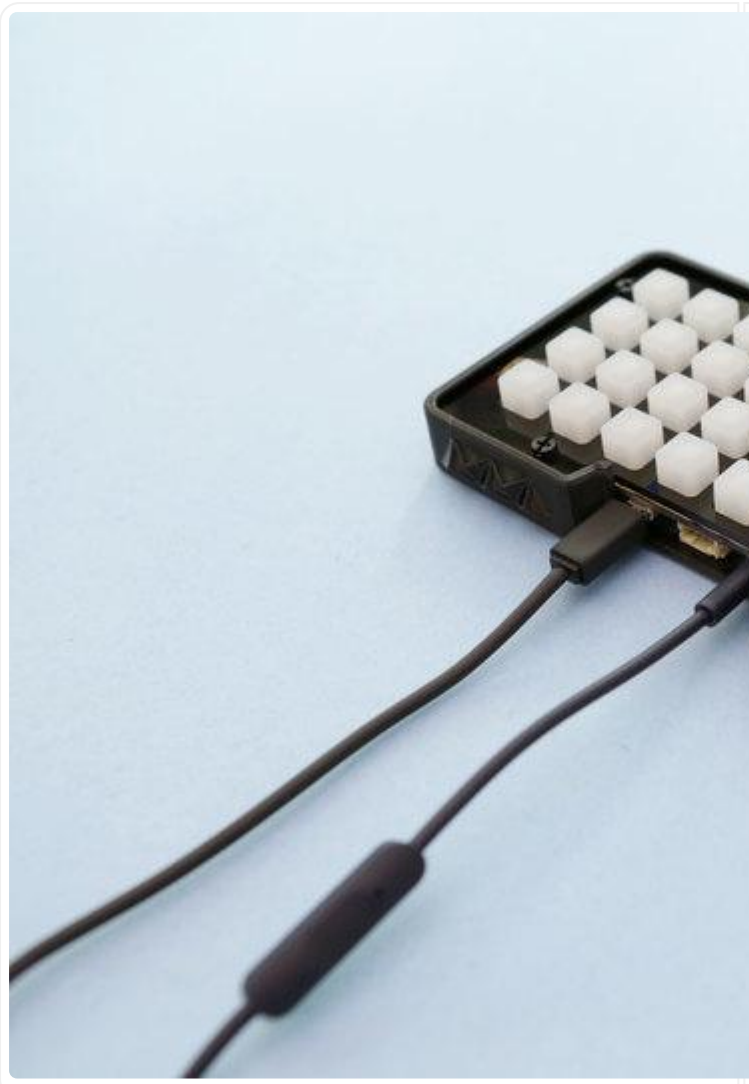
### Flexible Filaments

The bumper features a cut out on the back side for cables. The design is optimized for 3D printing using flexible filaments, such as [Cheetah Ninjaflex \(\)](#) and does not require any support material.

## How to 3D Print Flexible Filament

Our learn guide will walk you through some common practices for 3D printing with flexible filaments successfully.

[3D Printing Ninjaflex Guide](#)



## Slice Settings

Use these settings as reference. Values listed were used in [Ultimaker's CURA 3.X \(\)](#) slicing software. This was 3d printed using an Ultimaker S5 and 3.

Material Profile: TPU 95A  
.2 layer height / .35 Line Width  
2 wall line count / 10% infill  
220C/60C printer temp  
8mm retraction distance /35mm/s retraction speed  
25mm/s print speed (150mm travel)

[Download CAD files](#)

## Parts, Tools, Supplies

All we need for this project is the Adafruit NeoTrellis M4 Kit, flexible filament and a 3D printer.

- [Adafruit NeoTrellis M4 Kit \(\)](#)
- [USB-C to MicroUSB cable \(\)](#)
- [Flexible Filaments \(\)](#)
- [Ultimaker 3 – 3D Printer \(\)](#)
- [Flashforge MonoPrice Inventor II \(\)](#)



### [Adafruit NeoTrellis M4 with Enclosure and Buttons Kit Pack](#)

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 - Midnight](#)

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...

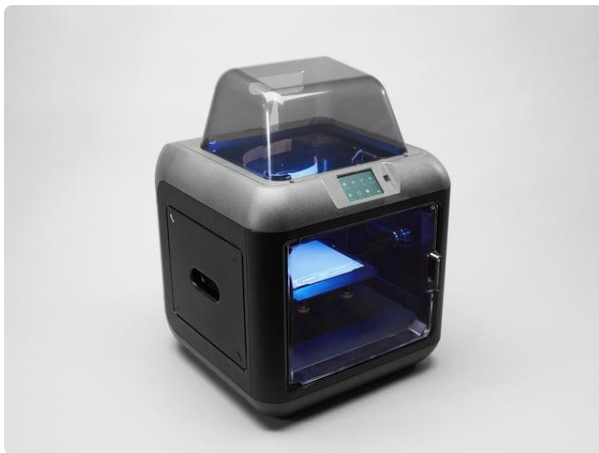
<https://www.adafruit.com/product/3185>



### Ultimaker 3 - 3D Printer

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>



### Monoprice Inventor II 3D Printer with Touchscreen and WiFi

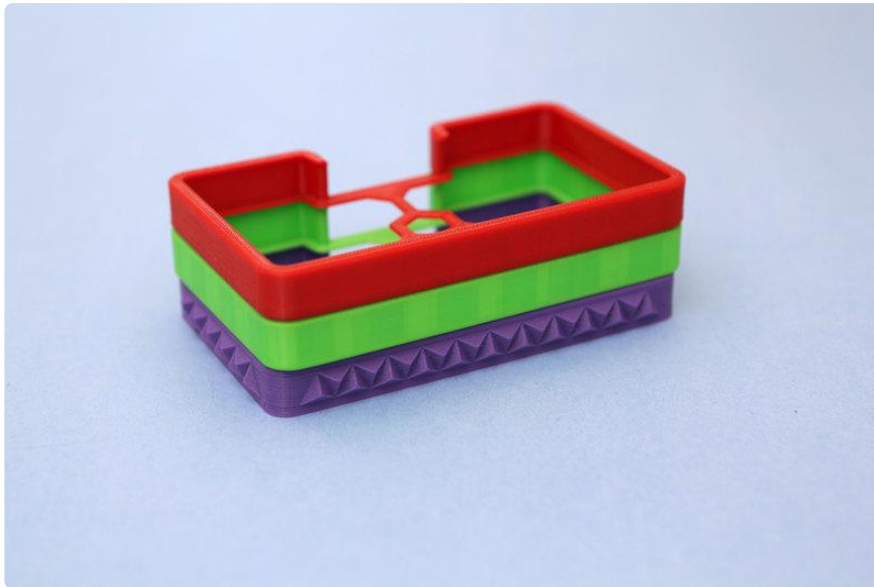
The Monoprice Inventor II 3D Printer Touchscreen with WiFi is a perfect entry-level 3D printer with small footprint and reliable performance. It comes equipped with...

<https://www.adafruit.com/product/3897>



## Colors!

Ninjabflex and similar TPU filaments come in a variety of different colors.



## Edges & Triangles

Two versions, a simple bumper with clean edges and one with triangles (for grip?).

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## 3D Modeling

### Layer by Layer – Fusion 360 Tutorial

We put together a step-by-step walkthrough of designing the bumper in Autodesk Fusion 360. In the tutorial, we import a DXF from the vector file of the acrylic case. Learn how to use sketch driven constants and modelings tools like fillets, chamfers and extrusions.

For more tutorial, be sure to check out [the playlist \(\)](#) on YouTube.

Layer by Layer YouTube Playlist

## Custom CAD

Want to make a your own design? Use the PCB and acrylic case files to create yours!

Adafruit NeoTrellis PCB and  
Enclosure Files