

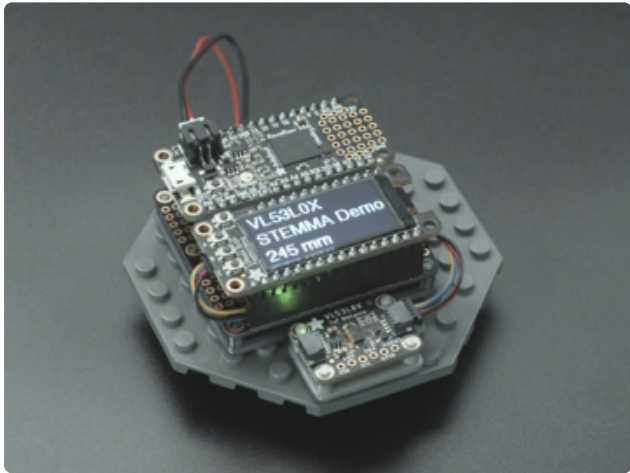


# Table of Contents

Overview	3
<hr/>	
• Parts	
3D Printing	6
<hr/>	
• Parts List	
• Fusion 360 Links	
• Slicing Parts	
• Glue	

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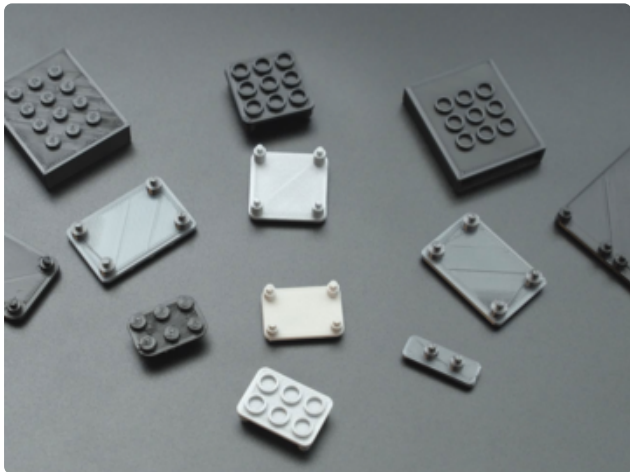
# Overview



Organize projects with these modular Lego base plates for STEMMA boards! These 3d printed holders feature built-in standoffs for press fitting the PCBs.

It's a nice way to secure them without screws or adhesives.

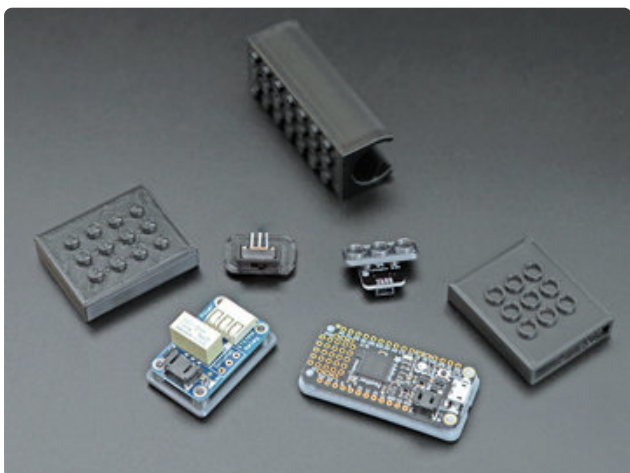
STEMMA board and sensors allow you to plug-and-play together various devices and accessories, without any soldering!



In this project, we'll build Lego base plates for all of our STEMMA boards! We designed several different sizes to fit all of our boards!

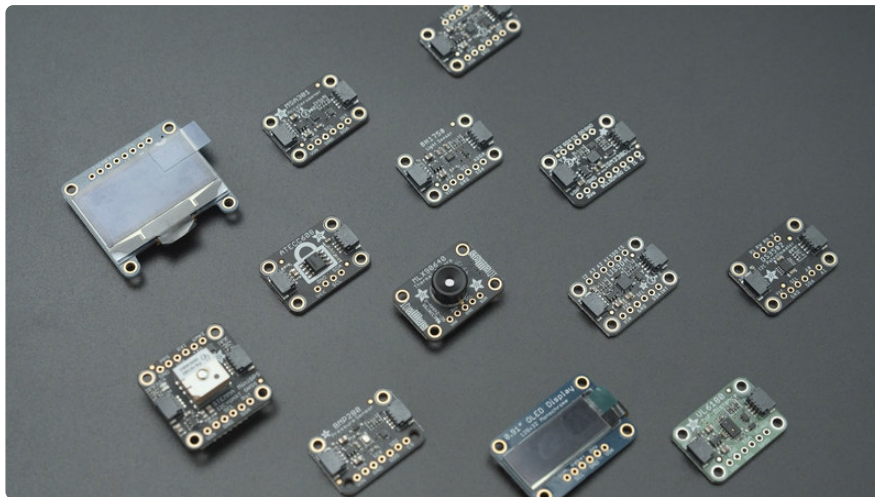
On the bottom are tubes that are designed to fit onto LEGO compatible bricks.

The clearance in between the PCB and holder allow space for components on the bottom of the PCB.

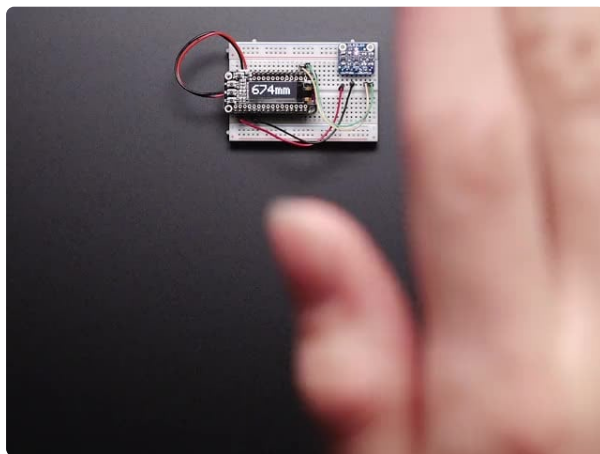


We also designed lego plates for a couple of components like Feather boards, battery pockets and a slide switch.

All of the base plates print will out any supports and the built-in pegs allow board to simply snap to place without any additional hardware.



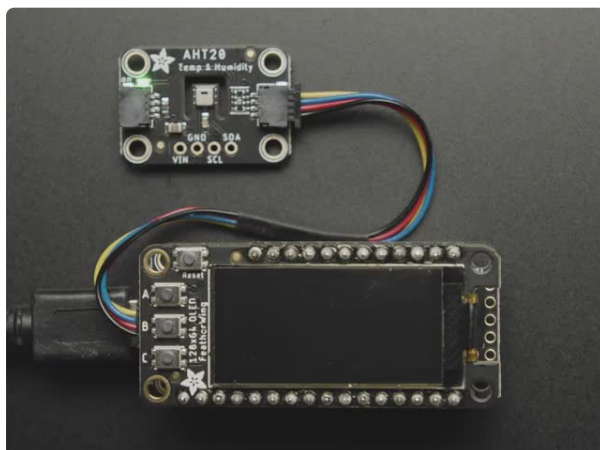
## Parts



### Adafruit VL53L0X Time of Flight Distance Sensor - ~30 to 1000mm

The VL53L0X is a Time of Flight distance sensor like no other you've used! The sensor contains a very tiny invisible laser source, and a...

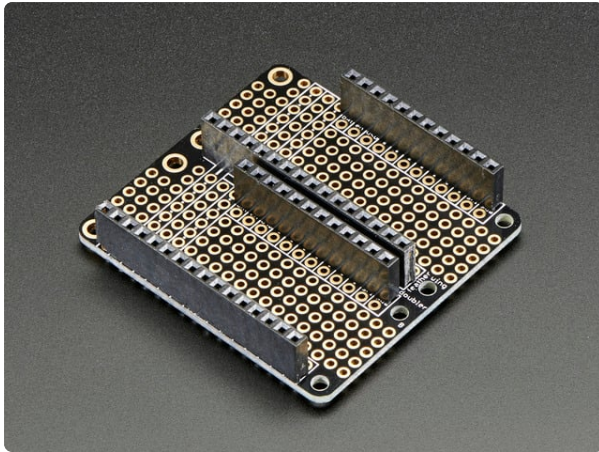
<https://www.adafruit.com/product/3317>



### Adafruit FeatherWing OLED - 128x64 OLED Add-on For Feather

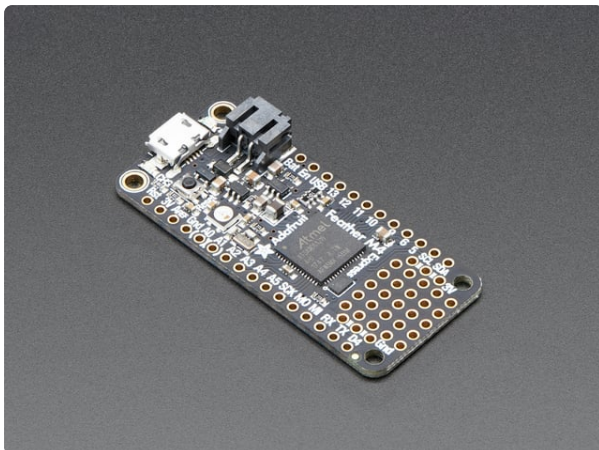
A Feather board without ambition is a Feather board without FeatherWings! This is the FeatherWing 128x64 OLED: it adds a gorgeous 128x64 monochrome OLED plus 3...

<https://www.adafruit.com/product/4650>



### FeatherWing Doubler - Prototyping Add-on For All Feather Boards

This is the FeatherWing Doubler - a prototyping add-on and more for all Feather boards. This is similar to our <https://www.adafruit.com/product/2890>



### Adafruit Feather M4 Express - Featuring ATSAMD51

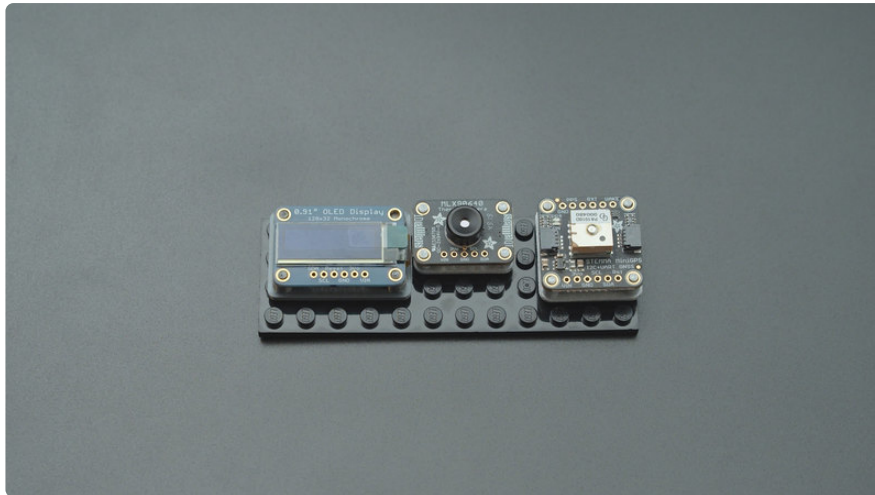
It's what you've been waiting for, the Feather M4 Express featuring ATSAMD51. This Feather is fast like a swift, smart like an owl, strong like a ox-bird (it's half ox,... <https://www.adafruit.com/product/3857>



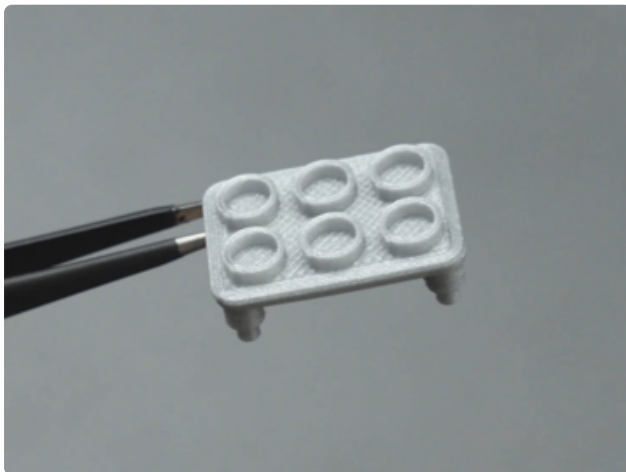
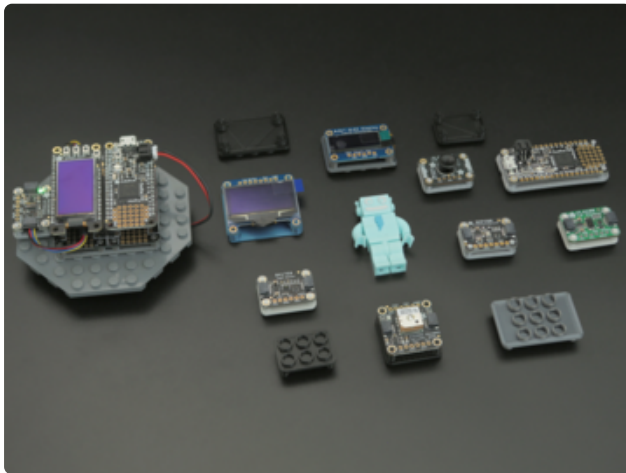
### NinjaFlex - 1.75mm Diameter - Semitranslucent White - 0.50 Kg

Looking beyond ABS? Tired of PLA? Open a world of possibilities, limited only by your imagination. NinjaFlex, a cutting-edge filament for 3D printers, is a specially formulated... <https://www.adafruit.com/product/2445>





## 3D Printing



### Parts List

STL files for 3D printing are oriented to print "as-is" on FDM style machines. Parts are designed to 3D print without any support material. Original design source may be downloaded using the links below.

STEMMA-Leo-1.4

STEMMA-Leo-1.3-oled

STEMMA-Leo-1.3

STEMMA-Leo-.9

STEMMA-Leo-.5

STEMMA-Leo-.7

STEMMA-Leo-.5

Additional optional parts

Feather-Lego-Peg-tubes

Lego-500-Bat-Pocket-studs

2200mah-lego-studs

Feather-Doubler-Lego

Lego-Slide-Switch

**Lego\_Stemma\_Feather\_Set.zip**

<https://adafru.it/NeL>

**Download STLs**

<https://adafru.it/NIB>

## Fusion 360 Links

**STEMMA Lego Base .5**

<https://adafru.it/NeM>

**STEMMA Lego Base Plate .7**

<https://adafru.it/NeN>

**STEMMA Lego Base .9**

<https://adafru.it/NeO>

**STEMMA Lego 1.3 OLED**

<https://adafru.it/NeP>

**STEMMA Lego 1.5in OLED**

<https://adafru.it/Ric>

**STEMMA Lego 1.3 Relay**

<https://adafru.it/NeQ>

**STEMMA Lego Base 1.4**

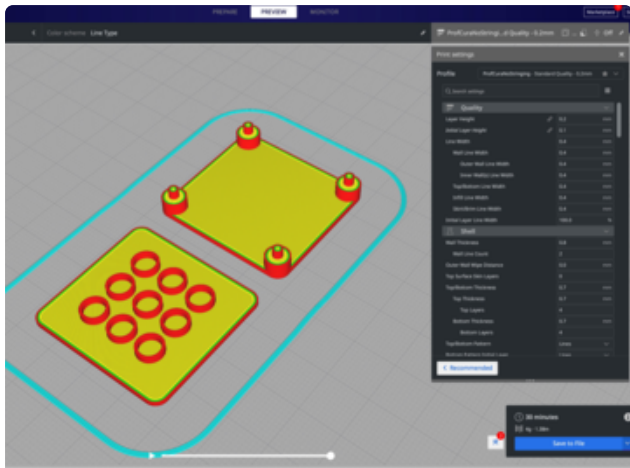
<https://adafru.it/NeR>

**Feather Lego Base Plate**

<https://adafru.it/MEq>

**Slide Switch Lego Base Plate**

<https://adafru.it/MEt>



## Slicing Parts

Slice with setting for PLA material. The parts were sliced using CURA using the slice settings below.

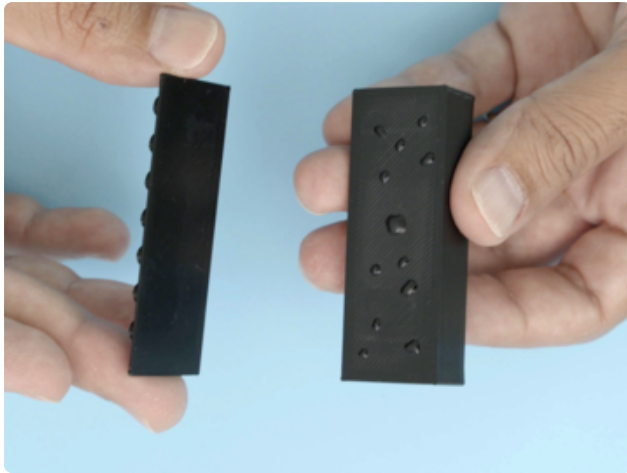
PLA filament 215c extruder

0.2 layer height

10% gyroid infill

60mm/s print speed

60c heated bed



## Glue

We use super glue to adhere the brick studs / tubes. Apply small even dots on one of the part, align both parts and gently press together. Allow the parts to dry for at least 10 minutes before use.

Follow the directions on the super glue container, do not touch with fingers, please wear eye protection and be careful. Older makers should help younger ones.