# Introduction

The Grips for Single Joy-Con are a pair of grips that attach to a pair of Joy-Cons to make them easier to hold and use when they are being used individually. They are designed for users that have difficulty holding the single Joy-Cons when using them individually.

# Research

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Photo** | **Price** | **Link** | |
| Nintendo Switch Single Joy-Con Grip + and - |  | DIY | [Link](https://www.thingiverse.com/thing:2769344) |
| Joy Con Grip |  | DIY | [Link](Joy%20Con%20Grip%20by%20Tomas%20|%20Download%20free%20STL%20model%20|%20Printables.com) |
| Hand Grips Compatible with Nintendo Switch/Switch OLED Model Controllers, FYOUNG Comfortable Grip Compatible with Joycons - Black (2 Packs) |  | $17.99 | [Link](https://www.amazon.ca/Compatible-Nintendo-Switch-FYOUNG-Controllers/dp/B06XZ1V1VB/ref=asc_df_B06XZ1V1VB/?tag=googleshopc0c-20&linkCode=df0&hvadid=459322697223&hvpos=&hvnetw=g&hvrand=14002688195378789734&hvpone=&hvptwo=&hvqmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=9105114&hvtargid=pla-567942988060&psc=1) |
| Verbatim - Hand grip - black (pack of 2) - for NINTENDO Joy-Con, Joy-Con(Left), Joy-Con(Right); Nintendo Switch | Verbatim - Hand grip - black (pack of 2) - for NINTENDO Joy-Con, Joy-Con(Left), Joy-Con(Right); Nintendo Switch 1 | $11.99 | [Link](https://www.dell.com/en-ca/shop/verbatim-hand-grip-black-pack-of-2-for-nintendo-joy-con-joy-conleft-joy-conright-nintendo-switch/apd/ab081090/gaming-gaming-accessories?gacd=9683780-3004-5761040-266662033-0&dgc=st&gclid=EAIaIQobChMI0dHn3b3R-wIVvW5vBB2trA-7EAQYAiABEgI9dvD_BwE&gclsrc=aw.ds&nclid=0A0xlDugGPE1awhyxE4ahtTn6C5r1DV2lwxSWLx6DDzbUnRw_BJIeRF_irn_l9OD) |

# Requirements

## Goals

|  |  |
| --- | --- |
| G01 | Allow a single Joy-Con to be more comfortably held and used |

## Functional Requirements

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| --- | --- |
| F01 | Device must connect to a single Joy-Con |
| F02 | Device must make the Joy-Con more comfortable to hold |
| F03 | Device must not impede any of the buttons on the Joy-Con |

## Constraints

|  |  |
| --- | --- |
| C01 | Must be entirely 3D printable |

# Ideation

When looking at the 3D printed DIY options, the printables option appeared to be a remix of the thingiverse option, with both grips added to the same file and posted several years later. Because of this, we decided to go with the thingiverse model, so the grips can be printed individually for more customizability.

# Testing

The grips were printed at several different orientations to determine which one had the least amount of supports and the most strength.

# Opportunities for Improvement

A retaining nub could be added to fit with the existing locking mechanism on the Joy-Con to prevent it from sliding around in the grip