



## Portal Weighted Storage & Companion Cube



3D Gloop!

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updated 27. 12. 2022 | published 27. 12. 2022

### Summary

It's quite surprising how many buttons you humans need to interact with on a daily basis. How do you get any work done?!



64.40 hrs



20 pcs



0.20 mm



0.40 mm



PLA



840 g



Prusa  
MK3/S/S+

[Toys & Games](#) > [Action Figures & Statues](#)

Tags: [portal](#) [videogame](#) [steam](#) [cube](#) [valve](#) [companion](#)  
[portal2](#)

Our team of scientists have developed a new device, completely on our own mind you! specifically for weighing down those pesky buttons. The guys in the lab also whipped up a version to accompany you through your life enrichment simulation! Doesn't it look like it loves you?

Alright, alright, so maybe our Robot Overlords stood on the shoulders of giants here and artfully recreated some science... But for good reasons! These awesome weighted storage & companion cubes are designed after the greatest non-fiction immersive history video game series of all time!

Portal (a creation from Valve Corporation). But enough about that! Cube and button-based testing remains an important tool for science and the Overlords need you to get back to helping us, help you, help us all!

Unlike Aperture Laboratories, many of us humans don't have warehouses full of these "worthless" cubes. Our Robot Overlords wanted to help you construct your own! These cubes measure 140mm and if printed using our supplied G-Code, come in at an impressive 800 grams! Be careful of scaling the STLs as tolerances are tight and things might not fit exactly.

Begin fabrication:

- First, print 6 superconducting Core Frames out of your favorite meta-material filament. We chose Inland Black PLA for these prints (Print 6: "6X-Core\_Black")
- Inserted into the Core Frames are 6 Identification Panes. It is important that each cube is fitted with Identification Panes that are IDENTICAL! Mixing and matching may result in an unstable runaway reaction breaking the physics of the universe due to oscillations of the cube's mass. Inland Lite PLA Pink & Yellow and Inland PLA Turquoise are great color choices here.  
(Print 6: "6X-Identifier\_Blue\_Pink\_Yellow.STL")
- The Identification Panes and Core Frames are focused into perfectly pleasing circles by 6 Quantum Reflecting Facades. These Facades redirect subatomic energy back into the cube. For this, only the highest quality material should be used. Our Robot Overlords recommend Prusament PLA Galaxy Silver.  
(Print 6: "6X-Facade\_Silver.STL").
- Next, print 6 super-colliding Rings out of nanite-stabilized anti-matter. Here we cheated out a bit and just reused our favorite meta-material again, Inland Black PLA.  
(Print 6: "6X-Ring\_Black.STL")
- Now it's time to manufacture the Personality Processor Icon Backgrounds & Icon Covers! 6 of each! It is imperative that you do not mix the Aperture icon and the Companion icon on the same cube... Doing so may result in the following side effects: Superstition, perceiving inanimate objects as alive, and hallucinations. While the weighted companion cube can not speak, in the event that it does speak, the Robot Overlords strongly urge you to disregard its advice!  
For the Aperture Icon Background, we chose Inland Lite PLA Grey.  
For the Companion Icon Background use the same material as the Identification Panes.  
For both the Aperture & Companion Icon Cover, Polymaker Polylite White PLA.  
(Print 6 of the same icon covers:

“6X-Aperture\_Icon\_Cover-White.STL”, **or** “6X-Companion\_Icon\_Cover\_White.STL”).

- (Print 6: “6X-Aperture\_Icon\_Background-Grey.STL”, **or** “6X-Companion\_Icon\_Background\_Pink.STL”).
- The Weighted Storage & Companion Cubes are protected by 8 Pointless Safety Tetrahedral Corners and 12 Pinch Reducing Edge Bands. These are here for YOUR PROTECTION! Your fragile skin-covered meat body is fragile and prone to lacerations when interacting with sharp corners and points. Here again, we used Polymaker Polylite White PLA.  
(Print 12: “12X-Edge\_White.STL” )  
(Print 8: “8X-Corner\_White.STL”)

Now that you have all of the components necessary to fabricate a cube printed it's time for assembly! This model is intended to be glued together using Gloop! **Get your Gloop! here: <https://3dgloop.com/shop>**

Assembly made without using Gloop! may result in the need to prepare for unforeseen consequences... One of our indentured... Uh, quality employees prepared an assembly video you can check out here:

Cake and grief counseling will be available at the conclusion of this assembly!

**NOTE!** If you want to increase the weight of your cube, we suggest using steel BB's and fine beach sand commonly available at Walmart's and other farm/home supply stores. For our “Activated” Weighted Storage Cube, we used about 10,000 BB's and roughly 500g of sand. The result is a cube that weighs 5.2kg (11.5lbs). Alternatively, you could just use around 2000g of sand as we did for our companion cube for a total weight of 2.8kg (6.2lbs).

Thanks so much for checking out our edition of the Portal Weighted Storage & Companion Cube. Let our Robot Overlords know if you've printed one (or hundreds) for yourself! An escaped employee has released the source files of the design (Solidworks 2020) available in the downloads. There are plans for revisions and additions in the future so please feel free to share your ideas with us! Cough cough\*\* (1500mw Aperture Science heavy-duty super-colliding super-button) \*cough... Excuse us while we dial back our human mannerism emulator.

## **LEGAL NOTICE:**

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## Model files



### 6x-aperture\_icon\_cover\_white.stl

☐ Print face down, 100% infill.

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### 6x-companion\_icon\_cover\_white.stl

☐ Print face down, 100% infill.

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### 6x-aperture\_icon\_background\_grey.stl

☐ Print face down. (chamfer taper side down)

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### 6x-companion\_icon\_background\_pink.stl

☐ Print face down. (chamfer taper side down)

---



### 6x-core\_black.stl

☐ Print face up, no supports required, 3 perimeters minimum.

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### 6x-identifier\_blue-pink-yellow.stl

☐ Print face down, 10 bottom layers or 100% infill.

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### 6x-facade\_silver.stl

☐ Print face up, 100% infill. Ironing may help with surface finish.

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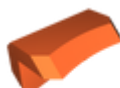
### 6x-ring\_black.stl

Print face up, 100% concentric infill.



### 8x-corner\_white.stl

Print at a 90 or 30 degree angle. (Sides parallel to machine axis or at a 30 degree angle)



### 12x-edge\_white.stl

Print vertically. Enable custom Z-hop to ensure successful print.



### portal-weighted-cube.sldprt

Source file. Solidworks 2020

## Print files



### Multi-Part Prints

10 files



#### multi-facade\_silver\_02mm\_pla\_mk3s\_2h15m.gcode

PLA 0.40 mm 0.20 mm 6.75 hrs 111 g Prusa MK3/S/S+

3 copies required, ensure build plate is level across X axis edge to edge.



#### multi-ring\_black\_02mm\_pla\_mk3s\_1h49m.gcode

PLA 0.40 mm 0.20 mm 3.64 hrs 40 g Prusa MK3/S/S+

2 copies required, makes 2 extra Rings.



#### multi-companion\_icon\_background\_pink\_02mm\_pla\_m.gcode

PLA 0.40 mm 0.20 mm 1.39 hrs 23 g Prusa MK3/S/S+

1 copy required for Companion variant, not required for Aperture variant.



#### multi-aperture\_icon\_cover\_white\_02mm\_pla\_mk3s\_1.gcode

PLA 0.40 mm 0.20 mm 1.62 hrs 17 g Prusa MK3/S/S+

1 copy required for Aperture variant, not required for Companion variant.



### multi-aperture\_icon\_background\_grey\_02mm\_pla\_mk.gcode

⚙️ PLA ⚙️ 0.40 mm ⚙️ 0.20 mm ⌚ 1.73 hrs ⚖️ 32 g 🖨️ Prusa MK3/S/S+

📄 1 copy required for Aperture variant, not required for Companion variant.



### multi-identifier\_blue-pink-yellow\_02mm\_pla\_mk3s.gcode

⚙️ PLA ⚙️ 0.40 mm ⚙️ 0.20 mm ⌚ 9.12 hrs ⚖️ 162 g 🖨️ Prusa MK3/S/S+

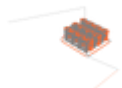
📄 2 copies required.



### multi-companion\_icon\_cover\_white\_02mm\_pla\_mk3s.gcode

⚙️ PLA ⚙️ 0.40 mm ⚙️ 0.20 mm ⌚ 2.31 hrs ⚖️ 25 g 🖨️ Prusa MK3/S/S+

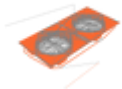
📄 1 copy required for Companion variant, not required for Aperture variant.



### multi-edge\_white\_02mm\_pla\_mk3s\_4h11m.gcode

⚙️ PLA ⚙️ 0.40 mm ⚙️ 0.20 mm ⌚ 4.18 hrs ⚖️ 36 g 🖨️ Prusa MK3/S/S+

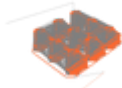
📄 1 copy required. Custom Z-hop



### multi-core\_black\_02mm\_pla\_mk3s\_6h49m.gcode

⚙️ PLA ⚙️ 0.40 mm ⚙️ 0.20 mm ⌚ 19.47 hrs ⚖️ 276 g 🖨️ Prusa MK3/S/S+

📄 3 copies required, ensure plate is level across X axis edge to edge.



### multi-corner\_white\_02mm\_pla\_mk3s\_13h9m.gcode

⚙️ PLA ⚙️ 0.40 mm ⚙️ 0.20 mm ⌚ 13.14 hrs ⚖️ 164 g 🖨️ Prusa MK3/S/S+

📄 1 copy required, makes 1 extra Corner.



### 12x-edge\_white\_02mm\_pla\_mk3s\_37m.gcode

⚙️ PLA ⚙️ 0.40 mm ⚙️ 0.20 mm ⌚ 4.96 hrs ⚖️ 24 g 🖨️ Prusa MK3/S/S+



### 6x-facade\_silver\_02mm\_pla\_mk3s\_1h12m.gcode

⚙️ PLA ⚙️ 0.40 mm ⚙️ 0.20 mm ⌚ 7.14 hrs ⚖️ 108 g 🖨️ Prusa MK3/S/S+



### 6x-aperture\_icon\_cover\_white\_02mm\_pla\_mk3s\_19m.gcode

⚙️ PLA ⚙️ 0.40 mm ⚙️ 0.20 mm ⌚ 1.86 hrs ⚖️ 18 g 🖨️ Prusa MK3/S/S+



### 6x-ring\_black\_02mm\_pla\_mk3s\_30m.gcode

🌀 PLA 🌀 0.40 mm 📏 0.20 mm ⌚ 3.00 hrs ⚖️ 30 g 🖨️ Prusa MK3/S/S+



### 6x-aperture\_icon\_background\_grey\_02mm\_pla\_mk3s\_.gcode

🌀 PLA 🌀 0.40 mm 📏 0.20 mm ⌚ 1.98 hrs ⚖️ 30 g 🖨️ Prusa MK3/S/S+



### 6x-companion\_icon\_background\_pink\_02mm\_pla\_mk3s.gcode

🌀 PLA 🌀 0.40 mm 📏 0.20 mm ⌚ 1.62 hrs ⚖️ 24 g 🖨️ Prusa MK3/S/S+



### 6x-identifier\_blue-pink-yellow\_02mm\_pla\_mk3s\_1h.gcode

🌀 PLA 🌀 0.40 mm 📏 0.20 mm ⌚ 3.72 hrs ⚖️ 162 g 🖨️ Prusa MK3/S/S+



### 6x-companion\_icon\_cover\_white\_02mm\_pla\_mk3s\_27m.gcode

🌀 PLA 🌀 0.40 mm 📏 0.20 mm ⌚ 2.70 hrs ⚖️ 24 g 🖨️ Prusa MK3/S/S+



### 8x-corner\_white\_02mm\_pla\_mk3s\_1h44m.gcode

🌀 PLA 🌀 0.40 mm 📏 0.20 mm ⌚ 13.84 hrs ⚖️ 144 g 🖨️ Prusa MK3/S/S+



### 6x-core\_black\_02mm\_pla\_mk3s\_3h56m.gcode

🌀 PLA 🌀 0.40 mm 📏 0.20 mm ⌚ 23.58 hrs ⚖️ 276 g 🖨️ Prusa MK3/S/S+

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