

# O4 Pod

Protect your O4 Pro/Lite camera with TPU in front of the lens for maximum protection but still with a clean image. How? I've modeled the camera's field-of-view (FOV) and built my design around that. My flexible on-demand design can mount in different positions (closer-in or props-hidden) with different RX antennae, GPS mount additions, and be configured for any camera tilt angle.



This is an ON-DEMAND design!

Only a few basic 10° versions are posted here, everything else is made for you (for free) on my [3D Design discord](#). You choose what options, I make you designs, you send me photos of your builds! See the [\\_Steps\\_](#) below.

New things:

- I've made a new [Instagram account](#) for showcasing users' prints of my designs!
- Now supporting Aluminum camera caged designs!
  - Apex EVO, AOS v5, SpeedyBee Mario5, etc. [Examples](#)
- ND Filters: Been adding more O4 Pro ND filter options, see Step 6.

- O4 Pro Frame now working great! [Example O4 Frame build](#)
- O4 Lite has been redesigned for better fit and protection (now on r2)
- Need an O4 [Antenna Mount](#) ? I've got a project for that too!
- [Thingiverse page](#) is live! Go add a ♥ to save it for reference later!
  - post a make to show off your build and inspire others!

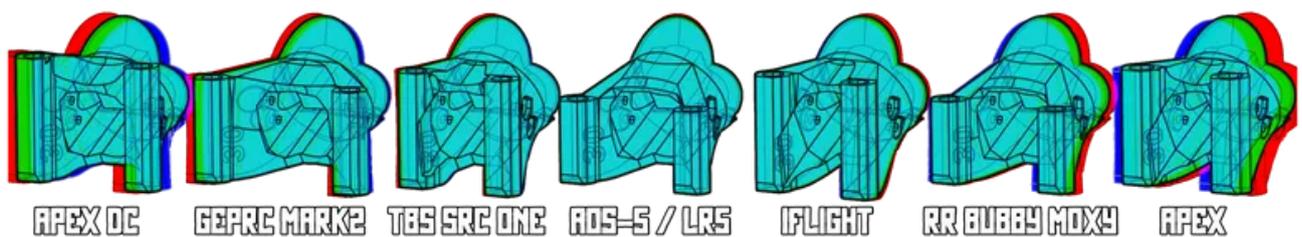
Have a different digital or analog camera? See my [universal Pod design project](#) page- it supports the Nebula Pro, DJI Air Unit, Runcam Phoenix, Walksnail Avatar HD Pro, Moonlight, Rattel, and dozens more.

## Just Follow the Steps!

### 1. Pick your Camera

1. O4 Pro
2. O4 Lite
3. Another camera? See [this project!](#)

### 2. Pick your quad(s)

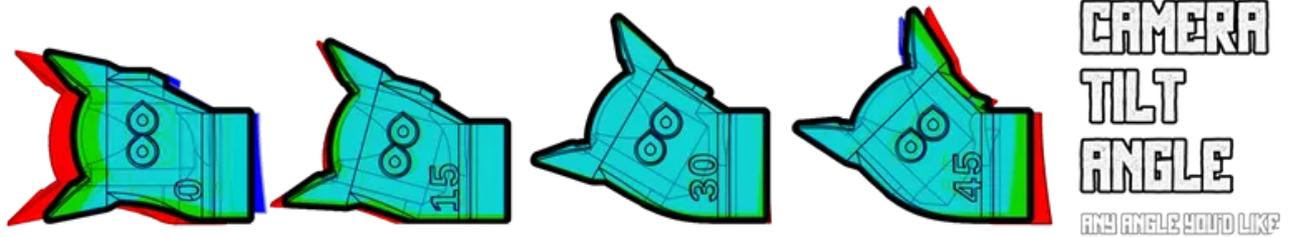


What quad you got?? I've made a highly flexible, adaptive system, with over 130 different bases in my database, new ones every day. \_(Yes the photo above is from my Action2 design database.. it's what I'm pulling from to populate this new O3 Pod database!)\_So far I've added

1. AOS standard (AOS 5, LR5, UL5, etc etc), AOS 3.5, AOS Falcon 7
2. new AOS v5 camera cage designs! AOS5v5, AOS LR5v5, etc
3. ImpulseRC: Apex, Micro Apex, Reverb, EVO
4. iFlight: standard (XL5-Nazgul, SL5-Cidora, F5D-Evoque, etc), Chimera 6 + 7, Chimera4 DC, Nazgul F6 DC, Titan DC5

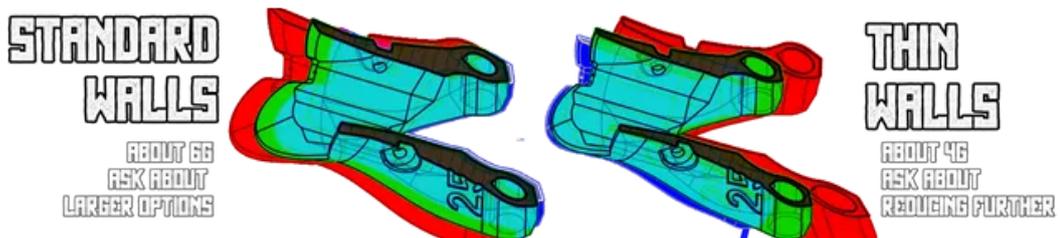
5. TBS: Source-One: V1, V2, V3, V4, and V5
6. SpeedyBee: Mario5
7. Rotor Riot: Bubby Moxy, CL1, etc
8. FPVCycle: Glide, Toothfairy 2
9. GepRC: Mark-2, Mark 4, Crocodile Baby 4
10. Heks Frames: Joocy
11. Hyperlite: Floss3
12. Lumenier: QAV-S JB, QAV-S Mini
13. Rekon: 4 LR, R5, R6, R10
14. Flywoo Explorer
15. Ummagawd: Demibot
16. Vanover: Vannystyle
17. Quadmula Siren F5
18. Quadmula Siren F3
19. Falconrad: RAD Scout
20. Ethix: Cinerat
21. Emax: Babyhawk II HD
22. Diatone: Roma F35
23. Dave\_C: MicroLongRange
24. Banggood: Steele 5
25. Banggood Strech X5 Freestyle 220mm
26. Air blade: Transformer Mini 4in
27. Five33 Spec 7, Switchback Pro (beta)
28. ... way more. Totaling 160 frames as of Jan 2025Any quad is fair game, ping me on [discord](#)!

### 3. Pick your uptilt angle(s)



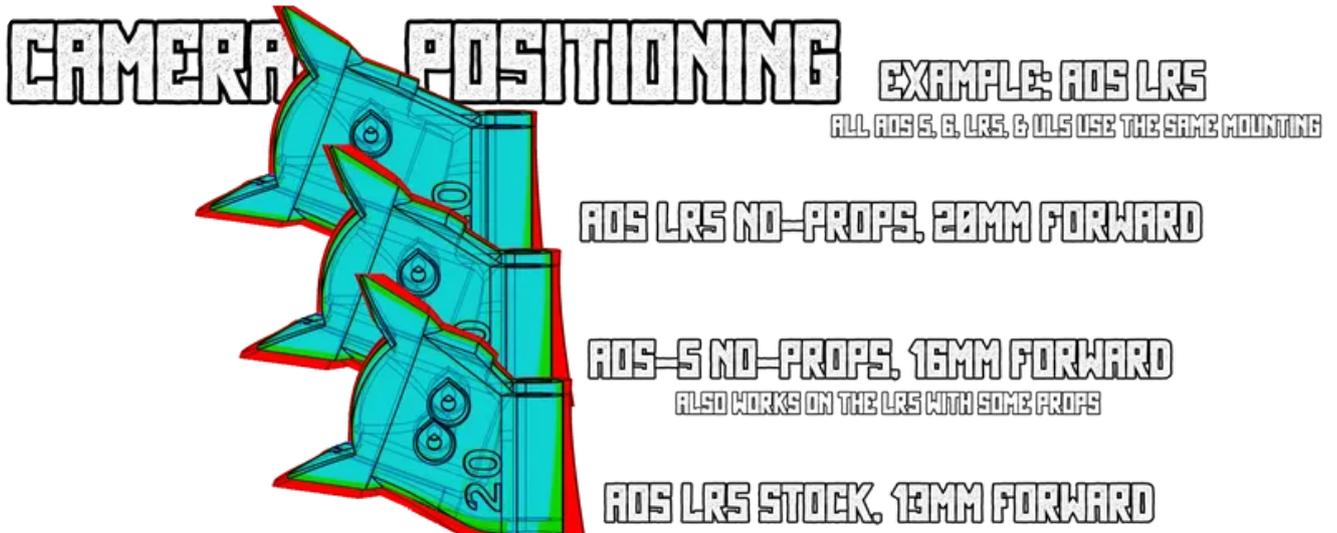
- Cinewhoops: 10-20°
- Cinematic/Long Range: 20°
- Freestyle: 25-30°
- Racing: 40°+

### 4. Wall size\*\*Flying a 3 or 4" and want it as lightweight as possible?



1. Standard size: 2mm most places, 3mm around the lens. Usually ~6g
2. Thin walls: 1.2 walls, 1.6 around lens. Usually ~4g.
3. Ask about any variations you'd like.

## 5. Forward Position



How far forward do you want your camera? Do you want your props in view? How much? Most frames have: 1. Close-in: a little more protection, usually props in view. 2. No-props: usually a little further forward. Depends on the frame. 3. New, but not always possible: ultra-close position. Where the camera is between the front standoffs. Frequently not possible when standoffs are too close-together. 4. All aluminum camera-cage designs have limited position options. (Apex EVO, AOS V5, etc)

## 6. ND-Filter support

### 1. None

- May offer the most TPU protection

### 2. Avata2 NDs (recommended)

- Wide view, full FOV, no vignetting. Like from DJI, Freewell, K&F, etc.

### 3. New weird above-lip big filters like [these](#) from flywoo. (not recommended)

### 4. New weird tall skinny filters like [these](#) from geprc. (not recommended)

### 5. More options to come! Ask about TBS ND support..

## 7. Vibration Isolation



1. Standard: None! The standard already eliminates many peoples' jello issues.
2. Cut-out isolation style (on the right)
  - The best balance of vibration absorption, weight reduction, durability, and easy printing.
  - Only for longer forward offsets ~15mm or further forward.
3. Vibration Isolated with mini suspension
  - Will be MORE susceptible to low-frequency oscillations from your tune/filters!
  - Most people get jello from tune oscillations! This won't help and often hurts.
  - See my "Vibration? Jello? Jitters?" section down below.

## 8. Antenna Mounting



Want to mount your RX antennas in front on the camera mount? There's three ways: 1. TBS Immortal-T \* low-profile design, see photos below! \* uses zip-ties (or twist-ties like I use!) to attach 2. ELRS \* Single T-style antenna (just like the larger TBS style) \* Diversity style: one horizontal on the bottom + one vertical on the side next to the standoff. \* Placing an antenna on the side may not fit on all frames 3. Leave a gap on the standoffs for an existing mount. Works great!

## 9. GPS Integrated Addition



Works best with smaller GPSs and/or longer forward positions.

New fancy GPS options:

Name	gen	link	~price	size	weight	rating
Walksnail WS-M181 [w/ compass]	M10	<a href="#">caddx</a>	\$17	18x18x4.6	4.3g	5
HGLRC M100 MINI	M10	<a href="#">hglrc</a>	\$16	15x15x5.2	2.6g	5
Beitian BE220 M8N / BN-220	M10	<a href="#">amazon</a>	\$15	22x20x6	5.3g	4
GOKU GM10 Mini V3	M10	<a href="#">flywoo</a>	\$18	18x18x4.6	4.5g	4
BZGNSS BZ-181	M10	<a href="#">nbd</a>	\$20	18x18x8	4.6g	4
GOKU GM10 Nano V3	M10	<a href="#">flywoo</a>	\$19	12x16x4.5	2.2g	3
GOKU GM10 Pro V3 [w/ compass]	M10	<a href="#">flywoo</a>	\$20	25x25x6	7.2g	2
Matek M80-5883	m8	<a href="#">matek</a>	EOL	20x20x10	7g	2
TBS M8.2 GPS	m8	<a href="#">tbs</a>	\$14	20x22x6	5.2g	2
iFlight M8Q-5883 V2.0	m8	<a href="#">iflight</a>	\$40	20x20x8.5	10g	1

MANY MORE

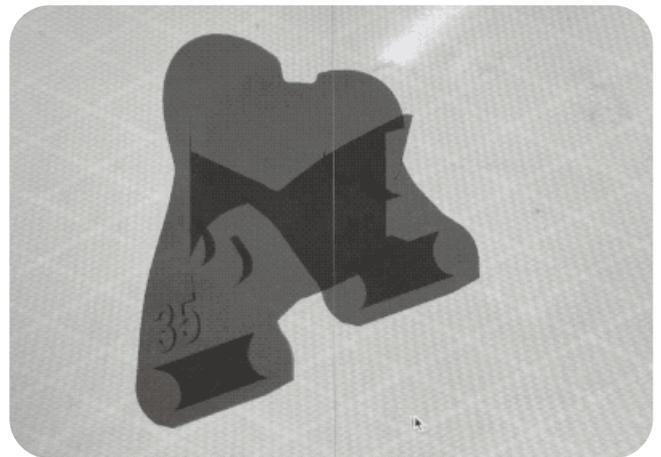
Yours not here? It's probably already been added!

## 10. Request the STL

Join my [discord](#) to request your specific custom version! Everything is generated on-demand with the settings you ask for! Why? 1. The STLs in the 'files' section are outdated. \* I can't possibly keep re-exporting, uploading, and organizing 80+ STLs after each tweak! 2. They don't have the configuration you want. \* I can't possibly upload all the variations! 3. User feedback is VITAL to making this project work. I need to hear from folks. → So request it! I've set up my discord as a cool queue system. I'll get you your custom STL in less than 24h, usually right away.

## 11. Print the Mount

- TPU filament required.\*\*
  - 95A hardness recommended
- Best printed as oriented in the STL!
- Use Tree support
- Wall thickness:
  - 1 wall for ultra-light builds
  - 2 walls for most builds
  - 3 walls for bando bashing
- Infill:
  - 15% Cubic is my general recommendation.
  - 20-30% if you're bashing. Any higher won't help
  - Cubic is best, gyroid is soft and flexible if .. you want that.
- Note: Orientation is slightly different for different tilts
  - with camera-angles past 15° it's best printed rotated to match the lens. This has the fewest overhangs and the best print quality results!
  - with low angles like 10-15° you can print it oriented with the flat back of the standoffs



## 12. Print the new Lens Cap design

- Get it from the Files section!

- It fits the whole front end, even with NDs attached
- Use a rigid material like PLA or PETG for best results
- If using TPU then downsize a little, either by scaling 98% or using the next size down in the files.

That's it! Go fly!

## Maximum Protection?

Yes.

Frame designs have to accommodate every camera tilt and so can't add protection in the most important place: above and below the lens. And because FPV cams have super wide field-of-views (the O4 Pro cam especially) they can't have much protection on the sides either.

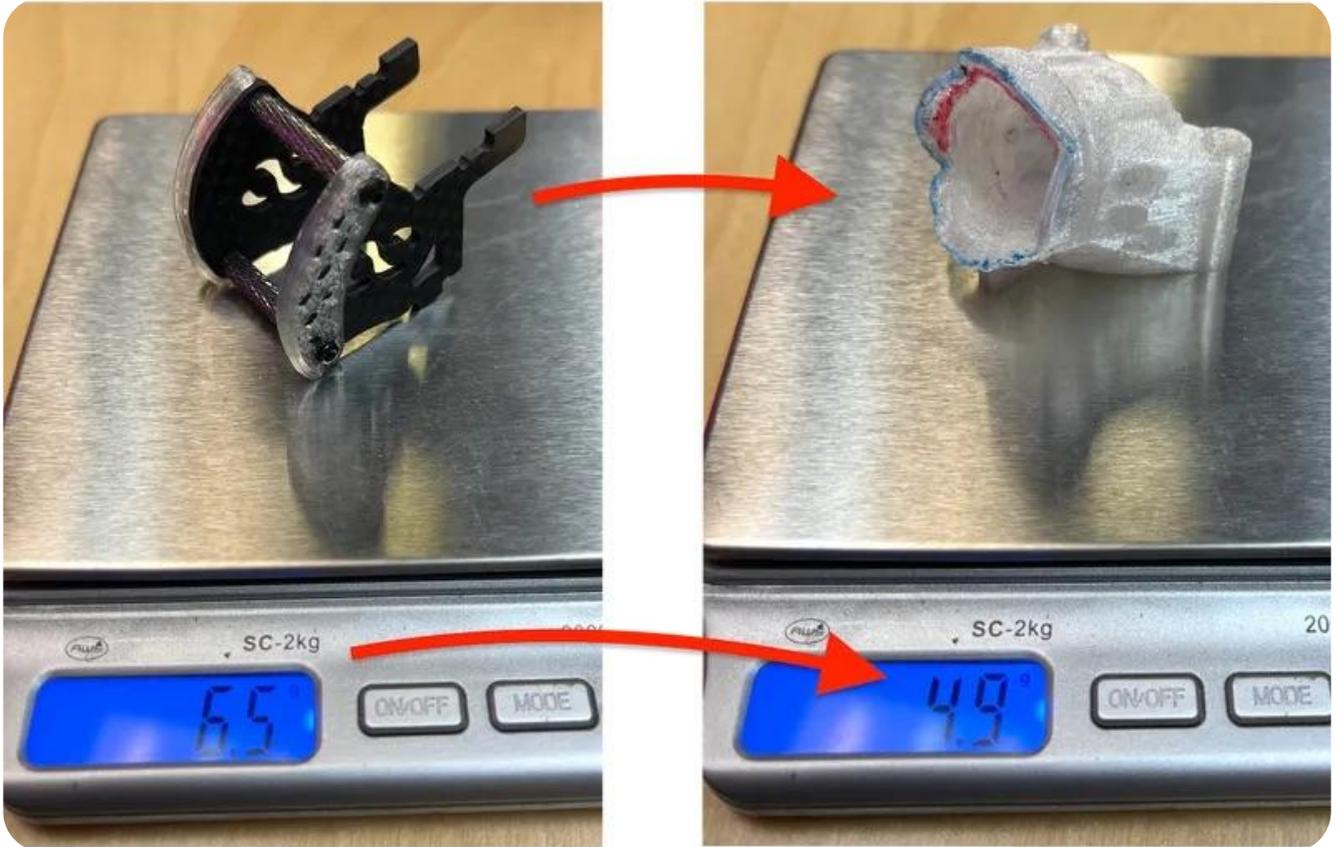
By printing a set-angle TPU mount you've got crash-absorbing TPU out in front of the lens. Right up to the very last possible point before being in view. Maximum FOV. Maximum protection. Works best on smaller/lighter quads, especially less than 400g.

Quads are MORE durable with big action cameras on top because of the impact absorption from their bomber fixed-angle bolt down mounts. Apply the same idea to your O3 camera and leave your \$500 gopro behind!

(and if you want a super protective GoPro 11 mini/fullsized or Action2 or Naked GoPro mount anyway then check out my [gp11 project](#) or [A2 project](#).)

## But weight.. Is it heavier?

Nope!



## Again: BEWARE, what's uploaded here is OUTDATED

Seriously. I just can't keep reuploading and categorizing 60+ STLs. Tweaks are always happening based on feedback. Thicker base, more material here, less there, on and on.

## Remix Policy

Please reach out [on my discord](#) before making/posting a remix. Chances are that I already make the thing you're looking for and you posting it publicly means I'll never hear from new users. The whole point of my project is to hear from folks and see everyone's build. Some remix designs are great and I'll be your first ♥

## Sharing & License & Stuff

The LAST thing I want to do is restrict anyone from sharing. But. PLEASE share links to this printables page, not the STLs. Here's why:

1. This is under active development. The STLs WILL CHANGE and get better.

2. The documentation is really important here, and I'm sure there's stuff I'll be adding as feedback comes in.
3. The community is important, I want people to reach out and join the discord not download some STLs and go it alone.
4. It's just a super dick move to repost designer's stuff. I've spent a long time making, testing, and documenting this and my only reward is that little stupid 'like' counter, download counter, and photos/stories from users. DON'T DEPRIVE ME OF MY ONE SENSE OF SELF WORTH

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