



18650 Micro Foldable FPV Drone



FPV GEEK

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Summary

Foldable 3D-printed FPV drone with magnetic battery holder.

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Tags: [drone](#) [18650](#) [fpv](#) [analog](#) [betaflight](#)

This project is a custom-built foldable long-range FPV drone designed for efficient, extended flight times of up to 18 minutes. The frame is entirely 3D-printed and incorporates a unique folding mechanism for easy portability. The drone is powered by a single 18650 cell, with a focus on creating a lightweight and cost-effective setup using components like repurposed Cetus X motors and an affordable AIO flight controller.

Throughout the build, challenges included optimizing 3D-printed part designs for precise assembly, dealing with material fragility, and troubleshooting various electrical issues. A key innovation was the magnetic battery connection system, which resolved voltage drop issues caused by initial design flaws.

This drone offers a practical and accessible solution for those interested in long-range FPV flight, balancing simplicity, functionality, and affordability.

Part 1Part 2:

Print Settings:

- Layer Height: 0.2
- Bottom Shells: 3
- Top Shells: 4
- Infill: 15%
- Speed: 120mm/s

Parts:

- FC: https://s.click.aliexpress.com/e/_olzt3M5 *
- Battery: https://s.click.aliexpress.com/e/_omPpQdL * (Pick a good one!)
- 4x 3mm x 41mm Carbon rods: https://s.click.aliexpress.com/e/_oDEKnG9 *
- Motors: https://s.click.aliexpress.com/e/_ooSbAyZ *
- Cheaper Motors: https://s.click.aliexpress.com/e/_oCzHpeh * (The motor mount for this is untested)
- VTX: https://s.click.aliexpress.com/e/_oEqMzmv *
- Camera: https://s.click.aliexpress.com/e/_oonKwJR *
- Props: https://s.click.aliexpress.com/e/_ol8grZB *
- 6x M2 x 2.5mm x 3.2mm Threaded Inserts: https://s.click.aliexpress.com/e/_oE0oS4h *
- 1x 10mm x 3mm, 1x 6mm x 3mm neodymium magnet: https://s.click.aliexpress.com/e/_oBIBzvr *
- Filament: https://s.click.aliexpress.com/e/_onDybZf *
- 4x M2 x 6mm Screws
- 4x M2 x 16mm Screws

Accessories:

- Remote Control: https://s.click.aliexpress.com/e/_oCUNKaR *
- Electric Screwdriver: https://s.click.aliexpress.com/e/_omFdLlp *
- Analog Goggles: https://s.click.aliexpress.com/e/_oEX2qlz *

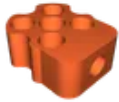
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Model files



Motor Mounds

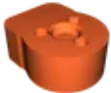
3 files



fpv-geek-micro-fold-motor-mount.stl



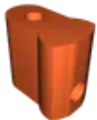
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fpv-geek-micro-fold-3-holes-motor-mount-beta-wide-h... .stl



fpv-geek-micro-fold-bottom.stl



fpv-geek-micro-fold-arm-mount.stl



fpv-geek-micro-fold-top.stl

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