**Bill of Materials**

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| **#** | **Component** | **Spec / Link to data sheet** | **Qty** | **Unit price (GBP)** | **Sub-total (GBP)** | **Why this part?** |
| 1 | **Brushless motor** | EMAX MT1806 2280 kV, CW/CCW mix ([vintagemodelcompany.com](https://www.vintagemodelcompany.com/emax-mt1806-2280kv-brushless-motor?utm_source=chatgpt.com" \t "/Users/dinov/Documents\\x/_blank)) | 4 | £18.00 | **£72.00** | Proven 18 g racing motor sized for ≤6″ props; 460 g thrust on 3 S gives >2∶1 T/W with safety margin. |
| 2 | **ESC** | T-Motor AT 12 A 2–3 S (with 5 V BEC) ([hobbyrc.co.uk](https://www.hobbyrc.co.uk/escs?utm_source=chatgpt.com" \t "/Users/dinov/Documents\\x/_blank)) | 4 | £8.40 | **£33.60** | Matches motor current, BLHeli-S firmware, slim 5 g package keeps arm sections narrow. |
| 3 | **Propeller set** | Gemfan 5030, 2 × CW + 2 × CCW (4 pcs) ([porcupinerc.com](https://www.porcupinerc.com/Gemfan-5030-Multirotor-CRP-Propellers-4pcs-Black_p_189.html?utm_source=chatgpt.com" \t "/Users/dinov/Documents\\x/_blank)) | 1 | £1.96\* | **£1.96** | Light 5″ props maximise motor efficiency; inexpensive to replace after crashes. *(US $2.60 → £1.96 @ 0.753 GBP/USD)* |
| 4 | **Flight MCU** | Arduino Pro Mini 328, 3.3 V / 8 MHz ([SK Pang Electronics Ltd](https://www.skpang.co.uk/products/arduino-pro-mini-328-3-3v-8mhz?utm_source=chatgpt.com" \t "/Users/dinov/Documents\\x/_blank)) | 1 | £7.20 | **£7.20** | Minimal, low-power board; enough I/O for IMU, ESC signal lines and telemetry bridge. |
| 5 | **IMU** | GY-521 MPU-6050 (6-DoF) ([switchelectronics.co.uk](https://www.switchelectronics.co.uk/products/gy-521-mpu-6050-3-axis-gyroscope-accelerometer-gyro-module?srsltid=AfmBOopH2kpn6bbQP4Me34UO_Z1fAfL9KTeOJFT8kMExWOlens3EQAKU&utm_source=chatgpt.com" \t "/Users/dinov/Documents\\x/_blank)) | 1 | £4.78 | **£4.78** | Provides gyro + acc data required for attitude control; widely supported libraries. |
| 6 | **Battery** | 3 S Li-Po 1000 mAh 65 C (Liperior) ([eBay UK](https://www.ebay.co.uk/itm/134878792001?utm_source=chatgpt.com" \t "/Users/dinov/Documents\\x/_blank)) | 1 | £15.99 | **£15.99** | Delivers ≈20 A continuous – enough for full-throttle hover with 8 min endurance. |
| 7 | **3-D-printed frame** | 1 kg spool PLA (1.75 mm) ([3D Prima](https://www.3dprima.co.uk/filament-resin/filaments?srsltid=AfmBOoofUZqdS3F7Ko3ijaULUlzuxlyRf_zCFoJIRxRUgpSe1zEga_L2&utm_source=chatgpt.com" \t "/Users/dinov/Documents\\x/_blank)) | 1 | £14.95 | **£14.95** | One spool covers two complete frames + spares; PLA easy to print and recycle. |
| 8 | **Wiring & connectors** | 18 AWG silicone lead, XT30 pigtail, bullet sets | — | £5.00 | **£5.00** | High-strand wire minimises resistive loss; XT30 suits 20 A class build. |

**Total Cost：£155.48**