# X11 Plus 动力套技术参数

# X11 Plus Propulsion System Specification

## 动力套参数 All-in-One Thrust System Specification

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| 产品型号<br>Model | X11 Plus | 适配锂电池<br>Compatible Lithium Battery | LiPo-12~14S |
| 额定电压<br>Rated Voltage | 54 V | 电压范围<br>Input Voltage | 24~63 V |
| 额定拉力<br>Rated Thrust | 15~18 kg（海平面、环境温度25℃）<br>15~18 kg (sea level, ambient temperature 25℃) | 最大拉力<br>Max Thrust | 37 kg（海平面、环境温度25℃）<br>37 kg (sea level, ambient temperature 25℃) |
| 额定拉力力效<br>Efficiency at Rated Thrust | 8.0~7.4g/W | 适用海拔<br>Operating Altitude | 0~2000 m<br>（不同环境温度下，海拔每升高 1500m，单轴起飞重量下调 5%~10%）<br>(For every 1,500 m increase in altitude, the single-axis takeoff weight must be derated by 5% to 10% under different ambient temperatures.) |
| 最大允许飞行速度（无风）<br>Max Allowable Flight Speed (calm air) | 13.8 m/s | 适用环境温度<br>Operating Temperature | -20~50 ℃ |
| 防护等级<br>Ingress Protection | IPX6 | 动力套重量（含线、不含桨）<br>Weight (with cable, without propeller) | 2025±40 g |
| 线材规格<br>Cable Specification | 电源线：10AWG 1350±10 mm 信号线：1100±10 mm<br>Power Cable: 10AWG 1350±10 mm Signal Cable: 1100±10 mm | 适用碳管直径<br>Tube Outer Diameter | 50 mm |
| 线序<br>Pinout | 黑-GND，白-PWM；黄-GND, 红-CH，绿-CL<br>Black-GND, White-PWM & Yellow-GND, Red-CH, Green-CL | 额定输出功率（最大持续功率）<br>Rated Output Power (max continuous) | 2130 W |
| 额定转速<br>Rated RPM | 2350 rpm | 额定功率密度<br>Rated Power Density | 1.88 kW/kg |

*本产品标注的拉力性能参数，均基于好盈封闭实验室（海平面，环境温度25℃）测试平台独立测试获得。
*在实际飞行工况中，受飞控系统适配程度、整机构型布局差异、重心配置状态等多重因素影响，各轴电机的实际输出功率并非完全均等，存在分配差异。产品选型时请充分考量上述工况偏差，建议以官方推荐的额定拉力参数作为选型依据。
*The thrust performance parameters of this product are independently measured on the test bench in Hobbywing's enclosed laboratory (sea level, ambient temperature 25℃).
*In real flight scenarios, multiple factors such as flight controller matching, airframe layout differences and center-of-gravity configuration can lead to unequal actual output power for motors on each axis, resulting in power distribution imbalance. Fully account for such operational deviations when selecting products; use the official recommended rated thrust as the selection reference.

## 电调技术参数 ESC Specification

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| 电压范围<br>Input Voltage | 24~63 V | 通讯方式<br>Communication Protocol | HWCAN |
| 电调尺寸<br>ESC Size | 114*64.5*35.5 mm | 重量（不含线）<br>Weight (with cable) | 209 g |
| 最大电流（3s）<br>Peak Current (3s) | 150 A (54 V) | 持续电流<br>Continuous Current | 50 A (54 V) |
| 防护等级<br>Ingress Protection | IPX6 | 油门源<br>Throttle Source | PWM+CAN |
| PWM脉宽<br>Operating Pulse Width | 1050~1950 μs | 黑匣子功能<br>Black Box | 故障数据<br>Fault data |
| 油门行程校准<br>Throttle Range Calibration | 固化不可校准，软件可修改范围<br>Solidified and cannot be calibrated (can be changed via DataLink software) | | |

## 电机技术参数 Motor Specification

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| KV值<br>KV | 85 KV | 槽极数<br>Slot & Pole | 36槽40极<br>36N40P |
| 电机外径<br>Motor Diameter | 120 mm | 电机重量（含线）<br>Weight (with cable) | 1598±40 g |
| 防护等级<br>Ingress Protection | IPX6 | 桨叶安装尺寸<br>Propeller Mounting Dimensions | D31-4*M5，中心孔D15<br>D31-4*M5, centre hole D15 |

## 桨叶参数 Propeller Specification

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| 产品型号<br>Model | MFP 43x14 | 重量<br>Weight | 427 g |
| 主要材质<br>Material of Propeller | 碳纤维增强尼龙复合材料<br>Carbon fibre-reinforced nylon composite material | 安装尺寸<br>Mounting Dimensions | D31-4*M5，中心孔D15<br>D31-4*M5, centre hole D15 |
| 安装螺丝锁紧扭矩<br>Mounting Screw Tightening Torque | 3 N·m | 适用海拔<br>Operating Altitude | 0~2000 m |
| 桨根到桨尖的距离<br>Blade Length (end of root to tip) | 523.16 mm | | |