Top Flite P-40 Warhawk

On a plane of that size, with a flying weight of approximately 10 pounds, you would be looking for 1200-1500 watts of power for good performance. If you try to do that with a 4-cell battery, you end up pulling 80-100 amps of current, which is a lot for a 4-cell pack. You would really need to use a 6-cell 5000mah LiPo battery on a plane of this size, and keep the current draw down in the 60-70 amp range for best performance.

Looking at the motors that we have available, for a plane of this size and weight, the BadAss BA-4520-540 motor would be the best choice. Running on 6 LiPo cells, if you run a 13x8 prop, you get the power of a good strong .61 2-stroke glow engine, and if you run a 14x8.5 prop, you get the power of a 2-stroke .75 glow engine.

With the 13x8 prop you get these full throttle performance numbers.

Volts – 22.2
Amps – 55.3
Watts – 1228
RPM – 9718
Thrust – 145 ounces (9 pounds 1 ounce)
Speed – 74 MPH

This setup gets you a bit under a 1 to 1 thrust to weight ratio, and around 120 watts per pound of power.

Stepping up to the APC 14x8.5-E prop you get these full throttle performance numbers.

Volts – 22.2
Amps – 68.6
Watts – 1523
RPM – 9518
Thrust – 169 ounces (10 pounds 9 ounces)
Speed – 77 MPH

Now you get just a hair over a 1 to 1 thrust to weight ratio and a power loading of 150 watts per pound for good aerobatic performance.

This motor has a Max current rating of 90 amps, So you could team it up with either the Rebel V2 100-amp ESC or the Renegade V2 105-amp ESC.

When flying in the pattern at 2/3 throttle, you will only pull about 25-28 amps in the air, so with a 6-cell 5000mah battery, and decent throttle management, you would be able to get 8-10 minute flights per charge. If you hot-dog it a big, and do several high speed full throttle passes, you should limit the flight to about 7 minutes per charge.

Below are links to the items described in the power system recommendation.

BadAss BA-4520-540 Motor: https://innov8tivedesigns.com/badass-4520-540kv-brushless-motor.html

BadAss Rebel V2 100-amp ESC: https://innov8tivedesigns.com/badass-rebel-v2-series-brushless-esc-100a.html

BadAss Renegade V2 105-amp ESC: https://innov8tivedesigns.com/badass-renegade-v2-series-brushless-esc-105a.html

BadAss 6-cell 5000mah LiPo Battery: https://innov8tivedesigns.com/badass-45c-5000mah-6s-lipo-battery.html

APC 13x8-E Prop: https://innov8tivedesigns.com/apc-b13x8e-propeller.html

APC 14x8.5-E Prop: https://innov8tivedesigns.com/apc-14x8-5e-propeller-black.html

If you need a spinner for the plane, we have a wide range of standard and Air-Flow styles and colors available on our website at the following link.

https://innov8tivedesigns.com/products/spinners.html