

Great Shark 330 VTOL Firmware and Function Upgrade

Newest upgrade for Foxtech Great Shark 330 with improved flying performance and safety!

Please note we added new settings and parameters, in order to make all feature work, please upgrade to the latest version ArduPlane V4.0.1 Firmware attached and import the newest parameters before the test flying. In the upgraded version:

I. Enhanced flying stability of the greatshark 330 in both VTOL and Fixed wing mode.

II. Five Emergency Failsafes are added

1: Rolling failsafe: in case of an unexpected rolling over 30 degree than desired, the Vtol motors will assist the flight until the attitude is resumed.

2. Stall failsafe: if the airspeed is smaller than 18m/s caused by e.g very small throttle by inexperienced operator, the Vtol motors will assist the flight until the airspeed is over 18m/s.

3. Fixed wing altitude protection: once the altitude is dropped to 40m in FBWA, CRUISE, AUTO, LOITER, the greatshark 330 will climb up until it's reaching 40m above the launching altitude.

Note: the plane has to go beyond 40m at least once after taking off to make this protection work.

4. Vtol assisted altitude protection(30m): once the greatshark 330 dropped to 30m in fixed wing mode caused by any reason(non-working

elevator, non-working thrust motor or even worse problem), the VTOL motors will assist the flight until the plane goes up beyond 30m.

5. Air speedometer failsafe: once the difference value of air speed and ground speed is over 20m/s, air speed value will no longer be valid and ground speed will be used.

Note:

We've added battery low voltage failsafe to the VTOL battery to ensure a safe landing under emergency cases. Once the VTOL battery voltage is lower than 41V, a Q-LAND command will be triggered, and the greatshark will then land with VTOL motors. In case this feature is not needed from customer end, pls turn the BATT2_FS_CRT_ACT to "0", and the customer must take the risk by himself.

Warning: Normally the protection only happens when the plane has no ability to fly in fixed wing mode, so the operator is suggested to send a Q-LAND command afterwards or the VTOL battery will be drained out very soon!!

Video Instruction:

<https://www.youtube.com/watch?v=5y6XJ5Wz5Hw>