

YS09 UAV Autopilot User Manual Google Earth Version



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Section 1 Brief introduction

YS09 UAV Autopilot (Called AP for short) system is a high performance, low cost and miniature UAV flight control system, which can be loaded at different flight platforms, and widely used in scientific experiments, tactical reconnaissance, emergency disaster relief, maritime surveillance, forest fire, aerial images, artificial rainfall, agricultural survey and pipeline inspection and other fields.

1、key Features

- ✈ Integrates GPS of 4Hz update rate, expandable to COMPASS, GLONASS navigation;
- ✈ Integrates digital airspeed and baro altitude sensors, 0.1mba high-precision, expandable to high precision radio altimeter measurement;
- ✈ Integrates low-cost, low weight IMU, calculating the most close situation to the real aircraft attitude via kalman filter using GPS data, dynamic accuracy is $\pm 2^\circ$, eliminating the instantaneous acceleration, gyro drift calculations on the impact of attitude;
- ✈ Positioning system can be extended to differential GPS, for precise flight control and automatic landing;
- ✈ Be expandable to external high-precision inertial navigation components, various types of AHRS, vertical gyro, and can added to turbojet engine electronic control unit (ECU);
- ✈ Onboard servo control PTZ, CCD zooming, using special PTZ control algorithm to lock on the ground fixed targets;
- ✈ Control the camera to take pictures at a certain distance interval, or take pictures in fixed waypoint. The picture position data can be saved on the AP.
- ✈ Edit and upload the waypoints, and adjust the flight parameters any time.
- ✈ All the operation of the operator is recorded. Can playback and analyze them after the landing.
- ✈ Real-time sensor data, such as 3 axis gyro data, can be shown in the GCS.
- ✈ 7~20V volt input, 12 bites A/D to capture the volt data.

- ✈ Multi kinds of PID mixing control algorithm, 256~1024 waypoints.
- ✈ Simple operation, many flight control modes: catapult take-off, throw out to take off, cruise flight, "one key" recycle by parachute. Click and go, circle position.
- ✈ Safety settings: volt monitoring, RPM monitoring, motor stopping, etc.
- ✈ The-loop simulation.
- ✈ 9 Channel servo outputs. Support all kinds of servo operation: open parachute, close parachute, close the cabin, throw the seeds, etc.
- ✈ Turn using AIL only, turn using RUD only. Install on all kinds of layouts: traditional, V tail, H tail, flying wing etc.

Disclaimer

This product is not a hobby grade Autopilot. Its state of the Art UAV System that is specially designed and tested over 4 years of period by top engineers and programmers in UAV field. The users will have full responsibility using this system. The manufacturer will not take any responsibility to those who bought the system from unauthorized dealers. Manufacturer will not offer any tech support and security commitments for such purchases.

Users are required to purchase the product from the manufacturer or the authorized dealers only by sending a copy of the credit guarantee (e.g.: photocopy of individual identity). Additional Data needed: usage of the product, serial number, and signed an undertaking responsibility.