

FC400 Flight Control

Model: FC400



Product description :

High cost performance, support oil, support RTK&PPK.

The FC400 series (cost- effective), flight control and navigation system, is designed for small size conventional fixed- wing, vertical take- off and landing fixed- wing, tilt- rotor aircraft, with integrated flight control computer and micro- integrated navigation system (GPS/MINS). It is capable for one- key action, enabling automatic take- off and landing, hovering, circling, returning, altitude holding, parachute landing and various forms of autonomous cruise function according to the setting route. It provides a comprehensive flight status monitoring, alarm function and a comprehensive emergency protection mechanism to ensure the safe operation of the system.

Features:

Support 4 forms of UAVs (including conventional tail, V- tail, and flying wings) electric and oil- powered composite (vertical take- off and landing fixed- wing), conventional fixed- wing, tilt- rotor and multi- rotor;

Integrated with micro GPS/MINS integrated navigation system, barometric altimeter, differential pressure,

airspeed meter, 2- channel speed measurement, 1- channel oil quantity measurement;

Support external differential GPS (RTK, PPK, Dual antenna directional function are all optional), and the external differential GPS is redundant with internal single- point GPS module, and the system will automatically select the better one;

Support external compass, which is convenient for users to select the area with less magnetic interference to improve the heading measurement accuracy;

Support automatic ignition function after the UAV driven by oil take- off;

The perfect emergency protection mechanism can protect against low voltage, low oil quantity, low speed, abnormal posture, high altitude, low GPS position accuracy, navigation system failure, exceeding of safety and control radius ranges, remote control failure, etc.;

It can preset 100 landing points, and automatically land near the emergency protection;

Provide 8 user routes, each route can add 800 waypoints; automatically generate hovering route, hovering center, hovering radius, and number of hovering circles can be set;

Provide photo (shutter control) function in the flight segment and also timing/fixed- distance setting can

be set;

Support typical photoelectric pods, open platform, and three-axis platform control for special rotation and control of surveying and mapping;

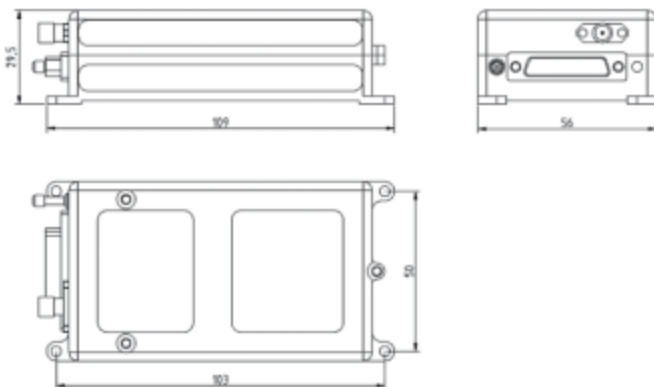
The flight and mission information are recorded and downed separately. The flight information recording

time is up to 9 hours, and the mission information record can reach 10,000 information packs;

The ground monitoring and control software support online map and irregular multi-measurement automatic mapping route planning, and support automatic planning of oil, electric and other patrol routes,

which can alert users to complete pre-flight inspection.

External dimension:



FC400: Electric vertical take-off and landing fixed-wing flight control and navigation system

FC410: Electric tilt-rotor flight control and navigation system

FC450: Electric conventional fixed-wing (hand throwing, ejection, parachute landing) flight control and navigation system

Performance index:

Parameter	index
Attitude precision	0.5°
Heading precision	2°
Position accuracy	2.5m
Angular velocity measurement range	±500°/s
Acceleration measurement range	±4g
Height measuring range	-500m ~ 10000m
The range of voltage monitoring	0 ~ 52V
Servo updating frequency	50Hz
Engine speed monitoring range	0 ~ 20000RPM

Communication interface	RS- 232C
Voltage monitoring	2 channels
Engine speed monitoring range	2 channels
PWM control range	9 channels
Digital output range	3 channels (PWM programmable)
Expansion serial port	3 channels (connect RTK, mission payload, etc.)
Sbus input range	1 channel
Number of routes	8 routes (800 waypoints on each route)
Built-in data logger	9 hours
Photographing point	10000 points
Emergency landing point	100 points
Electrical parameters	
Power supply voltage	DC4.5- 9.0V
Power consumption	< 3W
Physical parameters	
Weight	≤130 g
Dimensions (mm)	109*56*29.5
Environment parameters	
Working temperature	-20°C~ 55°C
Storage temperature	-40°C~ 85°C