

FC700 Flight Control

Model: FC700



Product description :

Ultra-high integration, support inertial data output, support user depth customization.

The FC700 flight control and navigation system integrates multi-redundancy and high-precision integrated navigation system (dynamic attitude accuracy 0.1°), high-precision differential positioning module and dual-antenna orientation module (course accuracy $0.1^\circ/2m$ baseline). It has the features of high integration, high precision, multi-redundancy, small size, light weight and deep customization. S7N is suitable for conventional fixed-wing, VTOL fixed-wing and multi-rotor UAVs with fully autonomous takeoff and landing functions.

Features:

Integrated high precision multi-redundancy IMUs, dynamic attitude accuracy 0.1° , principal and redundancy of high precision gyroscope and accelerometer, and can be real according to the working state ;

It has the advantages of high measurement accuracy and high reliability.

Integrated high-precision dual antenna directional system, course accuracy 0.1° (2m baseline), and double redundant magnetic compass system together to form a three-redundant heading system.

Greatly improve the reliability of navigation system;

Integrated high-precision BD/GPS real-time differential positioning module, the guide frequency supports 20Hz, support dynamic differential positioning;

12 PWM control output, 4 serial port output, 2 ADC input, 2 speed monitoring, 1 CAN, 1 SBUS input, 1 Route SBUS output;

Support the direct output of guide and integrated navigation original data, can be synchronized second pulse signal;

Support flight control formation simulation in the loop (flight control embedded digital aircraft model);

Support shipborne takeoff and landing, networking formation, terminal guidance and other functions, support user customization;

Support fixed-wing, vertical takeoff and landing fixed-wing, multi-rotor models;

Perfect emergency protection mechanism, can prevent low power, low oil, low speed, attitude abnormal, altitude abnormal, GPS positioning accuracy low, navigation system fault,

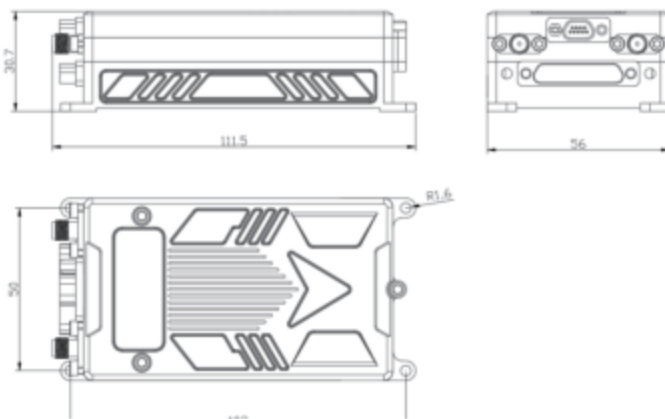
Beyond the safety fence, beyond the control radius, remote control failure and other protection;

100 emergency landing points can be preset to automatically land nearby in case of emergency protection;

10 flight routes, including 8 mission routes, each mission route can reach up to 800 navigation points; Automatically generate circling route, circling center, circling radius, circling circle number can be set; Flight information and mission information are recorded and downloaded separately. The flight information recording time is up to 9 hours, and the mission information recording time can reach 10,000 pieces.

Ground measurement and control software supports online map and irregular multi-survey area automatic mapping route planning, support oil, electric power lines such as automatic route planning, can Alert the user for a complete pre-flight check.

External dimension:



FC700: Vertical Takeoff and Landing Fixed wing Flight Control and Navigation system

FC710: Conventional fixed-wing flight control and navigation system for skidding Take-off and landing

Performance index:

Parameter	index
Attitude accuracy	0.1° (GNSS valid)
Course accuracy	0.1° (2m baseline)
RTK positioning accuracy	5cm+1ppm
Velocity accuracy	0.1m/s
Gyroscope measurement range	±500° /s
Accelerometer measurement range	±8g
Height measuring range	- 500m ~ 10000m
Voltage monitoring range	0 ~ 52V
Steering gear update frequency	50Hz ~ 200Hz
Engine speed monitoring range	0 ~ 20000RPM



Voltage monitoring channel	2 channels
Engine speed monitoring channel	2 channels
PWM control channel	9 channels
Digital output channel	3 channels (PWM programmable)
CAN communication interface	1 channels
Composite navigation output interface	2 channels
Guide output interface	1 channels
Second pulse signal	1 channels
Sbus interface	1 channels input, 1 channels output
Extended serial port	4 channels RS232
Electrical parameters	
Power supply voltage	DC4.5- 9.0V
Power consumption	< 3W
Physical parameters	
Weight	≤160 g
Dimensions (mm)	109*56*30.7
Environment parameters	
Working temperature	-40°C~ 85°C
Storage temperature	-40°C~ 85°C

