

FC800 Flight Control

Model: FC800



Product description :

Tri-redundancy , Ultra-high Integration , RTK&PPK&Dual-antenna Direction Finding。
FC800 series professional level, ultra high reliable flight control and navigation system with integrated micro- combination navigation system, Novatel high precision real- time differential GPS module (position accuracy up to centimeter), dual antenna orientation module and digital datalink (Optional), through highly integrated with simplifying external wiring, further improve system reliability and stability. It is especially suitable for 100 kg medium range full- automatic take- off and landing fixed-wing, vertical take- off and landing fixed- wing and tilt- rotor drones.

Features:

The internal integrated with tri- redundancy inertia device, the main redundancy is ADI high- quality gyro and accelerometer, and can switch the standby redundancy in real time according to the working mode, with the advantages of high measurement accuracy and high reliability;

Integrated with dual redundancy satellite navigation system, Novatel high precision real- time differential GPS module (RTK position accuracy up to centimeter) and the internal single- point positioning GPS module is redundant with each other, and the system automatically selects GPS data with better positioning status;

Integrated with high precision dual antenna orientation module, heading measurement precision: 0.5° (0.5m baseline);

The perfect emergency protection mechanism can protect against low voltage, low oil quantity, low speed, abnormal posture, abnormal height, 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 nearby according to the emergency;

Provide 8 user routes, each route can add 800 waypoints;

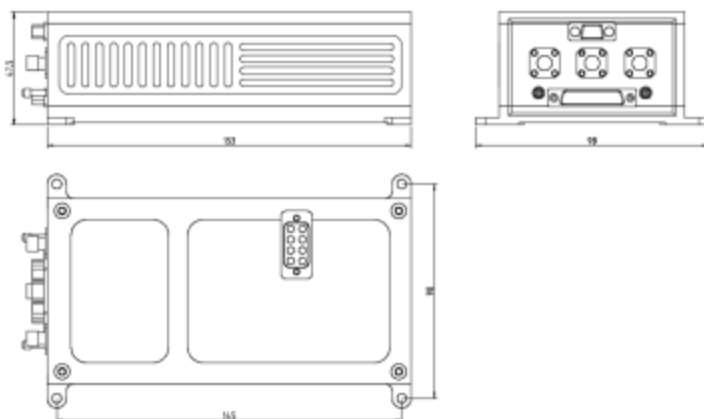
It can automatically generate hovering route, hovering center, hovering radius, and number of hovering circles can be set;

The flight information and mission information are recorded and downloaded separately.

Flight information can be recorded for up to 9 hours and mission information can be recorded up to 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 kinds of patrol, which can alert users to complete pre- flight inspection.

External dimension:



FC800: Vertical take-off and landing fixed-wing flight control and navigation system

FC810: Tilt-rotor flight control and navigation system

FC850: Conventional fixed-wing (hand throwing, ejection, parachute landing, sprinting take-off and landing) flight control and navigation system

Performance index:

Parameter	index
Attitude accuracy	0.35°
Course accuracy	0.08° (2m baseline)
RTK positioning accuracy	1cm+1ppm
Angular velocity measurement range	±450° /s
Accelerometer measurement range	±6g
Height measuring range	- 500m ~ 10000m
Voltage monitoring range	0 ~ 52V
Steering gear update frequency	50Hz
Engine speed monitoring range	0 ~ 20000RPM
Communication interface	RS- 232C
Voltage monitoring channel	2 channels
Engine speed monitoring channel	2 channels
PWM control channel	9 channels
Digital output channel	3 channels (PWM programmable)
Expansion serial port	3 channels (connect to RTK, mission payload, etc.)
Sbus input range	1 channel
Electrical parameters	

Power supply voltage	DC4.5- 9.0V
	DC7.0~36V
Power consumption	< 6W
Physical parameters	
Weight	≤480g
Dimensions (mm)	153*98*47.5
Environment parameters	
Working temperature	-40°C~ 85°C
Storage temperature	-40°C~ 85°C