Fire fighting drone

Firefighting drone

The high floors of the city are rising, and the floors are getting higher and higher, which brings great challenges to fire rescue.

The fire floor equipment on the floor is too high to quickly reach the control of the fire, and can only be allowed to ravage the fire, these reason causing major fire accidents.

In response to this problem, we have developed a dual fire-fighting drone, that has a large load capacity, strong wind resistance, high throwing precision, and can fire extinguishers remotely in a complex fire weather environment. At the same time, it can also spray fire extinguishing powder at close range.

The double fire fighting drone is a special fire fighting drone for high-rise buildings.

Fire fighting drone's features a folding fuselage design, super-load and anti-shock design, fast access to high-rise fire scenes, high-powered cameras to observe fire, and firearms to launch firefighting drones.

Function:

- 30-x optical zoom camera (can adopt thermal cameras and Infrared cameras as client require).
- Launch extinguishing system to break glass window and blow ABC powder extinguishing agent.
- Carry Lidar for Intelligent obstacle avoidance system.
- Night vision aiming system.
- Carry ABC powder extinguishing agent.
- Electronic quick control in APP software.
- IP-65 three defense capabilities.

Fire fighting drone

MODEL FLEXI-FF-IA

www.armour.gr

Weight:50 kg
Dimensions: 98 × 80 × 60 cm

Specifications

Aircraft

Symmetrical motor wheelbase: 1500 mm
Fuselage size unfold: 1150×1150×760 mm; fold: 650×650×760 mm
Max. Take off weight: 45 kg
Propellers: Diameter X screw pitch: 30×9.9 inch; Single weight: 160 g
Motor: KV value: 100 rpm/V; size of the stator: 81×20 mm; Weight: 630 g

ESC
Sustained current: 80A
Battery: 6~12S
PWM input level Signal: 3V/5V compatible
Compatible frequency: 50～500 Hz

Battery Voltage: 45.6V; capacity: 44000 mAh; energy: 2006.4 Wh; Type: LiHV 12S; discharge current: 25C
Max. Rising speed: 5 m/s
Max. Lowering speed: 3 m/s
Max. Horizontal flight speed: Sport mode: 8 m/s(windless); Attitude mode: 15 m/s(windless)
Max. Pitch Angle: 25°
Max. rotational angular velocity pitch axis: 120 °/s, Heading axis: 120 °/s
Max. Bearable wind speed: 14 m/s
Max. Flight altitude: 5000 m
Max. Flight altitude(GPS); Vertical: ±0.5 m, Level: ±1.5 m (when GPS positioning is working normally)
Max. endurance: 35 mins

Gimbal and surveillance camera

Gimbal size: 136×98×139 mm
Gimbal weight: 452 g
Gimbal input voltage: 12 V
Gimbal stability system: 3 axis (pitch, roll, level)
Gimbal angular control accuracy Static: ±0.008° ； Dynamic: ±0.02° ; Anti-shake : ±0.008°
Gimbal controllable rotation range pitch：-110° to +60° ; level ：±150° ; roll ：±10°
Gimbal control speed pitch：30 °/s ; level：30 °/s
Camera lens pixel: 1200 million pixels
Camera focus time: 7~8 seconds
Camera sensor: 1/2.3 SONY IMX117 CMOS
Camera ISO range Video：100～3200 ; photo：100～1600
Camera video recording resolution: 4K 30 fps
Camera resolution: 3840×2160
Camera focal length: 6.7-134.5 mm
Camera zoom multiplier: 30 X optical zoom
Camera zoom speed: about 2.0 second
Horizontal camera Angle: 59.8 ° ~ 3.0 ° (wide Angle – telescopic)
Camera proximity: 5000mm (wide Angle – telescopic)
Camera video storage code stream: Max. 64 Mbps
Camera compression standard: H.264 / H.265
Camera supports file storage format: JPG/MP4
Camera supports memory card type: SD/SDHC/SDXC micro-SD card with maximum support of 128 G and transmission speed of Class10 or above or reaching uhs-1 rating

Sighting

Magnification: 3~9 times
Extent: 33 cm
Weight: 590 g
Pipe diameter: 25.4 mm
Objective: 40 mm
Exit pupil distance: 7~8 cm
Differentiation of line: Cross point differentiation
Differentiation of material: Metal Wire differentiation
Focus Mode: Objective lens focusing
Accommodation mode: Swivel lock hand mode
Lighting system:Red & Green double light
Regulating variable: one click a quarter of an inch from 100 yards away

Lidar ranging obstacle avoidance system

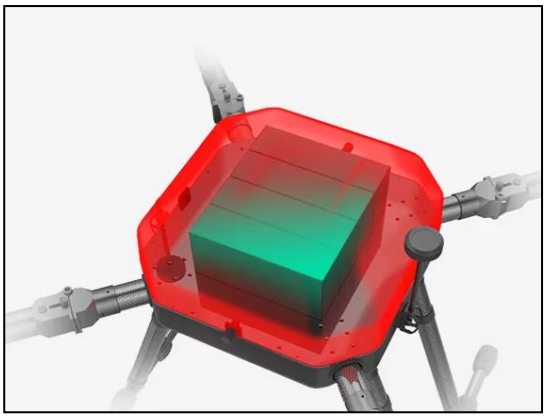
Distance measuring range: 100m
Range of obstacle perception: 3~15m(adjustable)
FOV: Level 20°; Vertical 3°
Survey frequency: 10kHz

Fire extinguishing system

Model of fire extinguisher launcher: CM60 airborne transmitter
Outside diameter of launcher tube: φ67 mm
Max. Outside diameter: φ 70mm
Emitter length: 1000 mm
Emitter weight: ≤ 1400 g
Fire system: CM60 rocket boosts ABC dry powder fire extinguishing projectile
Transmitter trigger voltage: 12V~24 V
Transmitter trigger current: ≥ 700 m A
Life of transmitter: ≥3 Years/100 Times

Fire extinguishing tank

Fire extinguishing tank material: HP295
Tank weight: 8.7 kg
Net dry powder content: 3 Kg
Filling pressure: 1.2 MPa
Installation: Hang up fast
Open mode: electronic fast
Powder spraying pipe Material: carbon fiber; Length: unfold4.8 m (minimum shrinkage is 1.2m)



Fire extinguishing System

Length: 995 mm
full weight: ≤3000 g
striking current: ≥ 700 mA
safe current: ≤150 mA
Initial emission velocity: ≤35 m/s
Max. range: ≤40 m
Single fire extinguishing capability: 9 m3 (Total flooding)

Fire extinguishing agent Species:
ABC super fine dry powder
Weight：≥1100g
Features: Fully sealed, waterproof, moisture-proof and non-explosive

Delay time for extinguishing agent injection:≥5 s
Life of fire system: 3Years

Remote control

Fuselage size: 65×174×62mm（L×W×H)
Weight: 970 g
Working frequency: 2.4 G
Working current：1000 mA
Signal effective distance: about 2Km (open, no occlusion, no electromagnetic interference)
Video output interface: HDMI
Power supply mode: Built-in lithium electricity 7.4V 6000mAh LiPo 2S
Mobile device support: For tablets or mobile phones

Ground Station / Portable

Ground Control Station is designed for controlling unmanned vehicles

Ground station is typically a software application, running on a ground-based computer, that communicates with your UAV via wireless telemetry.

It displays real-time data on the UAVs performance and position and can serve as a “virtual cockpit”, showing many of the same instruments that you would have if you were flying a real plane.

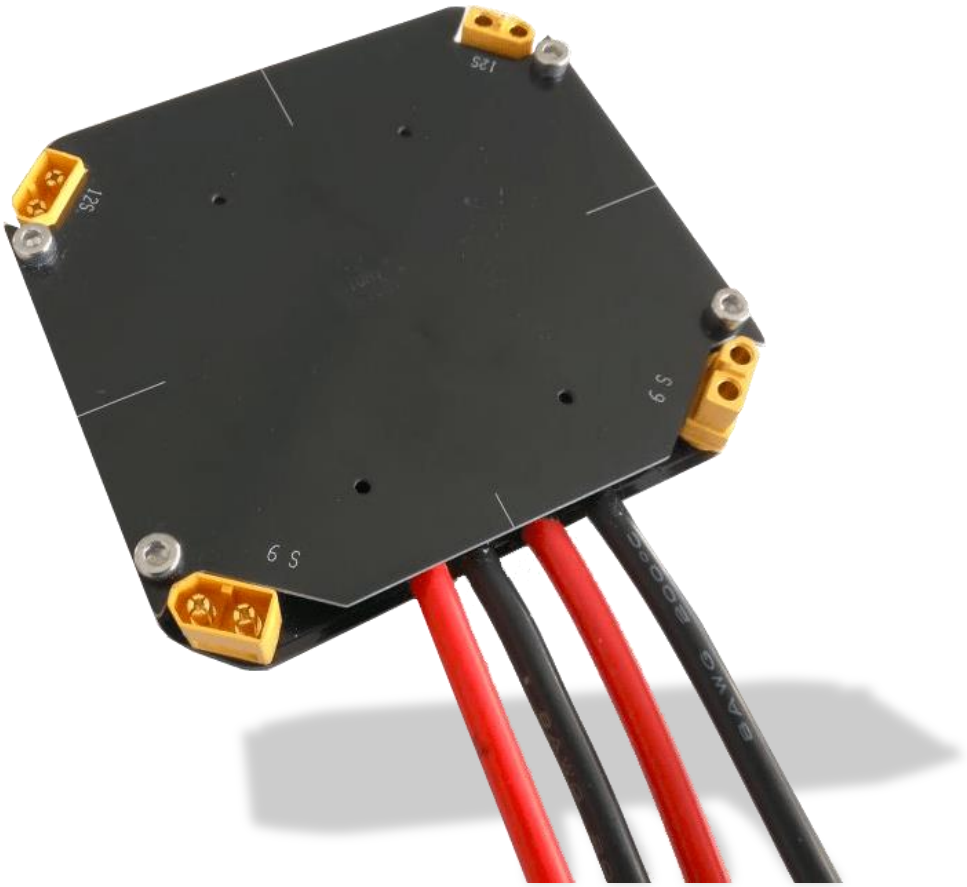
A GCS can also be used to control a UAV in flight, uploading new mission commands and setting parameters. It is often also used to monitor the live video streams from a UAV’s cameras. portable Ground Control Station (GCS) is a flexible and universal solution for controlling unmanned vehicles and payloads.

By using a unique, modular electronics compartment (MEC), application specific hardware can be quickly installed. This flexibility allows the GCS to be configured to control unmanned aircraft vehicles (UAV), ground robots, bomb disposal robots, remotely operated vehicles (ROV) and other robotic devices. The GCS can also be configured to control and monitor measurement and sensing equipment.

Specification:

Size: 462*256*70MM
CPU: Intel I7 7500U
Graphics card: Intel HD Graphics 620
Screen: Dual 13.3″ LED
Display resolution: 1920*1080
Touch screen: 10 points
Connector: 2*USB2.0/ 3*USB3.0/ 1*LAN/ 1*HDMI/ 1*MIC-OUT/ LINE-OUT/DC
Remote joystick： 2 Back to the Hall remote control lever
Gimbal Rocker: 2 Back to the Hall remote control lever
Channels: 14

Power Distribution Boards for 16L



Power Distribution Boards (PDB) are one of the simplest components on a Multi-rotor and therefore are one of the easiest to choose.

There are 3 main points that should be considered when choosing a PDB for your multi-rotor: Size and layout Voltages and Current Capability (on board voltage regulators).

Additional features It is necessary to have a good idea of what parts you will be using in your multi-rotor build in order to make sure that you choose a PDB that will have the right features and be able to support the power consumption of all the components.

Size is relatively straight forward, however is worth mentioning because PDB come in all shapes and sizes.

Some are made specifically for certain frames while the majority use a 30×30 standardized mounting.

Depending on the frame you have chosen, there may be a custom Power Distribution Boards available which may replace a Carbon component in the frame and greatly simplify the wiring and cleanliness of the build.

If your frame does not have a dedicated Power Distribution Boards available, you need to choose one that will suit your intended build.

This is where it is necessary to have a good idea of what other components you intend to use.