

WORLD'S ONLY CUSTOMIZABLE HEAVY-PAYLOAD UAV

NAFFCO Firefighting Drone



NAFFCO
PASSION TO PROTECT



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NAFFCO FIREFIGHTING UAV: ENABLING RAPID AND SAFE EMERGENCY RESPONSE TO FIRE INCIDENTS

REVOLUTIONIZING HIGH-RISE FIREFIGHTING THROUGH AUTONOMOUS AERIAL INNOVATION

High-rise firefighting remains one of the most critical challenges facing emergency response agencies worldwide. As cities continue to develop skyscrapers exceeding **200 meters** in height, current firefighting methods are increasingly constrained by accessibility, response time, and operational safety.

Our innovation introduces a **next-generation Heavy-Payload Firefighting Unmanned Aerial Vehicle (UAV)** designed for firefighting operations at heights of up to **200 meters**. The UAV is connected to a **ground-based fire hose system**, providing a continuous supply of firefighting agents. The platform integrates advanced aerospace engineering, AI-enabled autonomous flight, and lightweight carbon-fiber composite technology to deliver a rapid, safe, and highly effective aerial firefighting solution.

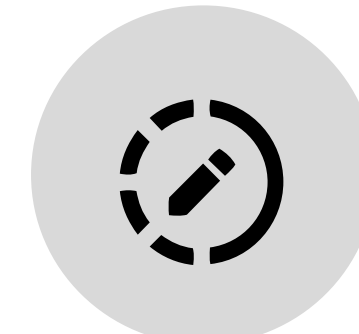
The **Firefighting UAV** is available with payload capacities ranging from **100 kg to 500 kg**, depending on customer requirements. This solution enhances firefighter safety, reduces response times, and improves the effectiveness of emergency response operations.



Intelligent autonomy &
rapid deployment



Intelligent radar
collision avoidance for
safe operation



Multi-source Fusion &
Anti-jamming Positioning
for Complex Urban
Environments

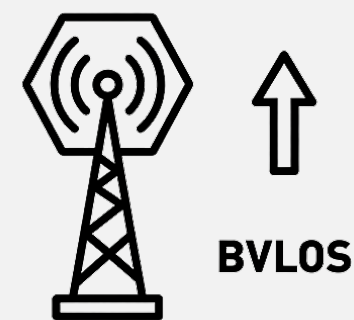


Dual-parachute
emergency protection
for reliability





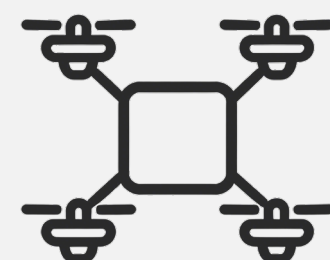
World's highest payload capacity
extreme MTOW up to 700 kg, with
an effective payload up to 300 kg.



Beyond Visual Line of Sight
(BVLOS) operations for extended
mission range.



Multi-constellation GNSS support
(GPS & GLONASS) RTK —
simultaneously processing dual-
satellite system.



Cluster control operation.
Supports operations such as
large-scale formation coordination
lifting and cluster fire
extinguishing.



INDUSTRIAL-GRADE HEAVY-PAYLOAD FIREFIGHTING DRONE



IP67 waterproofing and exceptional fire resistance for all-weather, all-mission reliability.



Extreme wind resistance safe take-off and landing in up to Level 7 winds.



Exceptional flight stability — maintaining smooth and controlled performance even under maximum payload of 2× its own weight.



Customizable to mission requirements, ensuring tailored solutions for national-scale emergency and logistics operations.



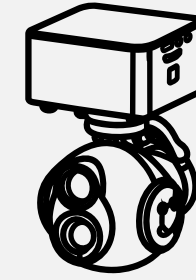
ADVANCED EMERGENCY RESPONSE FIREFIGHTING DRONE SYSTEM



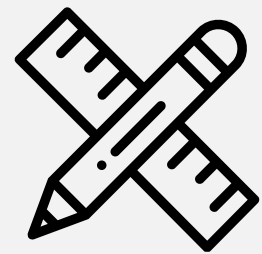
Long-Distance Anti-Magnetic Interference



Anti-Interference GPS



AI ISR Gimbal & Payload System



Customize Different Sizes Of Load Capacity



Obstacle Avoidance Radar



RTK Centimeter-Level Positioning, Safe And Stable



**MULTI-ROTOR FIREFIGHTING DRONE (EV & HEV)
WITH RTK, MULTI-GNSS, LIDAR, AND EO/IR**

SKYSCRAPER FIRE RESPONSE

High-pressure water delivery system capable of reaching fires over 150 meters high.

CUSTOMIZABLE CONFIGURATION

High-capacity tank and adjustable water hose length to adapt to different buildings and mission scenarios.

LONG-DURATION FLIGHT

Up to 45 minutes for continuous firefighting, enabling sustained suppression of major fires.

SUPERIOR STABILITY

Large platform (4345×4345×933 mm) and advanced flight control ensures accurate water placement even at height.

ADVANCED SAFETY & AVIONICS

Dual obstacle avoidance radars, centimeter-level RTK positioning & IP67 waterproof rating for reliable operation in extreme environments.

MISSION-READY FLEXIBILITY

Designed for complex urban fires, industrial sites, or emergency response in high-rise buildings

NEXT-GENERATION AERIAL FIRE SUPPRESSION SYSTEM

INTEGRATED AUTOMATED FUNCTIONS

Operational altitude from 50 to 500 meters with three integrated automated functions: precision delivery, automatic mid-air detonation, and programmable altitude control.

RAPID AREA COVERAGE

Each flight can cover approximately 200m², drastically improving firefighting efficiency.

EXTENDED ENDURANCE

15-45 minutes flight time depending on payload, enabling multiple targeted strikes or sustained suppression.

PRECISION TARGETING

2K gimbal camera with 180° rotation ensures pinpoint identification and deployment.

ROBUST & RELIABLE AIRFRAME

Carbon fiber + 7075 aviation aluminum frame with intelligent automatic release hooks, providing stability under maximum payload.

SAFE LONG-RANGE OPERATIONS

10 km control range with HD video feedback for safe, effective firefighting from a distance.

CARBON-FIBER FRAME AND PRECISION CONTROL ENABLED CENTIMETER STABILITY

Dimensions (Folders)	4345*4345*993 mm
Weight (Excluding Battery)	87.5 kg
Max. Flight Height	4500 m
Operate Height	≤ 1000 m
Max. Rated Weight	150 kg
Max. Take-off Weight	336.5 kg
Max Wind Resistance Level	Force 7 Wind
Material	Carbon Fiber + 7075 Aviation Aluminum
Hovering Accuracy	GPS: ≤ 1 meter RTK: Centimeter Level
Charging Power	3000 W
Max Flight Speed	20 m/s
Flight Radius	≤ 15 km
Frame Service Life	≥ 10 Years
Operating Temperature	-40 oC ~ 65 oC



NF150-EV MULTI-ROTOR FIREFIGHTING DRONE

Item	Specification
Dimensions(L*D*H)	3730*4060*1550mm(Spread) 2050*2300*1550mm(Fold)
Material	Full titanium alloy frame
Wheelbase	4060mm
Blade	72 Inch Coaxial
Fuel Tank Capacity	70L
Max Takeoff Weight	720Kg
Max Load	250kg
Max flight time	2 Hrs.
Max rising speed	3m/s
Max descent speed	2m/s
Cruising speed	10m/s
Max Allowable wind speed	Safe takeoff and landing <8m/s
Engine	1999CC EFI water-cooled 4-stroke turbocharged Engine
Voltage	800V
Generator power	160 KW
Operating temperature	-20°C-+55°C
Hover Accuracy	vertical: ±0.5m; Level: ±1.5m; (When GPS positioning is working normally)



NF250-HEV MULTI-ROTOR FIREFIGHTING & TRANSPORTATION DRONE

No.	Item	NF250	Remark
1	Size	4*1.3*1.9 m	
2	Rotor Diameter	4.8 m	
3	Aviation Engine	141 HP	Rotax Brand gasoline engine
4	Max Takeoff weight	650 kg	
5	Max Payload	260 kg	Sea level Including fuel
6	Endurance	2-4 h	Upto10 h
7	Ceiling	6500 m	
8	Max Flight Speed	160 km/h	
9	Cruise Speed	140 km/h	
10	Wind Resistance	≤7 Level	15 m/s
11	Controlling Radius	100 km	Can be extended

#39



NF250-HEV TANDEM-ROTOR FIREFIGHTING & TRANSPORTATION DRONE

Display	7-inch high-brightness screen
Resolution	1920 × 1200 pixels
Processor	Qualcomm 6nm processor
Dimensions	277 × 138 × 96 mm
Frequency Bands	2.4GHz / 5.8GHz
Battery Capacity	20000 mAh
Frequency Hopping	Adaptive automatic frequency hopping
RF Power	23 dBm (CE/FCC compliant)
Control Range	5–30 km (air-to-ground, line-of-sight)
Battery Life	8–12 hours



ACCESSORY PARAMETERS

REMOTE CONTROL G20

Built-in heat sink | Ensures prolonged stable operation in high-temperature environments



ACCESSORY PARAMETERS

TRIAxIAL DUAL LIGHT CAMERA

Visible Light Camera Parameters:

- Lens Resolution: 5MP
- Focal Length: $f=3.5-4.75\text{mm}$
- Aperture: F2.0
- Video Transmission Resolution: 1280×720
- Photo and Card Recording Video Resolution: 2560×1440

Thermal Imaging Camera Parameters

- Resolution: 384×288
- Focal Length: 7mm
- Aperture: F1.0
- Field of View (FOV): $24.8^\circ \times 18.7^\circ$
- Spectral Range: $8-14\mu\text{m}$





Length	180 cm
Diameter	40 mm
Water Outlet Caliber	10 mm
Weight	2.6 kg

Material	Aviation Aluminum
Water Pressure (Test)	9-20 Bar
Spray Distance (Test)	15 m
Max. Pipe Length (Test)	150 m

NF200 HIGH-RISE FIRE EXTINGUISHING VERSION

FIRE HOSE



Main materials of the launcher	Composite materials and aviation aluminum
Outer diameter	67 mm
Inner diameter	60 mm

NF200 High-Rise Fire Extinguishing Version

WINDOW-BREAKING LAUNCH DEVICE

Pod Diameter	Φ 260 mm
Pod Length	650 mm
Fire extinguishing Agent Type	Water-based extinguishing agent / Flame-retardant ABC dry powder
N.W. of Fire Extinguishing Agent	≥20 kg
Diffusion Radius	≥5 m
Coverage Area	m ≥50 m²
Safety Radius	≥20 m
Detonation Release Height	0~6 m
Drop Height	90~150
Operating Ambient Temperature	-20℃ ~ 60℃
Fully Sealed	Waterproof, Moisture proof
Safety Fuse	Double Insurance, Explosion-proof



NF200 FIRE EXTINGUISHING POD VERSION

FIRE EXTINGUISHING PODS



Size	222 × 104 × 245 mm
Model	Customized batteries
Quantity	4 pieces / set
Weight	15 kg × 4 pcs
Charging Ambient Temperature	-40°C ~ 65°C



ACCESSORY PARAMETERS

LONG-LASTING INTELLIGENT BATTERY



Urban High-Rise Fires

Use water hoses to accurately extinguish high-rise buildings and quickly control the fire



Petrochemical Disaster

Apply to hazardous chemical fires, provide air firefighting support to ensure the safety of personnel and equipment



Forest Fires

Quickly extinguish forest fires and reduce the spread of fires by precisely dropping fire extinguishing pods

PRODUCT & SOLUTION APPLICATION SCENARIOS



Warehousing And Logistics Facility Fires

Provide efficient fire suppression services for large-scale warehousing and logistics centers



Mountain/Island Fires

Provide timely firefighting support in remote areas with limited transportation to enhance emergency response speed



Post-disaster Reconstruction

Fighting building fires in disaster areas to reduce casualties and property losses

PRODUCT & SOLUTION

PRODUCT & SOLUTION



RAPID INTERVENTION VEHICLE

FORD F-550 4x4 SEVERE DUTY



Notes:

NAFFCO reserve the right to introduce minor changes to improve operational and performance related aspects of the vehicle and if also necessary to supply equivalent equipment/components if they

RAPID INTERVENTION VEHICLE

FORD F-550 4x4 SEVERE DUTY



01 CHASSIS

- FORD F-550
- 6.7 L V8 Turbo Diesel
- 10 Speed Select Shift Automatic
- GVWR 8845 kg

02 WATER/FOAM TANKS

- Water 1,000 Lit.
- Foam 100 Lit.
- Poly Propylene, UV Stabilized
- Lifetime warranty

03 FOAM PROPORTIONING SYSTE

- UL certified NAFFS-AATP
- Automatic ATP Foam System
- Foam ratios 0 -10%, 3% & 6%

04 CAF'S MONITOR

- Shield-UK
- Remotely controlled
- Light alloy construction
- Wet Foam 150 LPM
- Dry Foam 75 LPM

05 NAFFCO CAF SYSTEM

- Compressed air is supplied to the mixing chamber.
- Continuous operation up to 8 mins. based on the number of nitrogen cylinder.
- Air Automatically controlled by PLC through electronic regulator.
- Air/Foam solution ratio between 1:3 up to 1:10 as defined in ISO 7076-6.

06 STORAGE LOCKER

- Three RHS storage lockers
- Three LHS storage lockers
- Dust and waterproof
- Automatic illumination

07 ROOF MONITOR

- Shield-UK
- Remotely controlled
- Light alloy construction
- 2000 LPM at 8 bar

08 FIRE PUMP

- Shield/UK
- Corrosion resistant
- Rear mounted
- 2,000 LPM at 10 bar
- 2500 LPM at 40 bar
- 7.5- 8m Suction lift
- Automatic Priming System

09 DCP TROLLEY

- 50 Kg Extinguisher
- 7-9m Range of Discharge

10 SUSPENSION TIRES

- Lift Kit – 2.5 " Front and Rear
- Wheels – 20 x 10 Bead Lock Rims
- Fox Shocks – Front and Rear
- Tires - 335/80R20 (MPT 81) – Continental



04 DRONE SPECS

- Max Payload 150 kg
- Max Operating Height 4500 m AGL
- Flight Distance 15 km
- Speed 20 m/s
- Flight Time 45 min
- Wind Resistance Level 7

DRONE SPECS

01 MISSION CAPABILITIES

- Urban High-Rise Fires
- Petrochemical Disasters response
- Forest/Island Fires
- Warehouse Facilities

02 ADDITIONAL FEATURE

- Window Breaking & Fire Fighting Agent Projectiles.
- 25kg Fire Fighting Timed Canisters.
- 2K gimbal camera with 180° rotation

03 CAMERA

- Video Transmission Resolution: 1280×720
- Photo and Card Recording Video Resolution 2560×1440



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