



GDU | SAGA

In Flight, Day and Night

-FIRE FIGHTING-

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H 420m
vs 2.5m/s

-CORE TECHNOLOGY-

Single Chip
Integration
Technology

Intelligent
Control
Technology

Military
Frequency-
hopping
Anti-interference
Technology

Fully
Independent
R&D of Infrared
Technology

01 ABOUT SAGA



Foldable
Portability



Intelligent
Control



Obstacle
Avoidance



Compatible
Universal Payload



7KM HD
Video Transmission



Open
SDK



Max Take-off
Weight



Vision Positioning
System

Description	Parameters
Model	GDU SAGA
Dimensions (Unfolded)	745mm×555mm×225mm
Dimensions (Folded)	273mm×224mm×107mm
Maximum Take-off Weight	3.4kg
Maximum Load	1kg
Maximum Horizontal Flight Speed	15m/s (Sport Mode)
Maximum Flight Altitude	3500m
Maximum Tolerable Wind Speed	10m/s
Maximum Flight Time	35 minutes
Satellite Positioning Module	GPS/GLONASS Dual Mode
Hover Accuracy (P-GPS)	Vertical : ±0.5m (Downward Vision System : ±0.1m) Horizontal : ±1.5m (Downward Vision System : ±0.3m)
Video Transmission and Flight Control Distance	7KM



PAYLOADS



800X600
Infrared Camera



Floodlight with
Camera



Gas Detector with
Camera



Megaphone with
Camera



4K HD Camera
(Optional)



10X Optical
Zoom
Camera(Optional)



30X Optical
Zoom
Camera(Optional)

800X600 Infrared Camera (GTIR800)



Features

1. 800X600@50Hz infrared dual light
2. NETD 30mk or less
3. High precision temperature measurement
4. Multiple lens adaptation
5. Visible light/ infrared video switching

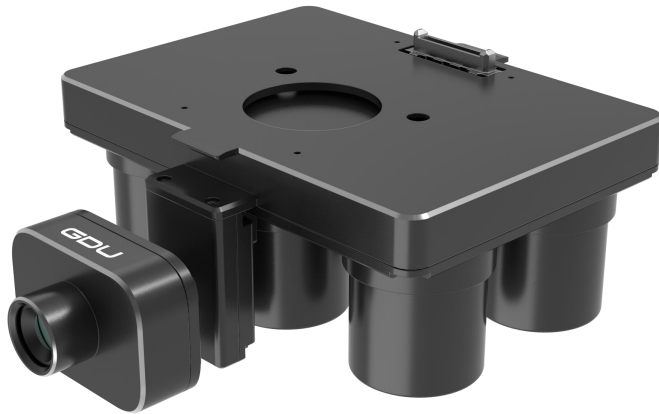
Floodlight with Camera (GISL01)



Features

1. Effective range 500m; Maximum brightness 3000lm
2. Photo resolution: 1920*1080;
3. Video resolution: 1920*1080
4. Operating temperature: -20°C ~ 50°C; Storage temperature: -40°C ~ 60°C
4. Operating humidity: 15% -90% RH (no condensation)

Gas Detector with Camera (GIGD01)



Features

1. Type Detection Range

NO₂ (0-20) ppm, 0.1ppm; CO (0-1000)ppm, 1ppm

SO₂ (0-20) ppm, 0.1ppm; O₃ (0-20) ppm, 0.1ppm

H₂S (0-100)ppm, 1ppm; CH₄ 0-100%LEL, 1% (Optional)

PM_{2.5} ≥2.5μ m, 0-1000ug/m³, ±15% (Optional)

2. Relative Humidity 0~100%RH, ±3%RH

3. Temperature Measurement Accuracy -40~125°C, ±0.3°C

4. Photo&Video resolution: 1920*1080

Megaphone with Camera (GISPK01)



Features

1. Effective range 300m;
2. Sound range 55-60 decibels 100 meters away, 120 decibels maximum.
3. Sound transfer range 5km
4. Photo&Video resolution: 1920*1080
5. Sound notifications Police, Fire, Car horn, Real time voice intercom

4K HD Camera (QYT003) (Optional)



Features

- 1: 12.4 million effective pixels;
- 2: Equivalent focal length 24mm;
- 3: 4K@30fp HD video, 12 million pixels HD photo;
- 4: 3-axis stabilization, image stabilization precision $\leq 0.03^\circ$;
- 5: Optional wiring box, supporting SBUS, PWM, serial port control interface.

10X Optical Zoom Camera (GTZMHD-10X) (Optional)



Features

- 1: 10x optical zoom, 4x digital zoom, zoom range 4.7-47mm;
- 2: 12.4 million effective pixels SONY CMOS;
- 3: 4K@30fps HD video, 12 million pixels HD photo;
- 4: Fully automatic focusing, supporting fine tune focus;
- 5: 3-axis stabilization, image stabilization precision $\leq 0.01^\circ$;
- 6: Optional wiring box, supporting SBUS, PWM, serial port control interface.

30X Optical Zoom Camera (GTZMHD-30X) (Optional)



Features

- 1: 30X optical zoom, 4X digital zoom, zoom range of 6~180mm;
- 2: 12.4 million effective pixels SONY CMOS;
- 3: 4K@30fps HD video, 12 million pixels HD photo;
- 4: Fully automatic focusing, supporting fine tune focus;
- 5: 3-axis stabilization, image stabilization precision $\leq 0.01^\circ$;
- 6: Optional wiring box, supporting SBUS, PWM, serial port control interface.

02 SAGA FIREFIGHTING APPLICATIONS



Monitoring and Tracking

Fire fighters face all kinds of disasters especially since conditions can change instantly. Using SAGA for real-time monitoring and tracking can provide precise information regarding changes in any situation to ensure that all levels of leadership are informed in a timely manner.

SAGA Fire Prevention Applications



Area Calculation

SAGA equipped with a 30X HD optical zoom camera with automatic white balance, automatic gain and automatic color correction can see practically anything allowing for HD and multi-angle video data to be obtained remotely. Accordingly, the data transmitted by SAGA can determine the effected area.

SAGA Fire Prevention Applications



Rescue Assistance

Using SAGA to carry key equipment can help in a variety of rescue situations:

1. Integrated voice amplification module to convey instructions. SAGA can be used to transmit instructions, which can be more effective.
2. Open up a way for rescue. Use SAGA to assist in rope throwing or to carry key equipment to open up a life-saving passage.
3. Use SAGA as a communications relay. For example, when communication is blocked, an integrated relay module can be used to serve as a temporary relay station, so that wireless communication links can be established in extreme environments.
4. SAGA can use surveying and mapping techniques to collect information in response to a disaster or accident and transmit it to the command center, so as to conduct emergency mapping of the terrain and provide strong support for rescue personnel.

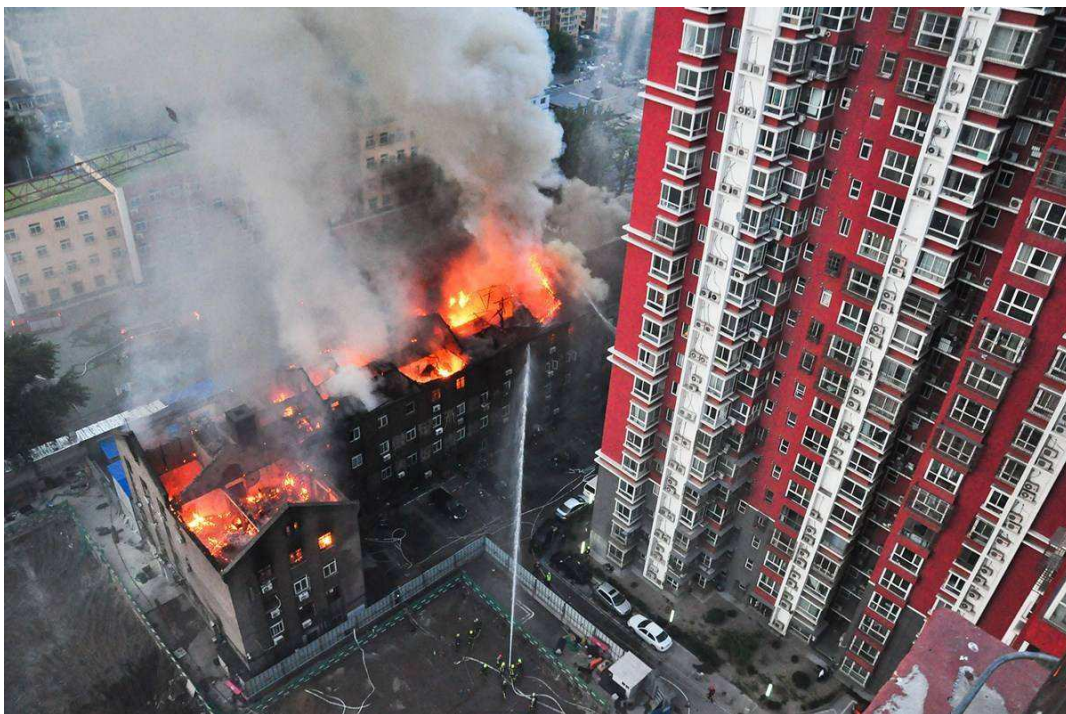
SAGA Fire Prevention Applications



Surveillance

SAGA can be used for comprehensive and real-time detection of forest areas, timely detection of fire hazards, real-time fire control, forest fire inspection, and on-site image storage. Video monitoring can be connected to other security or fire monitoring systems. It supports large-capacity and long-term image storage, retrieval, remote viewing, and control functions through intelligent terminals.

SAGA Fire Prevention Applications



Monitoring

After arriving at the scene of a fire, SAGA, carrying a 30X optical zoom camera, can collect evidence in the air and search for people trapped inside. After fire fighters break windows, the source of the fire can be identified with an infrared thermal camera and transmit the images to the command center in real time. Evacuating trapped people by means of HD cameras and using loudspeakers to convey information for a hasty escape is incredibly effective.

SAGA Fire Prevention Applications



Detection of Harmful and Explosive Gases

With chemical fires developing rapidly, the high potential for and toxic fallout from explosions are incredibly high making fire fighting and rescue operations extremely dangerous. SAGA can carry out real-time data analysis of gas concentrations and composition to transmit the data to the command center for leaders to make decisions, so as to avoid recurring explosions and casualties.

SAGA Fire Prevention Applications



Fire Scenarios & Rescue Operations

SAGA equipped with a release canister containing a smoke hood, fire-extinguishing bomb, rescue rope or other materials can assist trapped people trying to escape heavy smoke and fire. If there is a fire source below and the conditions for escape are not met, SAGA can also conduct aerial wiring and lead people to the opposite building for a lateral escape.

A large fire is burning in a wooded area, with thick smoke rising into the sky. In the foreground, several firefighters in orange gear are visible, some standing and others crouching. The scene is captured from a low angle, emphasizing the scale of the fire.

SAGA Fire Prevention Case Study

SAGA Case Study

1

Case Study: Forest Fire Rescue

Background Analysis:

Forest fires on steep terrain need a lot of manpower and material resources to extinguish. Quickly and accurately finding the source and monitoring the fire situation day and night has always been a difficult problem.

Necessity:

Replacing traditional fire fighting methods by applying UAV technology and system solutions to any given scenario greatly reduces safety risks and drastically improves efficiency. Combined with an HD video transmission and infrared monitoring capabilities, fire hazards in complex terrain can be easily managed with air patrols, on-site rescue command, fire detection and control by SAGA.



SAGA



4K HD



800X800 Infrared



30X

Equipment : The GDU SAGA

Payloads : 4K HD , Infrared , 30X

Content : Real-time monitoring, day and night patrol, aerial forensics

Agile maneuvering, low cost, and simple maintenance enable SAGA to have the capability of rapid, real-time inspection and monitoring of forest areas. For a fire rescue operation, having an accurate grasp and timely understanding of various dynamic information can solve many problems such as night patrolling or flying in low visibility conditions due to smoke. This is all possible due to SAGA's infrared camera.

SAGA Case Study

2



Disaster Patrol

Content : SAGA can use the 30X optical zoom and infrared cameras for day and night inspection, replacing traditional methods of fire monitoring and effectively relaying information to the command center to facilitate better decision making and to minimize losses.

Advantages : Maneuverability, low cost, night flight

SAGA Case Study

3



Fire Area Calculation

Content : The fire area can be calculated by mounting a 4K HD or 30X optical zoom camera on SAGA and transmitting the information back.

Advantages : Full vision, efficient, accurate data feedback

A person wearing a blue uniform and cap is kneeling on a grey concrete floor, packing a dark-colored bag. A drone controller with a single antenna is lying on the floor to the left. The scene is dimly lit, with the person's face partially obscured by shadow.

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In Flight, Day and Night