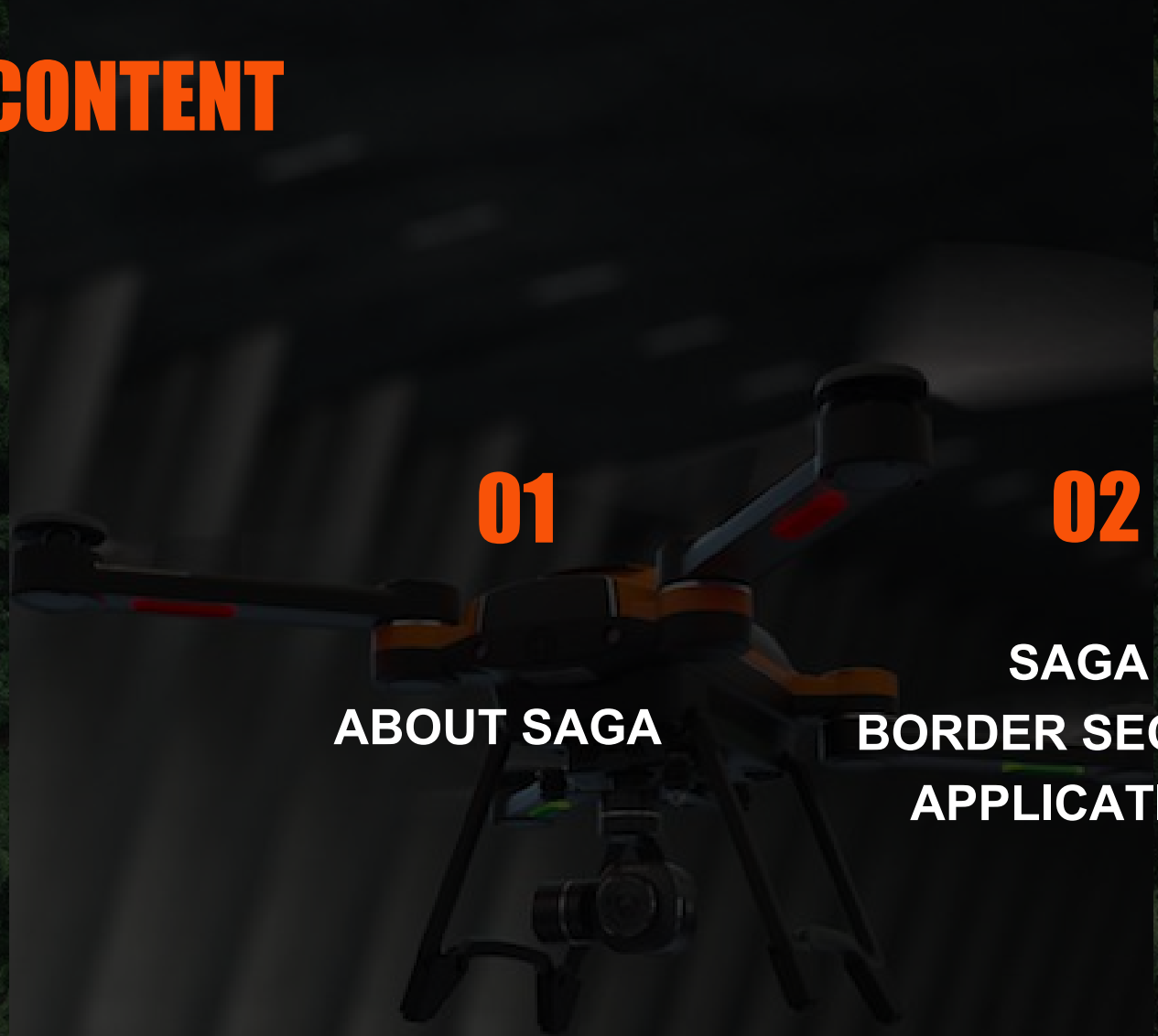
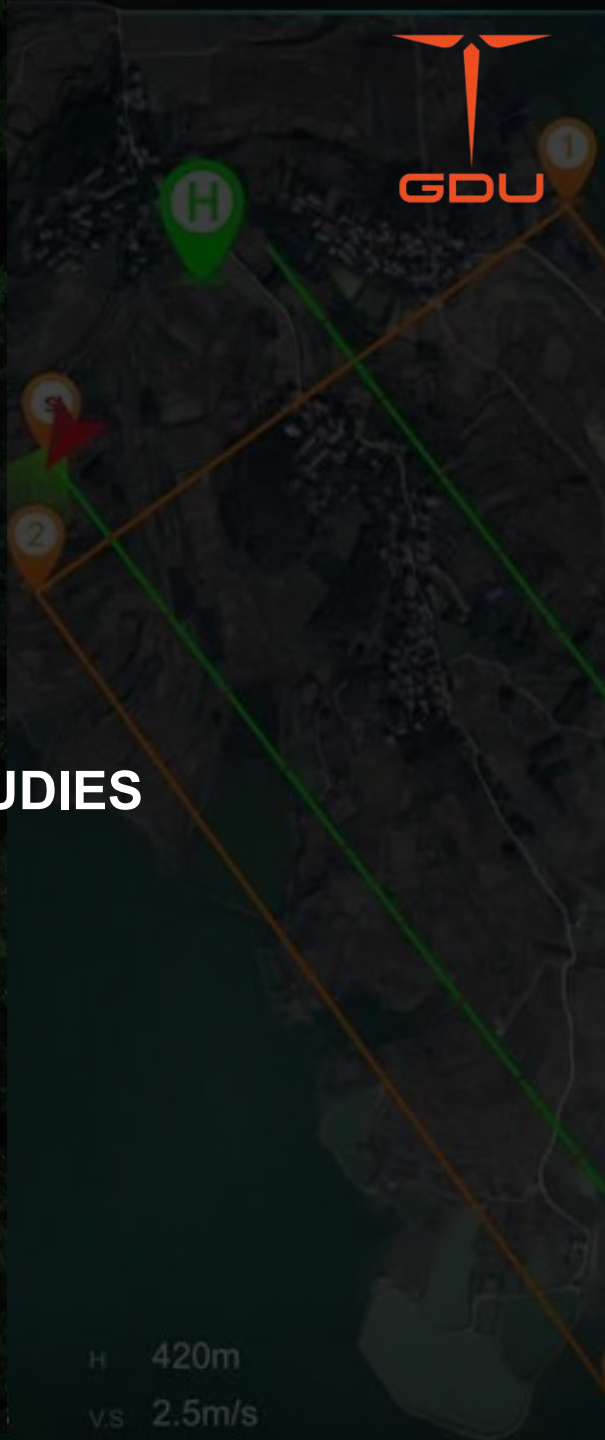
GDU | SAGA

In Flight, Day and Night

-BORDER SECURITY-

CONTENT





-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℃～ 50℃; Storage temperature: -40℃～ 60℃

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)

PM2.5 ≥2.5μ m, 0-1000ug/m3, ±15% (Optional)

2. Relative Humidity 0～100%RH, ±3%RH

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

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 ≤ 0.03 °;

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 ≤ 0.01 °;

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;

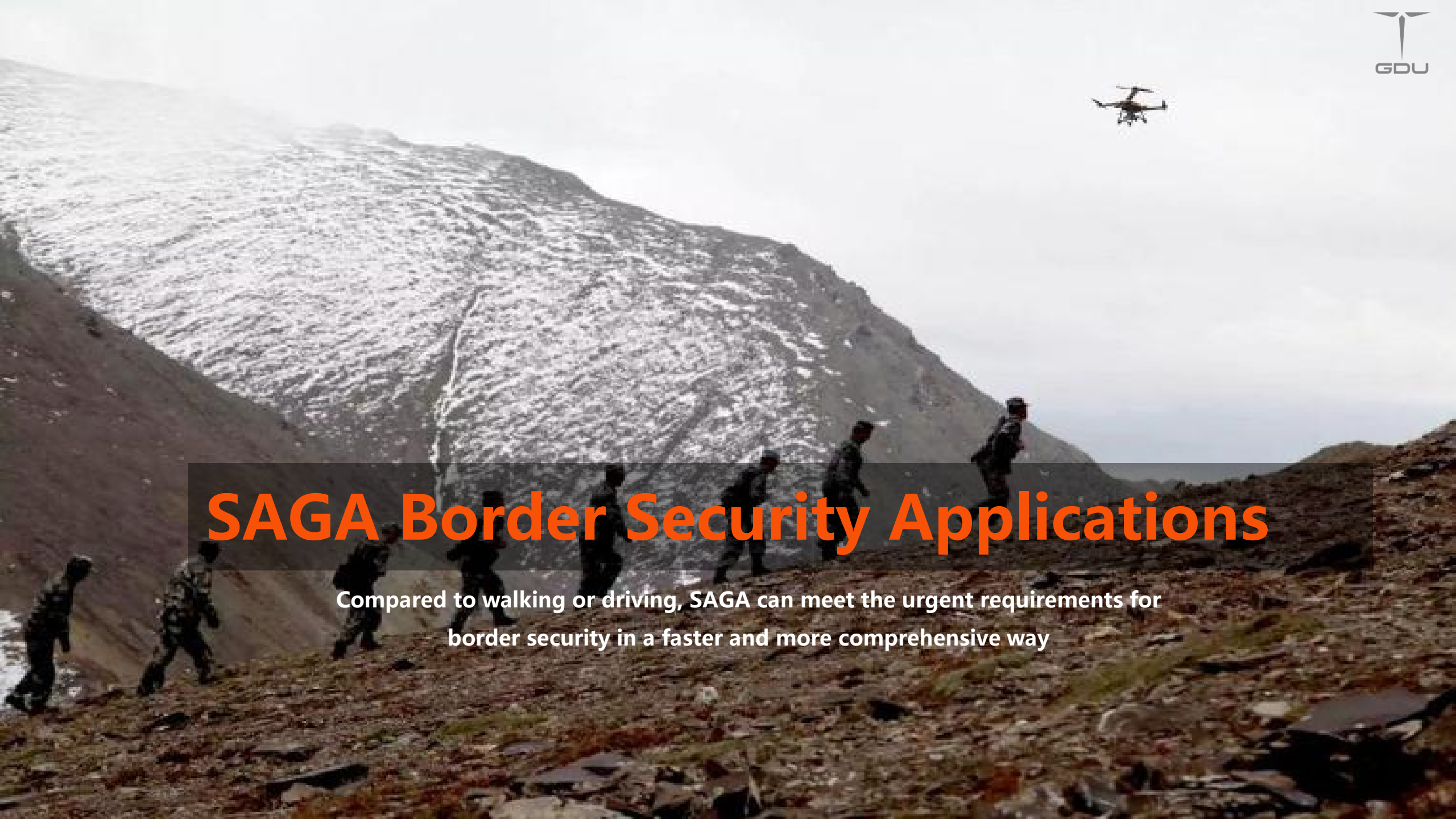
2: 12.4 million effective pixels SONY CMOS;

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 ≤0.01 °;

6: Optional wiring box, supporting SBUS, PWM, serial port control interface.



SAGA Border Security Applications

Compared to walking or driving, SAGA can meet the urgent requirements for border security in a faster and more comprehensive way

Border Security Management

- **Complex Environment**

  Borders cover large areas with extreme weather and terrain. Due to the complexity of the environment and the variety of geography, border security has its own difficulties and challenges.

- **Long Safety Cycles**

  Due to the vast area and complex environment, border security is difficult to carry out, resulting in longer shifts of border patrol and security personnel.

- **Limited Resources and Heavy Tasks**

  Border security resources and equipment are limited and responsibilities burden personnel

Traditional border security methods generally integrate border security personnel and border patrol equipment. , due to existing monitoring equipment, security personnel can't keep up with the demands of border security. Traditional methods are often unable to effectively deal with the challenges of border security.

Traditional Inspection Problems

Border security personnel patrol mainly by foot, horseback, and driving.

Difficult locations make it difficult to operate
Snow makes it difficult for patrols to cross mountains and streams

Vast areas make inspections time consuming

Weather, light, and obstacles can limit visibility

Resource allocation is inconsistent

The Value of SAGA Border Security

With the GDU SAGA for border security, we can achieve anything!

No blind spots, 360 ° monitoring, convenience, quick response, high quality data

To effectively respond to the challenges of border security and make up for the shortcomings of traditional methods:

Unconstrained by the complex geographical environment, the thermal imaging system, long-range HD video transmission system, and long-range audio transmission system carried by SAGA can efficiently and accurately assist the border security agencies in conducting border patrol, monitoring, as well as search and rescue.

Improve border security cycles:

Efficient implementation of fixed point, fixed time, and fixed route flight patrol can greatly improve border security cycles and the level of security provided.

Maximize the allocation of limited resources and strengthen communication:

Depending on the real-time situation of the selected area, the border security center can adjust and allocate limited border resources in a timely manner to achieve the optimal allocation of resources and maximize the efficient interconnectivity between the border security center, border personnel and border equipment, greatly strengthening the border security.

SAGA Border Security Applications

- **Border Security in Costal Areas**

By setting a route in the App, SAGA can conduct real-time, high-altitude detection according to the designated route area. You can monitor in real-time while effectively analyzing the security status of coastal areas.

SAGA Border Security Applications

- **Maritime Security and Fishing Vessel Management**

SAGA can carry out high-altitude monitoring and management of coastal waters day and night through HD and infrared payloads.

SAGA Border Security Applications

- **Coastal Waters, Entry and Exit Inspection**

  Since coastal areas have limited visibility, SAGA has the advantage of rapid response, accurate evidence collection and full vision. In addition to the intelligent HD and infrared payloads, SAGA can provide powerful data for border inspection and can effectively investigate incidents of drug smuggling.

SAGA Border Security Applications

- **Illegal Activity Monitoring**

  Through the use of HD and infrared cameras SAGA can rapidly patrol over a broad area allowing for accurate and efficient monitoring for suspicious individuals and vehicles on land and sea. SAGA can also provide strong air intelligence support and assist in other operations using payloads relevant to the situation like a megaphone or release canister.

SAGA Border Security Applications

Intelligence Processing

The command center can deploy SAGA in a moment's notice, monitor any site, and receive quick feedback in real-time.
For more efficient operational management, SAGA can make use of payloads like a megaphone and release canister while simultaneously tracking and monitoring.

SAGA Border Security Case Study

Case Study: Border Defense Group

Background Analysis: The Gobi desert complicates border security due to its remote location and extreme weather. Frontier forces use SAGA to replace traditional patrol methods and realize the transformation of adding a new element to patrolling: flight. Day and night infrared video monitoring equipment is installed for 24/7, all-weather monitoring.

SAGA Case Study

GDU SAGA - Border Security

GDU SAGA

4K HD

800X600 Infrared

30X

Equipment : GDU SAGA

Payload : 4K, 30X, Infrared

Work Content : Border patrol, infrared night patrol

Not limited by the environment, SAGA can take off and land at any time and anywhere, will collect evidence at rapid speeds through detection, monitoring, and patrol inspection. At the same time, intelligent payloads can obtain accurate data through a variety of means which brings great simplicity, speed, efficiency and accuracy to border inspection work.

SAGA Case Study

30X Optical Zoom Camera

Work Content： Replace traditional methods of monitoring with a 30X camera, able to detect the flow of people and vehicles in a target area while providing real-time data feedback.

Advantages： No blind spots, practical, accurate and real-time data feedback

SAGA Case Study

Night Time Infrared Inspection

Work Content : By carrying an 800x600 infrared thermal camera, SAGA can quickly show the real-time conditions of people, equipment, and animals in a target area while in flight, day and night.

Advantages : Full field of vision, easy monitoring, not affected by light or weather, accurate real-time data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