



Success Stories

A photograph of a construction worker from behind, wearing a white hard hat and a high-visibility yellow safety vest over a red plaid shirt. The worker is holding a black drone controller with a tablet screen. In the background, a drone is flying in the sky above a large industrial building under construction. A surveying instrument is visible in the foreground.

Enhanced Security Surveillance with Winmate UAV GCS

Winmate Was Chosen as the Provider of the UAV GCS Industrial Inspection Drone

Background

In modern industrial inspection and security applications, unmanned aerial vehicles (UAVs) have emerged as powerful tools. Drones can access narrow and hazardous environments, utilizing sensors and communication technologies for real-time monitoring and video capture. However, conventional drones face challenges such as flight stability, real-time tracking, and high-resolution video transmission in security scenarios. By leveraging wireless remote control and programmatic control capabilities, along with the integration of AI deep learning for rapid video analysis, the client achieved multi-modal target locking and real-time tracking for enhanced security surveillance. The control center, utilizing 5G network connectivity, sent control commands to the UAV flight control system, significantly improving the efficiency of traditional drones in security scenarios, enabling comprehensive and seamless security monitoring. The Winmate UAV GCS drone proved to be suitable for various inspection scenes such as storage tanks, sewers, bridge inspections, tunnels, boilers, factories, and pipelines.

Core Products

[G101TG](#) - 10.1" Intel® Tiger Lake Rugged Ground Control Station

[G101M9](#) - 10.1" ARM A73 + A53 Rugged Handheld Controller

Main Challenges

One of the primary challenges faced by the client was ensuring stable flight of the drone in challenging environments. Narrow spaces, strong winds, and obstacles posed difficulties for maintaining stable flight and maneuverability. The drone needed to be equipped with advanced flight stabilization systems and adaptive control algorithms to overcome these challenges and ensure safe and effective operations.

Real-time tracking and target locking were critical aspects of the client's security surveillance requirements. However, achieving accurate and reliable tracking in dynamic environments proved to be a challenge. The drone needed robust computer vision algorithms and advanced AI capabilities to track and lock onto targets in real-time, even in complex and changing scenarios.

The client's need for high-resolution video transmission posed another challenge. Traditional drones often struggled to transmit high-resolution videos in real-time due to bandwidth limitations and transmission latency. The drone needed to incorporate advanced video encoding and transmission technologies to ensure smooth and high-quality video streaming for effective monitoring and analysis.

Why Winmate

The Winmate UAV GCS industrial inspection drone is suitable for various inspection scenarios, including but not limited to storage tanks, sewers, bridges, tunnels, boilers, factories, and pipelines. It can efficiently perform inspections and monitoring in narrow and hazardous environments, ensuring operator safety.

- **Technological Expertise:**

Wimate is a well-established company with extensive expertise in the field of industrial technology. Our have a strong track record of developing innovative solutions for various industries, including industrial automation, rugged computing, and intelligent systems. Our expertise in integrating advanced technologies into their products made them a suitable choice for the UAV GCS industrial inspection drone.

- **Quality and Reliability:**

Wimate is known for delivering high-quality and reliable products. The industrial inspection drone needed to operate in demanding environments and withstand challenging conditions. Wimate's reputation for durable and robust solutions made them a reliable choice for the client, ensuring the drone's performance and longevity.

- **Customization and Adaptability:**

Wimate offers a flexible approach to meet specific customer requirements. The client needed a drone solution that could adapt to their unique inspection needs and integrate seamlessly with their existing systems. Wimate's ability to customize their products and provide tailored solutions made them a suitable partner for the client.

- **Strong Support and Service:**

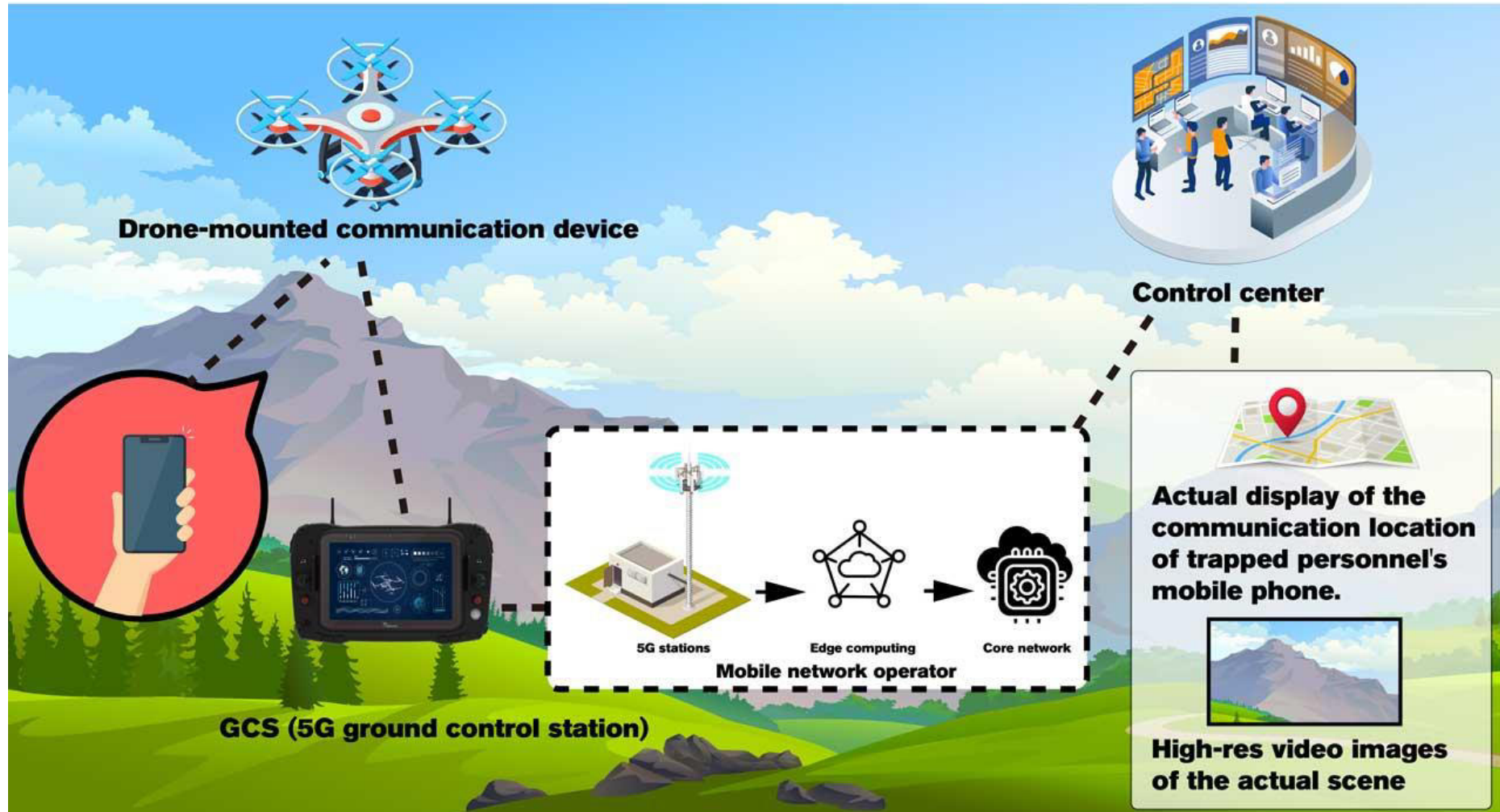
Winmate provides comprehensive support and service to their customers. Our offer technical assistance, training programs, and responsive customer support, ensuring that the client receives ongoing assistance throughout the implementation and operation of the drone solution. This level of support was crucial for the client to successfully deploy and utilize the industrial inspection drone.

- **Competitive Pricing:**

Winmate offers competitive pricing for their products without compromising on quality and performance. The client needed a cost-effective solution that would provide value for their investment. Winmate's pricing structure made their drone solution an attractive option for the client, balancing affordability with the required functionality.

Overall, Winmate's technological expertise, quality and reliability, customization capabilities, strong support and service, and competitive pricing were the key factors that led the South American client to choose them as the provider of the UAV GCS industrial inspection drone.

Application Diagram



Related Products



Winmate G101TG

- 10.1" Intel® Tiger Lake Rugged Ground Control Station
- Low Latency video SW decoder for real-time high-resolution video viewing
- All-weather, dust, and water-resistant design (IP65). MIL-grade drop, Shock and vibration
- Supports optional WIFI, BT and 4G/5G
- Embedded TPM IC and Optional OPAL SSD
- With a removable second battery and a battery life of over 10 hours is a must-have tool for serious UAV pilots



Winmate G101M9

- 10.1" ARM A73 + A53 Rugged Handheld Controller
- Low Latency video SW decoder for real-time high-resolution video viewing
- All-weather, dust, and water-resistant design (IP65). MIL-grade drop, Shock and vibration
- Supports optional WIFI, BT and 4G
- With dual antennas, providing improved wireless connectivity and stability
- With a removable second battery and a battery life of over 10 hours is a must-have tool for serious UAV pilots