Success Stories

Empowering Comprehensive Security Solutions

Winmate UAV GCS (Ground Control Station) for Inspection, Security, and Rescue Operations.

Background

With the invention of unmanned aerial vehicle (UAV), numerous aspects of people's lives have been significantly improved. The advent of 5G technology has become a key driver of UAV's technological advancements. The integration of intelligent platforms and cellular networks has transformed UAVs, enabling them to break through existing limitations. This not only revolutionizes crisis management practices but also enhances overall safety. Unmanned Aerial Vehicle (UAV), also known as drones, have experienced tremendous growth in the global market over the past decade, becoming essential tools in commercial, government, and consumer applications. Drones provide solutions across various fields and can be widely applied in construction, oil and gas, energy, utilities, and agriculture. With the rapid development of communication technology, drone applications are flourishing in various sectors. The integration of 5G communication modules with cloud-based drone management platforms enables remote scheduling, video access, and clear and fast transmission of visuals. This allows commanders to have a clear view of real-time ground situations and make strategic decisions. In public safety operations, typical network requirements for drones include real-time video transmission (multi-path), flight status monitoring, remote control, and network positioning. Drones are increasingly being used in inspection, security, rescue, and other fields due to their low cost, high flexibility, enhanced safety, minimal susceptibility to natural environments and terrain, and improved perspectives.

Core Products

G101TG - 10.1" Intel® Tiger Lake Rugged Ground Control Station

G101M9 - 10.1" ARM A73 + A53 Rugged Handheld Controller

Main Challenges

In South America, the customer faced various challenges in their inspection, security, and rescue operations. Conventional methods were often time-consuming, costly, and lacked real-time visibility, hindering their ability to respond effectively to critical situations. There was a need for a comprehensive solution that could provide efficient and reliable surveillance, enhance security measures, and optimize resources.

Why Winmate

The Solution: Winmate UAV GCS (Ground Control Station) and 5G Drones

To address these challenges, the customer implemented Winmate UAV GCS (Ground Control Station) and integrated 5G drones into their operations. Winmate UAV GCS (Ground Control Station) served as the ground control station software, enabling remote control, monitoring, and data analysis of the drone fleet. The integration of 5G technology unlocked new possibilities for real-time data transmission, empowering the customer with enhanced situational awareness and improved operational efficiency.

Key Features and Benefits:

- **Real-time Video Transmission:**
  The combination of Winmate UAV GCS (Ground Control Station) and 5G drones facilitated real-time video transmission, enabling command personnel to have instant access to on-site visuals. This allowed for immediate decision-making and response coordination, improving overall situational awareness.

- **Advanced Data Analysis:**
  The customer leveraged the AI capabilities of Winmate UAV GCS (Ground Control Station) to analyze the video feeds and data collected by the drones. This provided valuable insights and actionable information, enabling more informed decision-making and resource optimization.

- **Enhanced Security and Safety:**
  By utilizing drones equipped with 5G communication modules, the customer enhanced security measures and reduced risks to personnel. Drones could efficiently monitor public spaces, conduct inspections, and respond to emergencies without human presence in hazardous areas.

- **Efficient Resource Allocation:**
  The integration of Winmate UAV GCS (Ground Control Station) and 5G drones allowed for optimal resource allocation. The real-time data and video feeds provided by the system enabled command personnel to allocate resources effectively, prioritize critical areas, and make timely decisions, improving operational efficiency.

- **Versatile Applications:**
  Drones equipped with Winmate UAV GCS (Ground Control Station) and 5G technology found applications in a wide range of fields, including inspection, security, and rescue operations. Their flexibility, cost-effectiveness, and improved perspectives made them valuable assets in addressing various challenges.

Results and Impact:

The implementation of Winmate UAV GCS (Ground Control Station) and 5G drones brought about significant results and impacts for the South American customer:

- **Enhanced Efficiency:**
  The integration of Winmate UAV GCS (Ground Control Station) and 5G drones streamlined inspection, security, and rescue operations, resulting in improved efficiency and reduced response times. Real-time data transmission and advanced analytics allowed for quick decision-making and effective resource allocation.

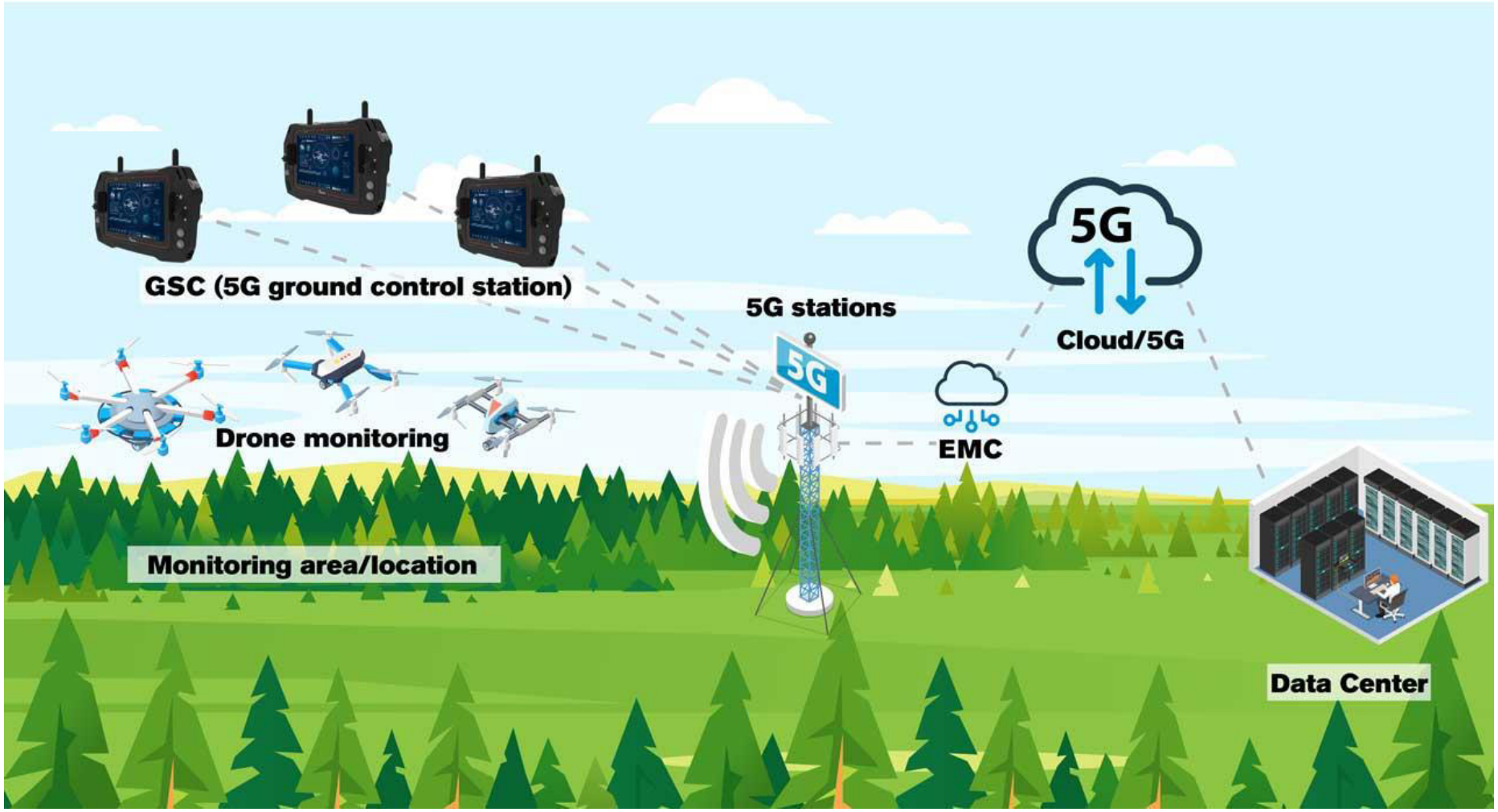
- **Improved Safety:**
  By leveraging drones with 5G communication capabilities, the customer minimized risks to personnel by avoiding direct exposure to hazardous environments. Drones provided a safer means of monitoring and responding to critical situations.

- **Cost Optimization:**
  The adoption of drones with Winmate UAV GCS (Ground Control Station) and 5G technology reduced operational costs by minimizing the need for manual inspections, physical security presence, and rescue personnel in dangerous areas. Efficient resource allocation and real-time data analysis led to cost savings.

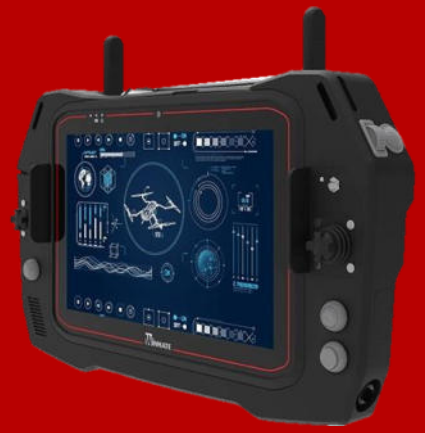
- **Future Opportunities:**
  The successful implementation of Winmate UAV GCS (Ground Control Station) and 5G drones opened doors to future advancements and opportunities in public safety. The versatility of the solution allowed for continuous improvements and adaptation to evolving challenges.

The South American customer's utilization of Winmate UAV GCS (Ground Control Station) and 5G drones exemplifies the transformative potential of integrating cutting-edge technologies into inspection, security, and rescue operations. By harnessing the power of real-time data transmission, advanced analytics, and improved situational awareness, the customer achieved enhanced efficiency, safety, and cost optimization. This success case serves as a testament to the valuable role that drones equipped with Winmate UAV GCS (Ground Control Station) and 5G technology play in public safety, unlocking new opportunities and revolutionizing operations in South America and beyond.

Application Diagram

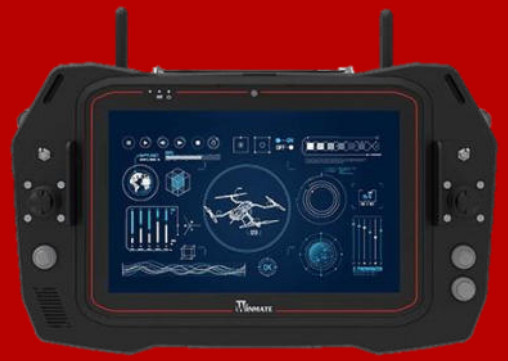


Related Products



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