WINMATE

Success Stories

Underwater Drone Remote Control Just Got Way More Remote

Bringing affordable insights to the surface

Background

In a seamless synergy, the Nordic Robotics company's underwater drone and Winmate's cutting-edge robotics controller unite to redefine the possibilities of subaquatic exploration. This partnership has unlocked new frontiers in efficiency, precision, and discovery beneath the waves. By integrating Winmate’s robotics controller technology, the collaboration is pushing the boundaries of what’s possible in underwater robotics.

Main Challenges

In this collaboration, several key challenges were addressed. Integrating the Nordic Robotics company’s advanced underwater drone with Winmate’s robotics controller required seamless compatibility and optimization in subaquatic environments. Ensuring environmental durability was crucial, as both technologies had to withstand harsh underwater conditions, including high pressure, temperature variations, and saltwater exposure.

Real-time data processing posed a challenge, demanding low latency and high-resolution video streaming. Reliable communication was essential, requiring robust signal transmission and data integrity solutions. Power management was a concern, with the need for sufficient battery life for extended missions. Lastly, customizing Winmate’s robotics controller to meet the specific needs of underwater exploration involved adapting the technology to unique operational requirements.

Inspection-class underwater drones, also known as remotely operated vehicles (ROVs), have now been enhanced with live remote-control technology developed by Nordic Robotics company. This innovation allows ROVs to be operated from thousands of miles away by multiple users through web-browser-enabled systems.

Nordic Robotics company's technology enables real-time control of ROVs, Hybrid ARV autonomous underwater vehicles (AUVs)/tethered ROVs, and Nordic Robotics company Connect networked underwater camera systems using the Live Remote Control browser-based app. For instance, an operator in Norway can control an ROV in an aquaculture farm off the coast of Chile. This technology also facilitates real-time data sharing among different branches or global offices, enhancing coordination and decision-making across locations.

Core Product

- **G101TG** - 10.1-inch Intel® Tiger Lake Rugged Ground Control Station

Why Winmate

- **Low Latency Video SW Decoder:** Enables real-time high-resolution video viewing.
- **Durable Design:** All-weather, dust, and water-resistant (IP65), with MIL-grade drop, shock, and vibration resistance.
- **Connectivity Options:** Supports WiFi, Bluetooth, and optional 4G/5G.
- **Built to Withstand Harsh Conditions:** The Robotic Controller features a durable plastic casing, rugged connectors for easy integration, and ensures reliable operation down to -20°C.
- **Security Features:** Equipped with an embedded TPM IC and optional OPAL SSD.
- **Improved Wireless Connectivity:** Ensures robust and reliable communication.
- **Extended Battery Life:** Comes with a removable second battery, offering over 10 hours of use, making it an essential tool.
- **Customizable:** Tailor the design to your specific needs, including adjustments to button layout, graphics, and other features.

Winmate is renowned for its innovative technology and robust solutions, making it a trusted partner in various industries. Their advanced robotics controllers and ground control stations are designed for durability and high performance, ensuring reliable operation in challenging environments. This expertise in robotics controllers made Winmate the ideal choice for a collaboration aimed at enhancing underwater operations.

Application Diagram

Related Product

Winmate **G101TG**

- 10.1” Intel® Tiger Lake Rugged Robotic 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 WIFI, BT and optional 4G/5G
- Embedded TPM IC and Optional OPAL SSD
- Providing improved wireless connectivity and stability Ground Control Station
- With a removable second battery and a battery life of over 10 hours is a must-have tool for serious UAV pilots