



Overview: Agricultural Technology Solutions

Agricultural technology is revolutionizing the farming industry by enhancing productivity, sustainability, and efficiency. With innovations such as GPS/GNSS-based machine control, precision farming, IoT devices, and data-driven software, AgTech helps farmers optimize operations, reduce waste, and improve crop yields. These solutions tackle key challenges like resource management, climate change, and labor shortages, enabling more informed decision-making and promoting sustainable farming practices for a resilient future.

Region US

Industry Agriculture

Solution RuggON Vulcan Series VX-601



Challenge:

Cook's AGPS LLC, an agriculture hardware and software integrator specializing in outfitting tractors, addressed significant issues with vibration and shock faced by steel track machines operating in hard or frozen ground. These challenges affected system performance and operator visibility, requiring a solution capable of withstanding harsh conditions while seamlessly integrating with the company's RTK GPS and machine control systems.

Background:

Cook's AGPS LLC, with over 20 years of experience in the agriculture market, is a leader in water management software and control systems. Specializing in GPS/GNSS-based machine control and mapping, the company has pioneered innovations, including the first RTK GPS machine control system for tile plows. The company needed to enhance its systems for more precision and reliability, particularly for farming operations that involve high vibration, extreme temperatures, and intense sunlight.





Product Selection & Solution:

Product:

The RuggON Vulcan Series VX-601 12" Ruggedized Vehicle Mount Computer was selected for its durability and reliability in challenging agricultural environments.

Key Features:

- 1200nits High-Brightness Touchscreen: Ensures clear visibility in bright sunlight.
- Rugged Design: MIL-STD-810G certified for shock and vibration resistance.
- Connectivity: Includes interfaces like CAN bus, serial ports, Ethernet, USB, DI/O, and auto-dimming.
- Wide Operating Temperature Range: Suitable for outdoor agricultural use in extreme temperatures.
- Graceful Shutdown: Protects the system for longer life.



How the Solution Resolved the Customer's Issue:

The solution effectively addressed the customer's needs by incorporating several key features designed for demanding agricultural environments. The VX-601's MIL-STD-810G certification ensures it can withstand the harsh shocks and vibrations typical of agricultural machinery, preventing system malfunctions. Its 1200-nit high-brightness screen guarantees excellent visibility, even under direct sunlight, allowing operators to easily read system data. The dual serial ports enhance connectivity, enabling seamless integration with RTK GPS solutions and machine control modules for precise hydraulic system performance. Furthermore, the user-friendly 12-inch screen and intuitive programming buttons streamline operation, improving both efficiency and safety for the user.

Why Cook's AGPS LLC Chose RuggON:

Cook's AGPS LLC chose RuggON for its VX-601 rugged solution due to several key factors that aligned with their operational needs. First, the superior brightness of the VX-601, with its 1200-nit display, stands out compared to many competitors, providing clear visibility even in challenging lighting conditions, such as direct sunlight. Second, the versatile connectivity options, including a range of ports and interfaces, allow the VX-601 to support various agricultural applications, ensuring compatibility with different systems and technologies. Lastly, the rugged durability of the VX-601, specifically its shock and vibration resistance, makes it a perfect fit for the harsh agricultural environment, where many commercial products often fail to perform reliably.

Result After Implementing the RuggON Solution

The RuggON Vulcan Series VX-601 helped Cook's AGPS LLC enhance its operations by providing better durability and visibility in challenging conditions. The all-in-one design streamlined integration, reducing installation time and minimizing compatibility issues. The high-brightness screen ensured that operators could clearly read vital data, even in direct sunlight. The rugged design withstood the harsh agricultural environment, ensuring continuous, reliable performance.

Key Takeaways:

- **Versatility:** Offers various screen sizes and operating systems tailored to different agricultural applications.
- **Efficiency:** Reduced installation time and minimized compatibility issues with the all-in-one design.
- **Durability:** Withstood the harsh agricultural environment, ensuring reliable performance in challenging conditions.

