



Case Study

Maximizing Nordic Forest Harvester Productivity with Darveen RTC-I116

Northern Europe is renowned for its expansive and dense forests, spanning Sweden, Finland, and Norway. These forests support a robust forestry sector that feeds a thriving timber and paper industry, while simultaneously sustaining local economies and employment. Efficient forest operations require precise planning, reliable machinery, and real-time access to operational data to maximize productivity while safeguarding environmental resources. Modern forest harvesters and logging equipment play a crucial role in ensuring operations are both efficient and sustainable

The Challenge

Operating a fleet of forest harvesters in Nordic forests presents unique logistical and technical challenges. Machines must navigate steep terrains, snow-laden paths, and remote forest areas where weather conditions frequently change. Monitoring each harvester's location, operational status, and productivity is critical, yet conventional consumer-grade tablets are ill-suited to such harsh environments. Issues such as limited screen visibility

under bright sunlight, susceptibility to water or dust, and limited battery life can disrupt operations.

Moreover, forest operators must manage a wide range of operational parameters, from arm and head control to engine performance, fuel consumption, and production tracking. Accurate field data collection is indispensable for forest inventory and predictive maintenance planning. Without rugged devices capable of running advanced management software, operators risk losing critical insights into log measurement, tree processing, and overall fleet performance.

Implementing the RTC-I116 Solution

A forestry operator in a Nordic country, guided by an experienced system integrator, selected the [RTC-I116](#) industrial-grade [rugged tablet](#) to address these challenges. The RTC-I116 became the primary interface for the operator's software system, allowing harvester crews to monitor and analyze data from all their machines in real time.

Using the RTC-I116, operators can track forest harvester locations, review production data, and generate detailed reports directly in the field. With strong connectivity and intuitive visualizations, managers can coordinate multiple machines, monitor key metrics like log measurement, fuel use, and downtime, and perform continuous field data collection for better forest inventory and fleet optimization.

Rugged RTC-I116 for Special Challenges and Better Productivity

The RTC-I116 is engineered to thrive in the most demanding forestry environments:

- 11.6-inch 1,000 nits sunlight-readable touchscreen: Ensures precise operation even under direct sunlight, and supports glove-friendly use for field operators.
- Military-grade durability: Compliant with MIL-STD-810H, the tablet withstands shocks, drops, and vibrations from heavy forest harvesters.
- Weatherproof design: IP66-rated housing protects against dust and water, enabling operation in snow, rain, and muddy conditions.
- High-performance computing: Equipped with 12th gen Intel® Core™ processor, it runs complex fleet management software smoothly, producing real-time reports for overall harvest tracking.
- Enhanced GPS capabilities: High-precision positioning allows managers to track machinery accurately and plan time-saving routes across forest plots.
- Flexible accessories: Available with vehicle dock and vehicle charger for in-cabin installation and continuous operation, as well as hand strap and shoulder strap for mobile use in the field, providing flexibility between in-vehicle and handheld workflows.

These features ensure that operators can continue working uninterrupted in extreme environments, while fleet managers gain visibility into all aspects of harvester performance and forest inventory.

Benefits and Outcomes

By integrating the [RTC-I116](#) rugged tablet, the Nordic forestry operator realized significant improvements across fleet operations:

- Optimized harvesting routes: Real-time machine tracking enabled operators to plan the most efficient paths, reducing fuel use and minimizing environmental impact.
- Predictive maintenance: Continuous monitoring of machinery performance allowed proactive servicing, preventing unexpected



downtime and costly repairs for logging equipment.

- Comprehensive data reporting: Operators could generate detailed operational reports on-site, including production statistics, fuel consumption, and machine alerts.
- Improved productivity: By combining high-performance computing with a rugged design, crews were able to complete tasks more efficiently and safely in all weather conditions.

Conclusion

Through the deployment of [RTC-I116](#) rugged tablets, the Nordic forestry operator successfully modernized its forest harvester fleet management. The tablets provide a reliable and durable interface for advanced operational software, enabling comprehensive monitoring, predictive maintenance, and efficient resource allocation. By combining robust hardware with sophisticated data analysis and Field Data Collection, the operator can maximize productivity, reduce downtime, and maintain control over complex forestry operations.

About Darveen

Darveen is a global solutions provider specializing in rugged industrial computing for harsh and demanding environments. Founded in 2007, we focus on panel computing and offer a comprehensive product portfolio including vehicle mount computers, industrial panel PCs, embedded box computers, in-vehicle computers, and rugged tablets. Our solutions are widely used in smart ports, logistics, heavy-duty vehicles, and more. As Industry 4.0 advances, we continue expanding into edge computing, industrial automation, medical, and marine sectors—delivering reliable, customized systems through agile and efficient manufacturing.

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