

NATURAL RESOURCES

From forest site to inventory management – fast, accurate and reliable.

How the German Lower Saxony State Forestry Authority is using the Getac F110 to speed up timber harvesting and avoid costly downtime.

With 330,000 hectares of managed forest land, around 1,350 employees and an annual turnover of approximately 160 million euros, Niedersächsische Landesforsten (Lower Saxony State Forestry Authority) is one of Germany's largest forestry operations. In addition to the sustainable management of the state's forests, it undertakes numerous public service tasks and provides services for the state of Lower Saxony. Niedersächsische Landesforsten is systematically digitising its timber harvesting processes right through to inventory management.

/ Challenge /

Timber stacks must be recorded directly on the forest site immediately after felling and added into the inventory management system with precise location data; this takes place outdoors all year round, often during the peak winter season and in areas with limited mobile network coverage. To achieve this, the district management requires fail-safe, high-performance devices that can reliably cope with these conditions and ensure stable processes.

/ Solution /

In a demanding tender process, which included a practical test in the forest, the fully rugged Getac F110 tablets and its VGPS Software outperformed several competitors and replaced the devices previously in use. Today, Lower Saxony State Forestry Service uses around 600 of these rugged tablets in the field, for example for timber measurement, mapping, planning and monitoring of nature conservation measures (including GPS-based coordinates and photo-optical volume measurement), and subsequently synchronises the data automatically with the central inventory management system.

/ Benefits /

Seamless, fully integrated processes from the forest site right through to the ERP system speed up timber recording and improve efficiency and data quality. Precise location data, automated analysis of timber stack images and seamless transfer to the inventory management system speed up workflows and contribute directly to profitability.

Thanks to high reliability, hot-swappable batteries and matching accessories, costly downtime is avoided. The display remains clearly readable even in difficult lighting conditions and enables quick on-site decision-making.

/ Lower Saxony State Forestry Authority /

"The Getac F110 enables time-saving timber recording whilst maintaining high data quality. Thanks to the VGPS software integration and image analysis directly in the forest, we work without workflow interruptions between field operations and the inventory management system. The fact that hot-swappable batteries and tailored accessories prevent costly downtime makes the solution completely reliable for us."

Fritz Hofheinz, Head of Forestry Applications,
Niedersächsische Landesforsten



Getac F110
Fully Rugged Tablet

/ Challenge /

With 330,000 hectares of managed forest land, around 1,350 employees and an annual turnover of approximately 160 million euros, the Lower Saxony State Forests is among the largest forestry operations in Germany. In addition to the sustainable management of the state-owned forest, they undertake numerous public welfare tasks and provide services for the state of Lower Saxony. In addition, they manage a further 77,000 hectares of woodland on behalf of local authorities and forestry cooperatives. A large proportion of its revenue comes from the sale of raw timber, a natural product that varies greatly in quality, dimensions and location, and which requires recording that is both precise and flexible. In the forests managed by Niedersächsische Landesforsten just under 6,000 solid cubic metres of timber regrow every day – around 250 solid cubic metres per hour.

To ensure that the harvesting and logistics processes run smoothly, timber stacks must be recorded immediately after felling and entered the inventory management system, each with details of quantity, quality and exact location. And this must always be done accurately, quickly and reliably, even under the most adverse environmental conditions. Across an area of 330,000 hectares, details such as the side of the road, the position relative to the road and the optimal approach angle for lorries are crucial, as the logistics operations rely entirely on this data.

The main felling season is in winter, when snow, rain, cold and changing light conditions make the work more difficult; added to this is the fact that mobile network coverage in the forest is sometimes limited. Forest district managers therefore require reliable, high-performance devices that can be used offline, withstand long working days and integrate seamlessly into day-to-day office work without any extra effort. To meet these requirements, Niedersächsische Landesforsten defined stringent criteria and subjected rugged tablets from several suppliers to an evaluated testing process.

/ Solution /

The high-performance Getac F110 G7, deployed together with Getac Platinum Partner Mettenmeier, emerged from this process as the best solution: it met all the defined criteria and replaced the tablets previously used in the field. Around 600 devices are in use and form the basis for timber recording, mapping, nature conservation monitoring and other applications in the field.

The most important process begins where the timber is produced: in the forest. After felling and hauling the timber to the forest track, the district managers use specialised offline mobile software directly on the F110 G7 to record all relevant data: from quantity and dimensions, through quality characteristics, to the location of the timber pile. The Getac VGPS software, used as part of the overall solution, utilises the integrated GPS module to determine the coordinates and transfer them directly to the timber recording software; this eliminates the data discontinuity that would arise if location information and timber data had to be recorded separately and merged later.

The tablet's rear camera takes clear photographs of the timber stacks; an application analyses the images, counts the logs and calculates the volume in solid cubic metres or stacked cubic metres. This speeds up quality control, makes results more comparable and enhances the data quality for downstream decisions.

The F110 G7 really comes into its own in the interaction between field staff and the office: after a day's work in the forest, the tablet is placed in the docking station and functions as a fully-equipped Windows workstation with an external keyboard, mouse and monitor. Data recorded offline is automatically synchronised with the central inventory management system when connected to the network, without the need for additional exports or imports. Based on modern technologies, the Getac rugged tablet combines data collection in harsh outdoor environments with further processing in the office to form a seamless process that

minimises friction and enables high efficiency. In general, the Getac F110 offers particularly long battery life. For very long shifts, two hot-swappable batteries per device and additional spare batteries per district manager are provided, which helps to avoid costly downtime in the forest.

Accessories such as docking stations, rugged keyboards and carrying straps were procured as part of the tender process and are precisely tailored to the requirements of the staff in the forest district.

/ Benefits /

The Getac solution combines rugged devices based on modern technologies with specialised applications and tailored accessories to form a highly efficient end-to-end solution, from the forest track right through to inventory management. Data is captured where it is generated, processed seamlessly without any media breaks, thereby enabling fast, stable processes in timber harvesting, planning and logistics.

The F110 G7's high reliability – thanks to its fully rugged design, hot-swappable batteries and resistance to cold, heat, moisture and impacts – ensures smooth, dependable operations. The display remains clearly readable even in difficult lighting conditions; the touchscreen and stylus can be operated precisely even whilst wearing gloves, ensuring a high level of user comfort in day-to-day work.

Consistent, end-to-end processes from the forest track to the desk speed up workflows, reduce sources of error and thereby boost the efficiency, quality and profitability of forestry operations. The combination of the fail-safe Getac rugged tablet, powerful software and tailor-made accessories not only meets the demanding criteria of Niedersächsische Landesforsten but also takes timber recording harvesting data capture to a new, highly efficient level.

