Getac

Rugged Mobile Computing Solutions

NATURAL RESOURCES

Getac Fully-Rugged T800 Thrives in the Cold

Extreme reliability & performance enables hassle-free forestry

/ Challenge /

The Biodiversity Exploratories open research platform is the largest of its kind in Europe, researching land use influences on biodiversity. All trees on all 150 forested study plots are inventoried at five-year intervals, ideally in winter. But a forest survey is data-intensive outdoor work, requiring a tablet computer with powerful wireless GPS capabilities that can run the requisite mapping and inventory software continuously, no matter what cold and wet conditions are encountered.

/ Solution /

The fully-rugged Getac T800 Windows tablet has been used successfully on these inventories for three years, acquitting itself admirably even in the harshest wintertime conditions, enabling smooth and swift real-time data collection all day, every day, for weeks at a time. Its sunlight-readable touchscreen responds instantly and flawlessly, even in extreme cold, snow, or rain, while its slim form factor sits comfortably in hand for long periods.

/ Benefits /

The T800 enables very large amounts of survey work to be done on short winter days, with no time lost due to screen, processing, wireless, or battery issues or any other mechanical problems. In the words of Dr. Julia Bass, "Large amounts of data can be collected easily, quickly, and securely in all weather conditions, and the tablets can withstand rough outdoor use without problems or failures."

/ Biodiversity Exploratories /

"Since we switched to Getac T800 tablets three years ago, our inventory processes have been uninterrupted and highly efficient. They withstand winter cold, humidity, and harsh environment without problems and are very comfortable to use. Despite being severely challenged by the cold and used daily for several weeks in winter, the T800 has supported the team since its first use with complete ease and fail-safe operation."

Dr. Julia Bass - Area Manager

Getac T800
Fully Rugged Tablet

/ Challenge /

The Biodiversity Exploratories have been carrying out biodiversity studies on managed areas for 15 years, with study zones established in Germany's protected forests and grasslands. At these sites, around 250 researchers from various disciplines are addressing biodiversity issues, researching how land usage intensity correlates with the biodiversity of particular interest.

Dr. Julia Bass, Area Manager, said, "The increasing loss of biodiversity poses an existential threat. Land use and its intensification are considered the main cause. Since at the same time, the effects of these changes are difficult to predict, research into biodiversity in used landscapes is enormously important."

To assess these effects on forest land, a complete tree inventory is carried out every five years across 150 study zones. Winter is often the best time for such inventories, as the reduced foliage makes outdoor survey work easier, with growth progress for an entire year easier to measure.

But German winters can be tough on both surveyors and their equipment, and this work cannot be done at night, nor can it be done by a drone, leaving a relatively short winter daytime window where a lot of trees must be counted, in person, on-site, with a lot of ground to cover.

Tablet computers used in this work must withstand drops, impacts, and other rough treatment and still send and receive map-related data in real-time, no matter how remote or tree-covered the current location, without being hindered by cold, rain, snow, or battery difficulties.

Biodiversity Exploratories tried other tablets, but they couldn't measure up. According to Dr. Bass, "Due to the year-round work and sometimes very harsh environmental conditions in our study areas, we need absolutely reliable equipment. The amount of data to be collected is very large and the time we have to do it is extremely short. Travel distances are sometimes long, and it gets dark early in winter, so we depend heavily on fast processes and fail-safe equipment."

/ Solution /

For three years, the fully-rugged T800 tablet from Getac, running Field-Map inventory software, has been used successfully in Biodiversity Exploratories' forest survey work, supplemented by an electronic compass and TruePulse 360R Laser Rangefinder (connected to the tablet via Bluetooth).

Fast responsiveness for the combined hardware and software, and secure communication between these various devices, are critical to surveying the maximum number of trees per day. It takes two to three people per plot per day to do this, and they record enormous amounts of data while sending and receiving GPS data simultaneously, all of which the T800's extreme performance and connectivity can handle with ease.

The touchscreen can also be operated with a stylus or gloved finger touch, facilitating data input in the rain, snow, or other wintry conditions, with data fed easily into spreadsheets and later processed further at the office.

This fast and secure data processing, along with the T800's high-quality 8" display (which is easily read even in sunlight), teams make quick progress with their work without any operational interruptions due to battery failures (which can be a problem in cold weather).

/ Benefits /

The fully-rugged T800 can be used all day, every day, for months at a time, even in extreme conditions, and this has greatly impressed Biodiversity Exploratories. According to Dr. Bass, "Since we switched to Getac's T800 tablets, our inventory processes have run without interruption and a problem. Any failure would bring the whole process to a standstill because we only have a limited amount of time to work with. The impressive battery life of the T800 also helps us a lot. We can charge the batteries at night in the office, so they last a whole day in the forest, even in very cold conditions, and daily use for several weeks."