Getac

Rugged Mobile Computing Solutions

NATURAL RESOURCES

FROM FIELDWORK TO THE LAND REGISTER – PRECISE, RELIABLE, FUTURE-PROOF

HOW LDBV USES THE GETAC CUSTOMISED K120 TO RELIABLY DIGITISE OFFICIAL SURVEYING IN BAVARIA GERMANY, FURTHER INCREASING EFFICIENCY

The State Office for Digitalisation, Broadband and Surveying (LDBV), based in Munich, is the central authority responsible for official state and cadastral surveying in Bavaria Germany. Across Bavaria, it oversees 51 Regional Offices for Digitalisation, Broadband and Surveying (ÄDBV) with 22 branch offices. Over 500 survey teams from the ÄDBV maintain the approximately 10 million digital parcels in the land registry on a daily basis and carry out some 10,000 land surveys and building measurements each year.

For its Bavaria-wide field operations, the LDBV relies on 739 fully rugged, customised Getac K120 devices running the Linux operating system. These enable the necessary data to be captured directly on site, can withstand even extreme weather conditions, and have replaced the rugged notebooks from another manufacturer previously in use as a reliable long-term solution.

/ Challenge /

The Bavarian cadastral survey is carried out by public authorities in the field, all year round, whatever the weather. Boundary points must be recorded accurately on site, so fail-safe equipment is essential. Linux is also a mandatory requirement, and driver support for this operating system has traditionally been difficult to obtain. In the tender process, the best offer had to prevail against numerous competitors.

/ Solution /

In the Europe-wide tender, the Getac K120 prevailed over several competitors and replaced the rugged notebooks previously in use. Getac supplied specially customised device drivers for Linux for this purpose. Since autumn 2025, the 739 K120 detachables have been in use at 51 offices and 22 branch offices; a further step towards technical innovation for Bavaria.

/ Advantages /

The technologically advanced, high-performance Getac K120 combines flexible tablet use with a robust full-size keyboard, a precise digitiser and compatibility with the Linux operating system. High reliability, high-performance batteries and a display that remains perfectly legible and offers stable viewing angles even in direct sunlight ensure reliable operations in all weather conditions. Long device battery life, a 5-year extended warranty and Getac's long-term product lifecycle policy makes the K120 an excellent, sustainable solution for the LDBV for years to come.

/ LDBV /

"For a roll-out on this scale, the introduction of the Getac K120 went really well. The devices have been working reliably so far, and even in the few instances where service was required, the collaboration was straightforward. As a public authority, we use our Getac devices for as long as possible; with a service life of six to eight years, we are also managing taxpayers' money sustainably."

Thomas Aigner, LDBV IT Department for Field Service Technology

Getac K120
Fully Rugged Tablet

/ Challenge /

As Bavaria's central surveying authority, the LDBV is responsible for an area of around 70,550 square kilometres – the largest federal state in Germany. In Bavaria, the field surveying service is a sovereign function: over 500 survey teams are out in the field every day across Bavaria to lay the groundwork for notarised property transactions and to keep the building record in the land register up to date.

The Bavarian Surveying Authority has been using several generations of semi-rugged and fully rugged notebooks since the 1990s; the switch from MS-DOS to Linux took place in the mid-2010s. The current tender was intended to mark the transition from bulky, rugged notebooks to lighter, more flexible tablet computers, although a full-size keyboard remained essential for drawing up reports on site.

The field service devices are in use almost every day, five days a week, eight hours a day, all year round in all weathers. At the survey site, existing boundary conditions must be identified, new boundaries marked out, documented and recorded; the environmental requirements are therefore aligned with those of the military sector, and the levels of robustness and protection class (Ingress Protection IP65) are correspondingly high and have so far proved to be appropriate. As the LDBV puts it: "Full functionality of the devices is essential for us and for the smooth running of our field operations."

Additional complexity arises from the use of Linux as the operating system for almost all servers, office clients and field computers; the current distribution used is SuSE Linux Open Leap. Support for non-standard hardware modules such as touchscreens or digitisers is traditionally problematic under Linux due to a lack of manufacturer drivers. In the Europe-wide tender with these high requirements, numerous suppliers of robust devices competed for the contract.

/ Solution /

Together with its long-standing Getac Platinum Partner, Mettenmeier, Getac won the LDBV's Europe-wide tender with the K120, beating several competitors. A key factor was that Getac ensured all functions would work under Linux: through close collaboration with Getac's technical support team, the previously missing drivers for the standard DisplayLink and for the K120's digitiser were implemented under Linux – an important prerequisite for the full use of the K120 as a tablet, even under an operating system not commonly used in the industry.

Since autumn 2025, 739 K120 Detachables have been in use across 51 offices and 22 branch offices. The large, multi-touch-capable touchscreen and the precise digitiser each offer their own advantages for computer control – in addition to traditional operation via a computer mouse: The in-house developed ALKIS software (Official Land Registry Information System), which is used by both field and office staff, meets the requirements of both a GIS system with highly detailed map displays and conventional office software. Users can select the optimal input method for every application and location. In the case of a standard land division, the survey teams check the existing boundaries, mark out the new borders and draw up a recording of the boundary survey, which is read out to the parties involved and signed by them before the new information is entered into the land registry by the office staff. For the final field report – an important document – a fully-fledged, comfortable physical keyboard is essential; virtual on-screen keyboards would be impractical here. That is why the detachable form factor was chosen, as it is designed to make the switch from laptop to tablet easier. The benefits are also evident when used in conjunction with other measuring instruments: previously, the limited Bluetooth range of the total stations and the weight of the rugged notebooks tied the survey teams to a fixed location. As a lightweight tablet, the K120 with next-generation total stations will enable the survey engineer in charge to work closer to and with greater mobility around the object being measured.

For long days in the field, hot-swappable high-performance batteries are used, which enable a full day's work off the mains even with frequent mobile data connections and high display brightness. In the event of service requirements, the Getac Self Maintainer programme for spare parts, combined with Mettenmeier's tailored service workflow, ensures fast, hassle-free processing, backed by a five-year Getac bumper-to-bumper warranty.

/ Advantages /

The Getac K120 is technologically advanced and powerful: its rugged, detachable keyboard, digitiser, multi-touch touchscreen and Linux compatibility are precisely tailored to the demanding requirements of cadastral surveying. This enables survey data to be accurately captured and documented directly on site.

Its high reliability and high-performance, hot-swappable batteries ensure uninterrupted work throughout the day in the field. "Some surveying situations in forests, rough terrain or mountainous areas require the device to be used from early morning until the end of the working day – eight hours away from the company vehicle in the field – for such scenarios, two battery sets per device ensure flexible and reliable operational readiness whilst minimising weight. The display remains highly legible even in direct sunlight."

The detachable form factor also simplifies repair logistics: a faulty keyboard, ususally due to the many mechanical parts, can be repaired separately from the device, whilst the computer containing the valuable data, remains with the customer and is still essentially operational, thereby reducing downtime. Thanks to this reliability, the Offices for Digitalisation, Broadband and Surveying require virtually no spare units; in the rare instances where necessary, loan devices can be organised internally within the departments.

Thanks also to Linux, the ÄDBV public authorities are able to use their devices for up to eight years, which is unusually long for the industry, and are thus managing taxpayers' money responsibly. Getac's product range also enables device lifespans of six to eight years, which is complemented by a five-year extended warranty and straightforward servicing via the Self Maintainer programme with Mettenmeier.