



The EE25 Series™

survives the rigours of
on-the-road surveillance
with ROSHO GmbH



ROSHO GmbH is a leading specialist in mobile applications for public transport systems and cars. It has a diverse customer-base across Europe, offering a broad portfolio of products for everything from in-car infotainment systems to audio and video systems for tourist buses, satellite navigation systems and sophisticated surveillance solutions for buses and trains.

In the past, the engineers at ROSHO had trouble finding hard drives that could cope with the extreme heat and vibration that is typical in this tough transportation environment.

“We were constantly encountering serious technical problems and issues with hard drive failure, particularly with our surveillance solutions.” explains Jörn Gruël, a senior software developer at ROSHO. “That was bad for ROSHO’s reputation and especially problematic when we were building critical systems like surveillance on buses and trains – where failure really isn’t an option.”

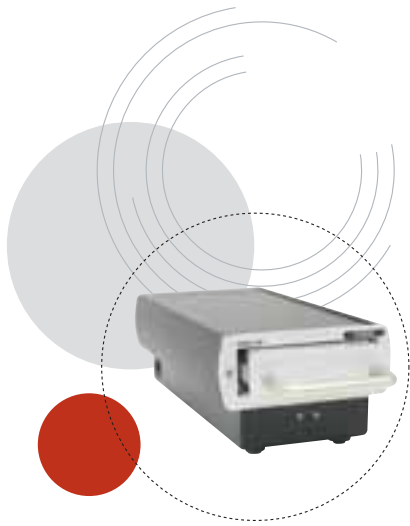
Only Seagate drives were tough enough

“Up until 2006, we experienced real difficulties with hard drives,” Gruël continues. “We were using disk drives from companies other than Seagate and system failure was common.”

The public nature of transport systems means that ROSHO applications are also vulnerable to vandalism. And the frequent requirement for round the clock operations puts extra strain on systems, which need to be optimised for continuous performance, with excellent heat-management capabilities. In short, ROSHO’s systems need to be hyper-robust to survive.

“ We heard from other partners that they were having great success with the Seagate EE25, particularly with regard to heat management and reliability, so we thought we’d give it a go ”

Jörn Gruël, ROSHO



Hot, exhausting work in dangerous mobile terrains: it's what the EE25 is made for.

"Our systems often have to do 20 hour days without stopping," says Gruël. "That creates cooling problems which are exacerbated because devices generally need to be mounted in tough tin casing to protect them from accidental damage or vandalism. That obviously obstructs airflows and creates further reliability issues. Added to that, our customers also need to be able to swap drives in and out themselves to maintain storage levels, so this kind of integration by non-specialists also needs to be easy to perform."

ROSHO currently integrates 40GB EE25 drives into its surveillance systems, which can store a whole day's images from 6-8 cameras. ROSHO's customers generally don't need continuous video-style imaging but fast, sequential single images – however Gruël says that the trend is changing, requiring ROSHO to integrate ever bigger capacity drives. "We are increasing our integration of the 60GB and 80GB EE25.2 too," he says. "And customers seem to find them easy to swap in and out themselves, which is an extra bonus."



"All the EE25 Series drives we've deployed have performed flawlessly so far," Gruël confirms. "We've experienced no problems at all, which means our customers are very happy."

With a unique 2Gs vibration operating performance, operating temperature range from -30°C to +85°C and a 24x7, 8760 power-on hours-per-year capability, it's no surprise.

A robust relationship with Seagate, into the future

Looking to the future, ROSHO is thinking of expanding into more hand held consumer electronics devices, like video recorders as well as more sophisticated specialist infotainment systems for customers in the transport sector. Gruël says that flash technologies are currently failing to provide the excellent cost-per-gigabyte of disk-based hard drives, so their relationship with Seagate is only set to grow.

Gruël concludes: "Our excellent experience so far means that we'd definitely deploy EE25 Series drives in these new applications too."

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