

Dallmeier Press Release

Maximum AI performance for “sterile zones” and CRITIS applications “Perimeter AI” and only one system every 200 m: An entirely new Panomera® perimeter camera

Regensburg, 12 September 2024 (Germany) – Dallmeier, one of the leading providers of professional video surveillance solutions, presents the new Panomera® S4 Perimeter. The “Perimeter Panomera®” combines four sensors in one optical unit. This provides a resolution of 200 effective megapixels – MPE – per camera. Combined with an AI object classification system specially trained for perimeter requirements, and AI tamper detection also optimised for this purpose, the result is an extremely powerful solution with comparatively low infrastructure, system and personnel costs.

The surveillance of narrow strips along perimeters such as fences, buildings or roads, often referred to as “sterile zones”, is one of the most demanding requirements for physical security. Until now, video systems as the leading system on the perimeter have often failed to live up to user expectations, particularly in high security environments: unsatisfactory detection performance, high false alarm rates and, above all, the fact that the analytics are easy to manipulate are often cited as disadvantages. Other shortcomings include poor image quality and high infrastructure costs, particularly due to the large number of cameras required. The new [Panomera® S4 Perimeter](#) from Regensburg-based manufacturer Dallmeier promises to help.

Specially trained perimeter AI even manages the “crawling ghillie suit”

Equipped with a neural network specially trained for perimeter protection, the Panomera® S4 Perimeter reliably recognises people with unusual body postures such as bent over, crouching or lying down and movement patterns such as very slow, very fast or crawling. People wearing camouflage such as Camouflage Central Europe, British Smock or Ghillie are also reliably detected.

The trick: a combination of perimeter AI and AI tamper detection

The advanced AI tamper detection application supports the detection of tampering attempts that are typically expected at a perimeter. In addition to classic methods such as twisting, defocusing, spray-painting and covering the camera or IR illumination, blinding the camera with a laser pointer, flashlight or strobe light is also reliably detected. Furthermore, indirect tampering by deliberately fogging the detection area with pyrotechnics such as smoke grenades or smoke pots is detected and an alarm is triggered. The combination of both evaluation techniques provides optimum detection of intrusion attempts with a very low error and false alarm rate.

200 m range, highest image quality and zone categorisation with the Perimeter App

The Panomera® S4 Perimeter has outstanding low-light performance. The latest generation of sensors is three times more sensitive to infrared light than its predecessors and delivers outstanding results even in low-light conditions. With a dynamic range of 130dB, it can



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accurately capture details at distances of up to 200 metres, providing excellent results even in difficult lighting conditions. With the specially developed AI Perimeter application, users can define specially protected areas with pre-zones. When relevant objects (people, vehicles, etc.) enter these zones, it is possible to escalate messages to focus operators' attention on the most important events.

One for the right, one for the left: For optimum geometry

The camera's special perimeter geometry minimises blind spots and avoids capturing uninteresting areas beyond the fence – an important privacy benefit. Depending on the model, the sensors are oriented to the right or left and arranged in perspective. This means that even unusual postures and movements can be detected. The camera detects the upper body of a standing person from a distance of as little as 4 metres, enabling targeted surveillance without unnecessarily covering adjacent areas.

“With the Panomera® S4 Perimeter we are setting a new standard in perimeter protection: where previously several cameras, complex infrastructure and costly analysis were necessary, now a single system every 200 metres is sufficient”, says Thomas Reisinger, CTO of Dallmeier electronic. “Our specially trained perimeter AI reliably detects even the most challenging scenarios, such as crawling people in camouflage or complex manipulation attempts. This is a real revolution in the field of perimeter security, especially for operators of critical infrastructures and organisations that are directly or indirectly affected by NIS-2 and the other CRITIS directives.”

Further information:

- [Mountera® system](#)
- [Panomera® cameras](#)
- [Dallmeier technology partners](#)
- [Become a Dallmeier Panomera® partner](#)

+++ CAPTIONS +++

Panomera-Perimeter

All good things come in threes: The special perimeter optics in combination with specially trained AI and AI-based tamper detection promise optimum results.

Photo credits: Dallmeier electronic



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Dallmeier: Turn images into assets.

With pioneering video technology from Germany.

In 1984, Dieter Dallmeier founded what is now Dallmeier electronic – not in the proverbial garage, but in a garden shed in Regensburg, Germany. Today, the company, which can justifiably call itself a hidden champion for video information technology “Made in Germany”, has several hundred employees worldwide, more than 250 of them at the company headquarters in the centre of Regensburg alone.

Our customers: From commercial enterprises to World Cup stadiums

Dallmeier's camera, recording, software, and analysis solutions optimise security and processes for B2B end customers in a wide range of industries in over 60 countries. The focus is on users from the casino, smart city, airports, logistics, stadiums, and industrial sectors. But also, banks, critical infrastructure facilities as well as medium-sized companies from all sectors.

Low total cost of ownership “Made in Germany”

With pioneering innovations, Dallmeier has succeeded time and again in placing itself at the forefront of technology: From the world's first digital image storage system with motion analysis in 1992, the patented “multifocal sensor technology” Panomera® with its “Mountera®” mounting system, to the latest Domera® camera family, which allows up to 300 camera variants with only 18 components. These and many other innovations provide real, tangible customer benefits. And with a low Total Cost of Ownership (TCO) and a high Return on Investment (ROI) they can easily compete with systems produced and supplied from low-wage countries.

Cybersecurity, data protection and ethical responsibility through maximum vertical integration

With 100% “Made in Germany”, we also guarantee our customers the highest standards in data protection, cybersecurity, and ethical responsibility. With high quality and short supply chains, we also ensure – almost incidentally – sustainability and environmental protection. From our prestigious headquarters in the centre of Regensburg, Dallmeier not only carries out its own research and development but also the complete manufacturing process – from component to product to solution.

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