Hybrid video surveillance for critical infrastructure

HOW PADERBORN/LIPPSTADT AIRPORT MEETS THE REQUIREMENTS OF THE GERMAN AVIATION SECURITY ACT

Requirement

- Compliance with the German Aviation Security Act (§5 and §8)

- Effective monitoring of security-relevant areas

- Step-by-step modernization without a complete replacement

- Efficient surveillance with minimal resource use

✓ **65,000 m²**
Apron coverage

✓ **100 %**
Compliance with regulatory requirements

✓ **AI-ready**
With a scalable system architecture

Solution

- Hybrid solution architecture: combining analogue technology and IP components

- Panomera® multifocal sensor systems for wide-area coverage with high detail resolution

- Video management with SeMSy® Compact / SeMSy® Event Manager

Result

- Compliance with applicable security and data protection requirements

- Fewer cameras with consistently high image quality (TCO/maintenance benefits)

- Future-proof solution

"With the Dallmeier solution, we were able to seamlessly modernize our existing infrastructure while efficiently meeting new security requirements. We were particularly impressed by the ability to flexibly combine analogue and IP systems."

Paul Sawatzki, Head of IT & Technology, Paderborn/Lippstadt Airport

PADERBORN LIPPSTADT AIRPORT

Paderborn/Lippstadt Airport plays a central infrastructural role in the East Westphalia-Lippe region of Germany. In order to meet the growing requirements of the German Aviation Security Act (LuftSiG), the airport comprehensively modernized its existing video surveillance system. The objective was to ensure efficient monitoring of critical areas such as the apron, access roads, car parks, and terminal entrances – with minimal resource use. Together with systems integrator Horn Sicherheitstechnik, Dallmeier developed a solution that allows gradual migration to IP-based components such as the multifocal sensor system Panomera®, without the need to immediately replace existing analogue technology. The solution complies with all applicable security and data protection requirements and is designed for future scalability.

Responsibility for the region and for security
Roughly six million people live within the catchment area of Paderborn/Lippstadt Airport. As a regional transportation hub, the airport provides vital connectivity to both tourist and business destinations. Scheduled and charter flights as well as business, private, and cargo traffic are all part of daily operations. This makes the airport not only an important infrastructure facility but also a regional employer and mobility partner. Smooth operations and full compliance with legal obligations – such as the Aviation Security Act (§5 and §8), the General Data Protection Regulation (GDPR), and the NIS-2 Directive – form the foundation for secure airport operations.

Modernization with foresight
The decision to upgrade and extend the video security infrastructure was driven by increasing regulatory requirements and technological advancement. The focus was on reliable video coverage of the approximately 65,000 square metre apron area, as well as other critical zones such as access roads, car parks, terminal entrances and the so-called aviation security boundaries – the transition point for passengers from landside to airside. Analog systems were not replaced in one step; instead, a step-by-step migration to IP technology was planned and implemented – in a manner that was flexible and adapted to the airport's existing infrastructure and operational needs.

Paderborn/Lippstadt Airport: critical infrastructure with high security requirements.

Video security systems that help fulfil aviation security requirements.

"Thanks to [...] the use of Dallmeier's PlanD camera planning tool, we always had full control over the project."

Michael Horn,
Managing Director of Horn Sicherheitstechnik

A hybrid solution with well-designed system architecture
The implementation was carried out by experienced systems integrator Horn Sicherheitstechnik in collaboration with Dallmeier electronic. At the heart of the project is a hybrid system architecture that combines existing analog components with modern IP cameras. Video recording is handled by Dallmeier recording appliances such as the DMS 2400 and IPS 10000, which enable simultaneous operation of both analogue and IP technologies.

To monitor sensitive zones, various camera models are used – including Domera®, fisheye, and bullet cameras, as well as Panomera® systems from the W4 and S8 series. Panomera® enables wide-area coverage with a minimum number of cameras while still delivering high-resolution detail – a major advantage for large apron areas where both overview and detailed monitoring are essential.

Video management is handled via SeMSy® Compact in combination with the SeMSy® Event Manager. Additionally, door and alarm contacts were integrated using Moxa devices to enable functional synergies and alarm forwarding – particularly at the aviation security boundaries.

Security, efficiency and future-proofing
With the new system, the airport fully meets the requirements of §5 and §8 of the German Aviation Security Act – for example, in monitoring aviation security boundaries, access roads and other sensitive operational areas. The hybrid system architecture allows targeted expansion of the existing infrastructure.

One key benefit: Thanks to Panomera®, the number of cameras required was significantly reduced – without sacrificing field of view or image quality. This results in savings not only in installation and operational costs but also in ongoing maintenance. The modular system design supports step-by-step migration and offers long-term flexibility. "With the Dallmeier solution, we were able to seamlessly modernize our existing infrastructure while efficiently meeting new security requirements. We were particularly impressed by the flexibility to integrate both analog and IP systems," explains Paul Sawatzki, Head of IT & Technology at Paderborn/Lippstadt Airport.

Compliance and security for critical infrastructure
The Dallmeier solution meets all requirements set forth by the GDPR and the NIS-2 Directive – especially in terms of data protection, IT security, and system availability. As an ISO-certified company – including certification to ISO/IEC 27001 for information security management systems

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Dallmeier

— Dallmeier delivers the highest standards in the handling of sensitive data. These certifications provide a reliable foundation for deploying the technology in critical infrastructure environments. Additionally, Dallmeier's in-house development and production in Germany ("Made in Germany") ensures transparency and legal certainty for operators.

Ready for AI and process optimization
Another key advantage of the new system is its future-proof design. Beyond surveillance alone, AI-based analytics for process optimization and cost savings are increasingly in focus. The airport plans to deploy AI-driven technologies such as the Dallmeier "Attribute Finder", which can be seamlessly integrated into the existing infrastructure.

Conclusion
The project at Paderborn/Lippstadt Airport demonstrates how intelligent planning and cutting-edge technology can bridge the gap between legacy infrastructure, system modernization, and long-term readiness. The "Made in Germany" solution delivers durability, efficiency, and high integration capability — representing a successful deployment of modern video technology in a critical infrastructure environment. Horn Sicherheitstechnik also draws a positive conclusion: "Thanks to close coordination with all project stakeholders and the use of Dallmeier's PlanD camera planning tool, we always had full control over the project. The tool gave us complete planning reliability right from the design phase," says Michael Horn, Managing Director of Horn Sicherheitstechnik.

Panomera® technology enables large areas to be captured in high detail with significantly fewer cameras — ideal for the expansive apron zones.

- Panomera® cameras
- Privacy and security
- Dallmeier Solutions for Airports

Let's talk about your project!   info@dallmeier.com   +49 941 8700-0

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