

## PIONEERING VIDEO TECHNOLOGY "MADE IN GERMANY"





### MADE IN GERMANY.

#### SECURITY AND BUSINESS SOLUTIONS THROUGH PATENTED VIDEO TECHNOLOGY

Since 1984, Dallmeier has pioneered with cutting-edge solutions in the field of CCTV/IP video technology.

Our customers comprise the world's biggest casinos, airports, cities and stadiums as well as hundreds of small to medium businesses and organisations of all sizes. This experience is used to develop intelligent software and high-quality recording and camera technologies.

These solutions enable Dallmeier users to protect their customers, employees, and assets.

Our innovations such as the patented Panomera® multifocal sensor technology ensure maximum cost efficiency while maintaining the highest standards of cybersecurity and durability.



Employees worldwide



**60+** Locations



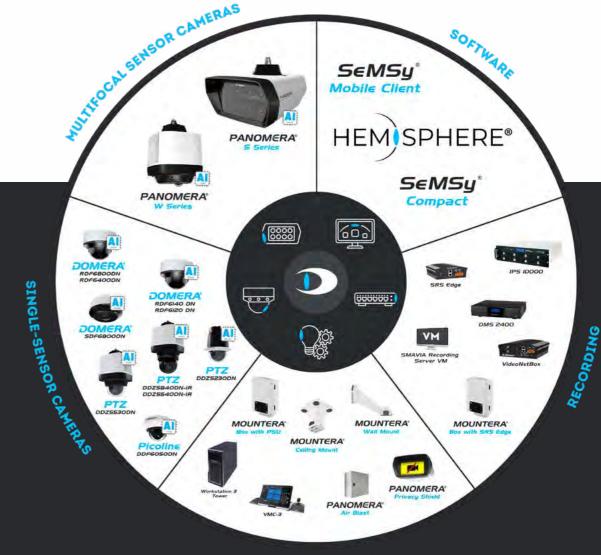
100% Integrity & trust



### PRODUCTS FOR SOLUTIONS.

WHAT WE DO

- Development and manufacturing of hardware and software for video security solutions
- · Cameras, video analytics, recording, management
- Realisation of complete industry solutions



ACCESSORIES

### THE PANOMERA® SERIES

### **EVERYTHING IN FOCUS.**



#### PANOMERA® S SERIES

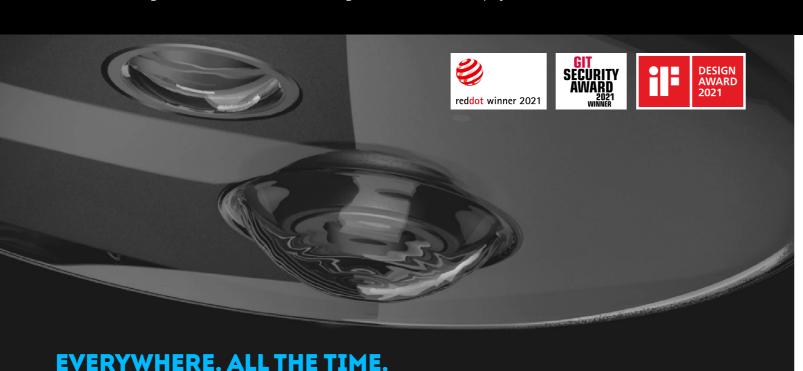
PANOMERA®

The patented Panomera® technology combines several lenses and sensors with different focal lengths in one optical unit. Thus, Panomera® cameras with "Multifocal Sensor Technology" also capture long distance and middle ground image areas with the same high resolution as scenes in the foreground.



#### PANOMERA® W SERIES

The innovative combination of high-resolution sensors provides an outstanding effective UWDR dynamic range and allows the W8 model to uniquely capture a complete 360° hemisphere in real time. The entire 360° space is displayed as a continuous, rectified view.



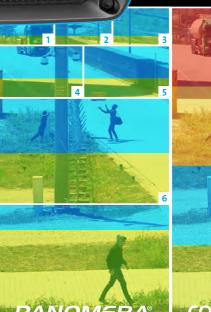


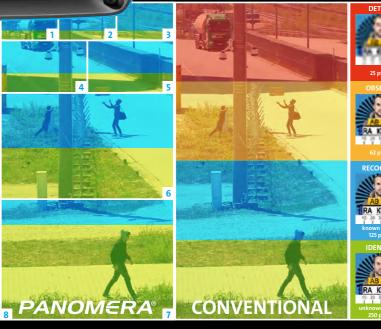


### **HIGHEST RESOLUTION -LIVE AND RECORDED**

Megapixel cameras deliver too little resolution in the rear image areas.

Panomera® captures the entire object space with the pre-defined required pixel density (px/m).





#### WHY PANOMERA®?

With Panomera®, customers can cover much larger areas or longer distances with significantly fewer camera systems compared to conventional technology.

Panomera® works like a virtual combination of any number of PTZ and several Megapixel cameras. Thus, users can capture large areas or long distances with a fraction of the cameras normally required and with maximum operational efficiency. This results in advantages for all parties involved – from the planner and installer to the system operator, the security manager and the commercial decision-maker.

#### IEC 62676-4

The DIN EN 62676-4 standard defines the pixel densities required depending on the application. For example, 125 px/m are needed to recognise known persons or perpetrators, 250 px/m to identify unknown persons. The standard defines a minimum resolution of at least 62.5 px/m for observing and tracking actions.

Panomera® technology provides the maximum value with the fewest possible number of cameras required for the respective application on a significantly larger area than traditional solutions.

Onvir Ms1 Panomera® supports ONVIF Profile M, S and T





THE PANOMERA® PERIMETER

# 2x PERIMETER AI + SUPERIOR OPTICS.

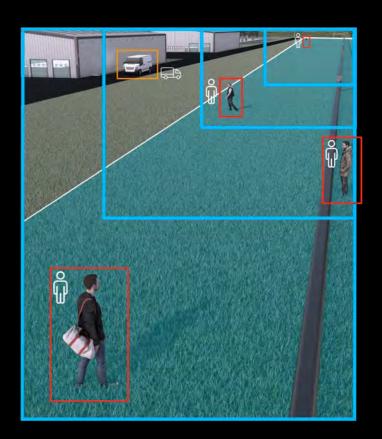
The Panomera® is equipped with a neural network specifically trained for perimeter scenarios. Even camouflaged, crawling or rolling intruders are reliably detected. The extended Al Tamper Detection app detects tampering attempts like using flares, fog or smoke.

In combination with the superior image quality and optical overview of the patented Panomera® multifocal sensor technology, these two AI capabilities create one of the most powerful perimeter protection systems in the industry.

#### **UNIQUE SENSOR DESIGN**

The Panomera® S4 Perimeter combines the patented multifocal sensor technology with a unique corridor sensor geometry for maximum resolution and dynamic range at the area where it's needed the most at a perimeter.

- Ultra Wide Dynamic Range (UWDR)
- Up to 200 metres "Recognise" resolution (> 125 px/m according to DIN 62676-4)
- Excellent light sensitivity (< 0.0005 lux)</li>
- Great range of coverage (4 m 200 m)



#### MAXIMUM PROTECTION WITH MINIMAL INFRASTRUCTURE



**1**X
Panomera® camera



replaces up to

Mpx cameras

### **MULTIFOCAL SENSOR**

Optical geometry for perimeter



Four sensors with different focal lengths in an optimised geometry provide superior optics.

### PERIMETER AI

Specifically trained



Specifically trained on perimeter scenarios, the perimeter Al detects beyond the standard.

#### **TAMPER AI**

Against manipulation



The extended Tamper Al detects a wide range of manipulation techniques.

"With the Panomera® S4 Perimeter we set a new standard in perimeter protection: where previously several cameras, complex infrastructure and costly analytics were necessary, now a single system every 200 metres is sufficient."



**Thomas Reisinger,** Chief Technical Officer (CTO) Dallmeier electronic

### **VIDEO ANALYTICS GROW UP.**

**ANALYTICS NEED PROPER DATA** 

The strengths of Panomera® come to the fore in video analytics:

The image quality and thus the data quality can be precisely adapted to the respective analytics requirements and – very importantly – a consistent minimum quality can be guaranteed over the entire area. In addition, the user is able to acquire data over an enormous area with just one single camera. As a result, Panomera® enables precise analytics of even the most complex and large spatial contexts.

#### **RELIABLE DATA QUALITY FOR AI AND ANALYTICS**

Video technology is about to leapfrog: The image itself is becoming less and less important. At the same time, more and more users are realising how much added value lies in the analytics of the data captured by video technology. But neural networks for classifying objects or processes depend on the quality of the video image that is fed into them. For this reason, Panomera® technology guarantees a consistently high level of data quality over the entire spatial context. For the best possible, precisely predictable analytics results — both in live view and recording.





















### **QUALITY IN - QUALITY OUT.**

ADD VALUE WITH YOUR IMAGES

#### AI-BASED VIDEO ANALYTICS

Dallmeier's analytics offers a wide range of specially trained applications for perimeter protection, people counting, parking garage monitoring and much more.

For further applications, our systems are compatible with a wide range of third-party analytics solutions.



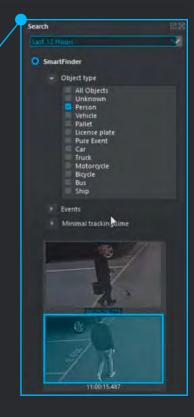




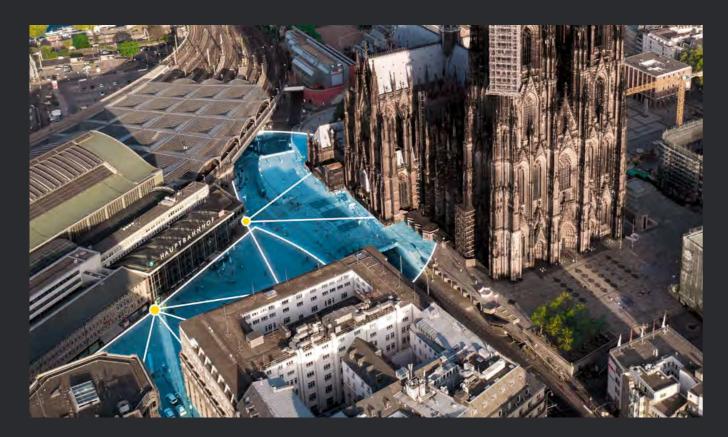
#### FIND WITH EASE

The Dallmeier "Comfort Search" function provides the operator with the desired results in the shortest possible time. Especially when combined with Dallmeier's patented Panomera® camera systems, it provides an unprecedented situational overview. One Panomera® is sufficient to classify objects within an area of up to 50,000 m².





### PANOMERA® IN ACTION.



#### **CITY OF COLOGNE**

With just 8 Panomera® cameras mounted at 2 installation points, the city of Cologne is able to cover 8,800 m<sup>2</sup> of public space. The minimum resolution density required by the Cologne police for forensic purposes was 250 px/m. With the solution in place, the City of Cologne is meeting both security and privacy requirements far beyond their initial expectations.

Area of

8.800 m<sup>2</sup> fully covered

Min. resolution density

250 px/m

Panomera® cameras



VS.

53 x conventional cameras



### TOTAL COST OF OWNERSHIP.

#### IT'S NOT ABOUT THE CAMERA

In a video security solution, the cost of cameras is only a fraction of the "total cost of ownership" that is required to protect an organisation's assets.

#### ANY NUMBER OF VIRTUAL PTZS

Panomera® works like a virtual combination of any number of PTZ and multiple megapixel cameras. Therefore Panomera®-based solutions require significantly fewer camera systems than conventional approaches. This results in significant savings in infrastructure and operational costs, from the purchase of masts, excavation and cabling to reduced manpower requirements, due to fewer screens and better overview.

#### **CHEAPEST OR MOST ECONOMICAL?**



Camera, recording, storage, software



#### **INFRASTRUCTURE**

Masts, cabling, network



#### PROJECT COMPLETION

Client training, documentation, re-design



#### INSTALLATION

System design, assembly, configuration

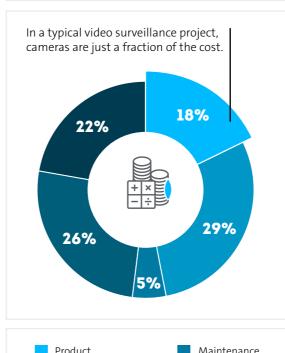


#### MAINTENANCE

Maintenance costs & costs in case of system failure



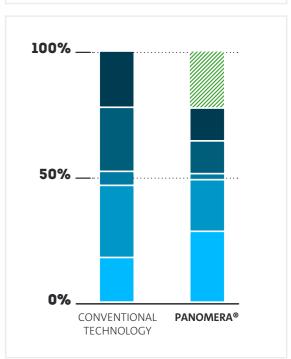
Operating costs for products



Product Maintenance Infrastructure Operation Installation & Project completion Savings

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Save up to **22%** total costs with Dallmeier due to innovation and quality.





PROBABLY THE MOST VERSATILE CAMERA IN THE WORLD

### THE DOMERA® SERIES.











Domera® covers more than 90% of typical indoor and outdoor video solutions – while providing maximum quality and security as well as minimum Total Cost of Ownership (TCO).

Theoretically, more than 300 different product variants can be "built" with Domera® components. This is made possible by a well thought-out system of five camera base variants that can be combined with various lighting rings and different housing and mounting elements.











#### **BEYOND THE IMAGE.**

- IR or white light outside the bubble eliminates stray light and is perfectly adaptable for even the most challenging lighting conditions
- Al-based video analytics for a variety of analytics applications with "Deep AI" object classification in the camera
- RPoD Remote Positioning Dome for easy alignment and readjustment via remote access from any web browser

INTELLIGENT From image to result



**PICTURE-PERFECT** Don't miss a thing



**VERSATILE** 100 % adaptable









40 x zoom with autofocus 100 m **IR** lighting

**GDPR** compliant













\* supported in the PTZ home position

The Dallmeier surveillance cameras have been developed specifically for security applications and are characterised by the highest image quality and a high dynamic range.

The result: Dallmeier IP cameras offer the highest colour fastness and richness of detail, while the bit rate still remains low – undeniably major benefits for the use in a professional and reliable video security system.

- Intelligent assistance through Al-based video analytics
- Perfect lighting with adaptive IR

- Domera® OS for "privacy and security by design"
- Easy installation with the Mountera® mounting system

Users of Dallmeier PTZ cameras can cover all relevant application areas: From casino gaming floors to organisations counting as Critical Infrastructure. With superior technical feautures and up to 20% less cost compared to previous generations.

- High-speed pan/tilt/zoom mechanism
- Digital image stabilization (EIS)
- 30x or 40x zoom, 2-8 MP resolution
- 128 programmable preset positions

- ONVIF compatible
- EU-GDPR and NDAA-compliant
- Supports MQTT protocol
- Mountera® outdoor variant with integrated heater

#### **HIGH-PERFORMANCE**



Maximum image quality, high zoom factors, numerous mounting options.

#### INTELLIGENT



Reduced human error and improved security with Al-based object classification.

#### **REDUCED COSTS**



Easy installation and 20% lower product cost compared to previous generation.









### **PICOLINE SERIES.**

**GDPR 5 MP** IR ΔΙ resolution lighting compliant on board

With the DDF6050DN series, Dallmeier offers a compact and cost-effective solution for applications that require images with the highest resolution by day and night (IR mode).

Whether for use in an environment with challenging lighting conditions or limited space – the Picoline delivers high-quality results.

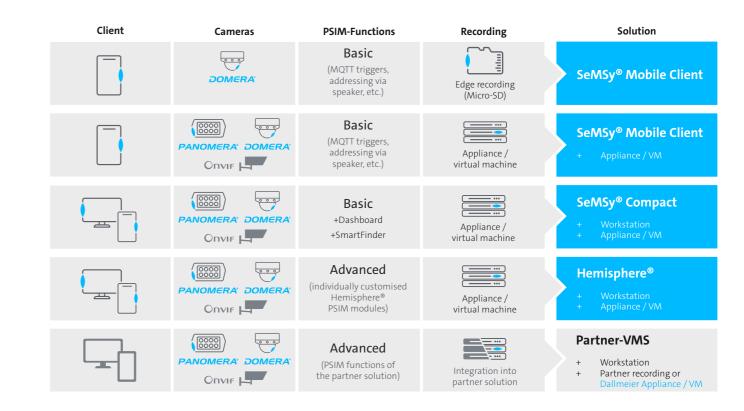
- 5 MP resolution
- Deep AI classification
- EdgeAnalytics Al apps

- IR lighting
- Compact housing
- Fixed focus lens/Varifocal lens



### VIDEO MANAGEMENT THAT FITS.

SOFTWARE BY DALLMEIER OR SELECTED TECHNOLOGY PARTNERS



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#### **DISCREET INSTALLATION**



Only 93 mm diameter (surface mount)

#### **PRIVACY & SECURITY**



Comprehensive features for security and privacy, configurable as required.

#### **INTELLIGENT ASSISTANCE**



Video analytics and "SmartFinder" for fast detection, finding and response.

- SeMSy® Mobile Client: "Mobile First" VMS for professional use. As a "standalone" VMS with edge recording on the camera or in combination with SeMSy® Compact and Dallmeier recording.
- **SeMSy® Compact:** The VMS is perfect for medium requirements and for use on Windows-based workstations. Extension modules also enable adaptation to larger requirements.
- SeMSy® Hemisphere®: "Modular building kit" consisting of video management, data management and front-end applications. Enables the most sophisticated enterprise applications.
- Third-party VMS: ONVIF or RTSP allow users to integrate all Dallmeier cameras into their preferred VMS. In addition, advancis, Genetec and Milestone offer full Panomera® functionality.

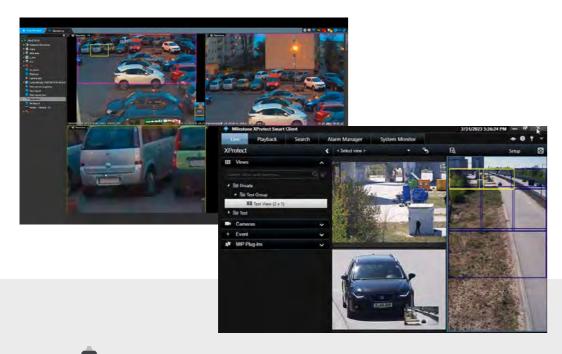
### INTEGRATIONS & INTERFACES.

"BEST OF BREED" OR EVERYTHING FROM A SINGLE SOURCE

#### VMS: IT'S THE ENDUSER'S CHOICE

All Dallmeier single-sensor cameras and Panomera® multifocal sensor systems can be integrated into video management software (VMS) that support the ONVIF specification profiles M, S and T as well as RTSP.

Furthermore, for market-leading systems, including advancis, Genetec and Milestone, there is a deep technical integration including the entire range of advanced Panomera® functionality.





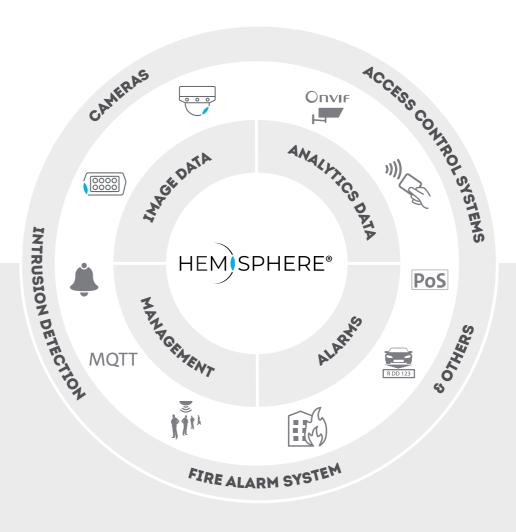


#### **INTERFACES TO DALLMEIER SOFTWARE**

Conversely, users can easily integrate products and security systems from other manufacturers into the Dallmeier Hemisphere® software platform. These include:

- IP cameras (ONVIF, RTSP)
- Access control systems
- Intrusion detection systems
- Fire alarm systems

- Point-of-sale systems
- Casino dealing shoes
- and many more



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### PLAN D

### **LET'S PLAN!**

3D CAMERA PLANNING THOUGHT DIFFERENTLY



#### 3D PLANNING TOOL "PLAND"

Smart features combined with an intuitive user interface take professional camera planning to a whole new level. Within minutes, planner, installers and end customers can plan video projects professionally.

A share function and the innovative CamCards simplify the coordination process and get your project to its destination faster.

- Visualisation of resolution density according to DIN EN 62676-4
- Realistic 3D models

- (partial shading)
- Realistic visualisation of camera view

Precise 3D shading visualization



100 % made by Dallmeier

256 Bit encryption for maximum security

4 FREE provided by Dallmeier

#### FROM OUR CUSTOMER LIST

- Bali Indonesia
- Bristol UK
- St. Louis-Lambert USA
- Milan Linate Italy
- Copenhagen Denmark
- Istanbul Türkiye
- Bangkok Thailand
- Naples Italy

"With Panomera® technology, distant

objects can be captured with the same quality as those in the foreground. The extremely high resolution throughout the entire area and intuitive operation of the system led us to choose Dallmeier."

**Giuseppe Musto**, Head of Innovation & Automation Development, GESAC, Naples International Airport

### **SOLUTIONS FOR AIRPORTS.**

#### **MAXIMUM SECURITY AT MINIMUM COST**

Dallmeier offers a wide range of solutions for many complex areas of airport operations: from video surveillance for the security area to systems for apron and runway monitoring all the way to the optimisation of business processes through video-based data acquisition.

#### **BENEFITS**

- Optical control of long distances and wide areas (e.g., apron, runway, taxiway, and exterior areas)
- Protection against unauthorized intrusion at the perimeter
- Integration of flight data, weather data etc.
- Integration in third party software such as Genetec, Milestone
- Improvements for passenger flow and many other processes
- Solutions for virtual / remote / contingency tower

Istanbul Grand Airport (IGA) uses Panomera® technology and Dallmeier's video management software SeMSy®.



#### **SOLUTIONS FOR**

### LOGISTICS.

### MORE SECURITY AND BETTER PROCESSES - WITH LOWER OVERALL COSTS

Logistics companies around the world use Dallmeier technology to improve their flow of goods, improve yard, damage and claims management and better protect their businesses and operations.

Furthermore, Dallmeier's modular solutions allow the integration and further processing of video-generated data in a wide variety of existing systems. This enables logistics companies to achieve a wide range of economic advantages.

#### **BENEFITS**

- Efficient parcel tracking by combining scan and video data
- Interfaces to ERP systems
- Objective claims management for improved customer relations
- Increased safety for staff and customers
- Al-based video security for perimeters, business premises and external boundaries

Container Terminal Herne saves more than 60,000 € annually with Panomera® and AI.



#### FROM OUR CUSTOMER LIST

- DHL Germany
- Flottweg Germany
- Container Terminal Herne Germany
- Spedition Scherbauer Germany
- Sportisimo Czech Republic

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"Al reduces the effort and thus also the costs

for the Emergency Control Centre to a minimum."

#### Thorsten Kinhöfer,

Managing Director of the Container Terminal Herne (CTH)



#### FROM OUR CUSTOMER LIST

- Allianz Arena Germany
- Olympic Stadium Berlin Germany
- Allianz Stadium Italy
- Emirates Stadium London UK
- Anfield Stadium Liverpool UK
- Alsancak Stadium Izmir Türkiye

"Another decisive advantage was that

the Panomera® cameras enable us to zoom into detailed areas even during recording, while maintaining the high-resolution overall view at all times."

**Dave Lewis**, Head of Security and Stadium Safety at FC Everton

#### **SOLUTIONS FOR**

### STADIUMS.

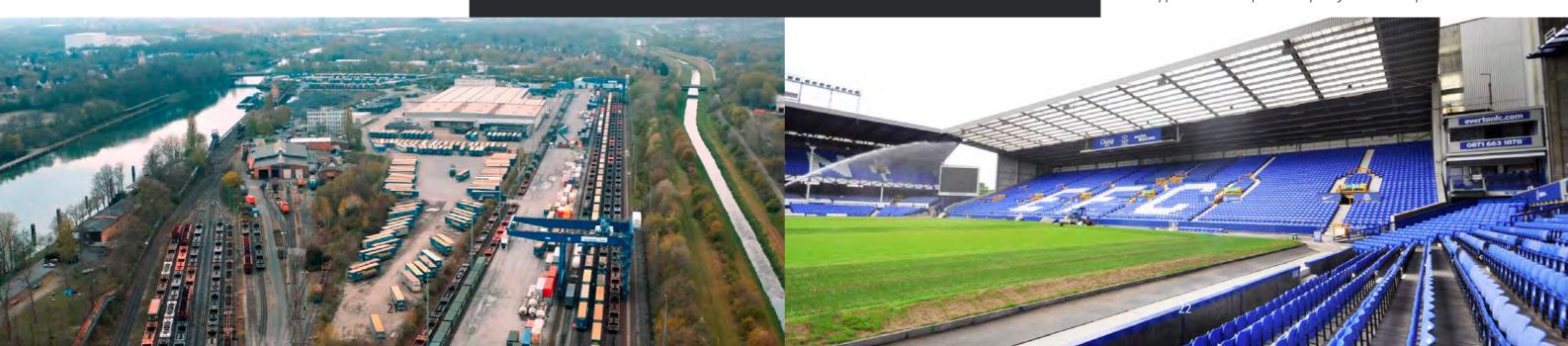
#### LESS INFRASTRUCTURE - MORE SECURITY

Many of the world's largest stadiums rely on Dallmeier stadium solutions – from grandstand security to software-based support for emergency forces. The patented Panomera® multifocal sensor technology requires only a fraction of the number of camera systems required within conventional solutions. This reduces the cost for planning, implementation, infrastructure and operations many times over and increases the efficiency of the operators.

#### **BENEFITS**

- Optical control over wide areas, such as grandstands, entrance area, and parking lots
- Digital incident file for efficient investigations and cooperation with authorities
- Proactive operation and crowd control
- Reduced fines by identifying individuals lighting pyrotechnics, throwing objects etc.
- More efficient operations thanks to integration of third-party systems, such as access control, intrusion detection and ticketing
- Minimum installation points and infrastructure costs with patented Panomera® multifocal sensor cameras

FC Everton in Liverpool uses Panomera® for their grandstand surveillance. The excellent overview of the situation enables criminals to be apprehended and punished quickly and on the spot.



#### **SOLUTIONS FOR**

# SAFE & SMART CITIES.

#### SAFER CITY – BETTER LIFE

Technical development in the safe and smart city area is currently undergoing a period of enormous change: Conventional video security technology is evolving into an all-round tool. With Panomera®-based solutions from Dallmeier, urban authorities have the capability to safeguard even very large public areas with significantly lower infrastructure and operating costs than was previously possible in public area solutions.

#### **BENEFITS**

- Safeguarding large public places with minimum amount of Panomera® cameras and installations points
- Panomera® cameras as "smart optical data sensor" for analytics such as traffic control and people counting
- Sophisticated privacy and security features ensure GDPR compliance
- Panomera® Privacy Shield add-on for compliance with peaceful rallies and demonstrations

A total of five different camera perspectives help the Frankfurt police to defuse crime hotspots. With a maximum of data protection, those responsible expect a further reduction in crime in the area of "Frankfurt Hauptwache" (Frankfurt's police headquarter) and beyond.



#### FROM OUR CUSTOMER LIST

- Frankfurt Germany
- Hanau Germany
- Essen Germany
- Cologne Germany
- Gaillard France
- Jesolo Italy
- Stockport Housing UK

"With Panomera®, we achieve optimal control with minimal operator workload and low total cost of ownership due to fewer systems required."

**Thorsten Wünschmann**, Head of Public Order Office, City of Hanau (Germany)



#### FROM OUR CUSTOMER LIST

- Casino St. Moritz Switzerland
- Seven Luck Casino South Korea
- Golden Valley South Africa
- Studio City Casino Macau
- Gila River Casino USA

"There is simply no other camera technology on the market that meets our key requirements:

Maximum enhancement of the customer experience with minimum visibility."

**Hendrik Strauss**, Resort Security Manager, Sun City

#### **SOLUTIONS FOR**

### CASINOS.

#### THE ROYAL FLUSH FOR YOUR CASINO

With smart casino solutions from Dallmeier, casinos minimize risk, work more efficiently, improve decision making and automate table gaming. Whether it's being able to find a person of interest in 3 minutes instead of 20, increasing the speed of table games or generating valuable marketing data.

SeMSy® Hemisphere®, Dallmeier's "Casino Operating System", the company's unique camera systems and CAT, the Casino Automation Technology for Blackjack, Baccarat and Sic Bo, make it possible.

#### **BENEFITS**

- Optical control in the whole casino from gaming floor to perimeter to hotel area
- Quickly adapt to new positions of gaming tables with Domera<sup>®</sup> "Remote Positioning Dome" functionality
- Complying with casino regulatory authorities
- Efficient, cross-departmental collaboration with customizable dashboards for different user groups
- Business insights by combining video with third-party data such as slot machines, gaming shoes and point-of-sales (POS)
- Casino Automation Technology (CAT): real-time information about the position and value of bets, game pace, float value and many other data points

Casinos all over the world benefit from Dallmeier surveillance and gaming analytics solutions.





PIONEERING VIDEO TECHNOLOGY

### MADE IN GERMANY.

The label "Made in Germany" is experiencing an amazing renaissance – especially among customers of B2B video technology solutions. Reliable supply chains, cybersecurity, data protection and privacy have never been more important.

With "Made in Germany", we guarantee our customers the highest standards in these important fields. Quality, proximity of suppliers and our "Green Global Security" philosophy also ensure sustainability and environmental protection.

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www.dallmeier.com



- Components "Made in Germany" to the highest quality specifications
- Certified quality management (ISO 9001)
- High depth of manufacture for research, development and production
- AI-based video analytics with customised trained neural networks
- "No Backdoors" policy with regular penetration test by independent third-party experts

- Transparency of source codes for code inspection, etc.
- Political and financial independence solutions developed under the rule of law in a western democracy
- Interfaces to a wide range of third-party systems
- ONVIF compatibility of all components



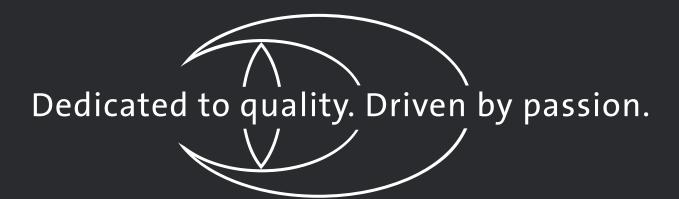
et's talk about your project!



info@dallmeier.com



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Dallmeier electronic GmbH & Co.KG Bahnhofstr. 16 93047 Regensburg Germany

Tel: +49 941 8700-0 Fax: +49 941 8700-180

info@dallmeier.com www.dallmeier.com

