



PANOMERA®

EVERYTHING IN FOCUS.



INTELLIGENT



PICTURE-PERFECT



COST-EFFICIENT

 MADE IN GERMANY



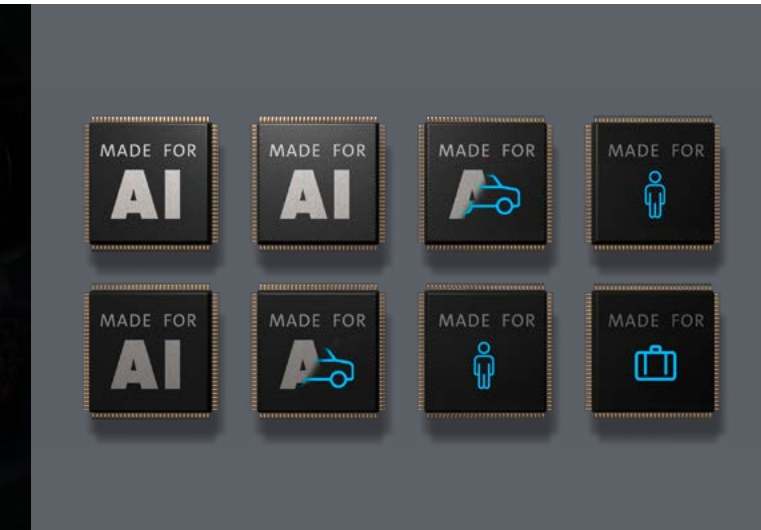
See more.



PANOMERA® HIGHLIGHTS

THE REVOLUTION IN VIDEO SURVEILLANCE

The patented Panomera® technology combines several sensors and lenses with different focal lengths in one optical unit. Panomera® cameras with “multifocal sensor technology” also capture rear and middle image areas with the same high resolution as scenes in the foreground. With unique advantages for video observation, video surveillance and video analytics.



8X MULTIFOCAL SENSOR

- 8 sensors for up to 304 MPe resolution
- 8 lenses for maximum dynamic range
- 1 overview with any number of detailed views

8X AI POWER

- 8 AI chips for maximum analytical performance
- On-board analytical apps for a wide range of applications
- Up to 50,000m² analytics area

HIGH SECURITY – LOW COST

- Development and production in Germany
- Highest standards of cybersecurity and data protection (GDPR / NDAA-compliant)
- High cost-effectiveness through innovation and quality

THE MULTIFOCAL SENSOR SYSTEM PANOMERA®

THE SECURITY OF HAVING EVERYTHING IN VIEW

Panomera® is a patented camera technology that opens up completely new possibilities for the security industry, especially for the comprehensive protection of large areas. In contrast to conventional cameras, whose resolution density decreases with distance, the multifocal sensor technology provides a constant resolution from near to far. This means that large areas and distances can be monitored from a single location – in real time with consistent image resolution, high dynamic range and continuous depth of field!



WITH ONLY ONE PANOMERA®

ACHIEVING DEFINED GOALS

Different application scenarios require different resolutions on the recorded area. The key factor is the target specification, including the pixel density in pixels per metre (px/m), for a particular scenario:

- Do you need to record and **observe** persons?
- Do you need to **recognise** known persons?
- Do you need to **identify** unknown persons for use in court?
- Do you need to evaluate images from analytical systems?



DIN EN 62676-4

The DIN EN 62676-4 standard defines the pixel densities required depending on the application.

For example, 125 px/m is required to recognise known persons or offenders, 250 px/m to identify unknown persons. To analyze and distinguish objects, depending on the object size at least 62.5 px/m.

Panomera® technology provides the minimum value required for the respective application over a significantly larger area than traditional solutions.



	SEATS	AREA	DISTANCE
250 PX/M IDENTIFY	2,500	2,300 m ²	150 m
125 PX/M RECOGNISE	10,000	9,500 m ²	300 m
62.5 PX/M OBSERVE	35,000	38,000 m ²	600 m

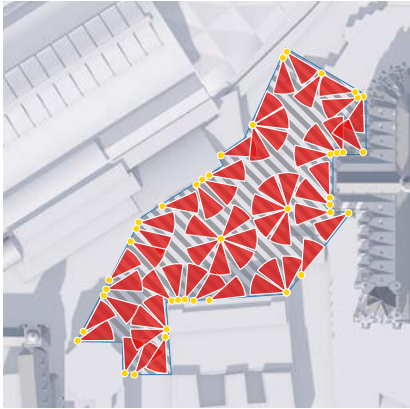
FEWER CAMERAS - MORE SECURITY ...

CASE STUDY: CITY OF COLOGNE

With just eight cameras and two installation points, both the security requirements and the data protection regulations were met beyond the expectations of the City of Cologne.



8x Panomera® cameras

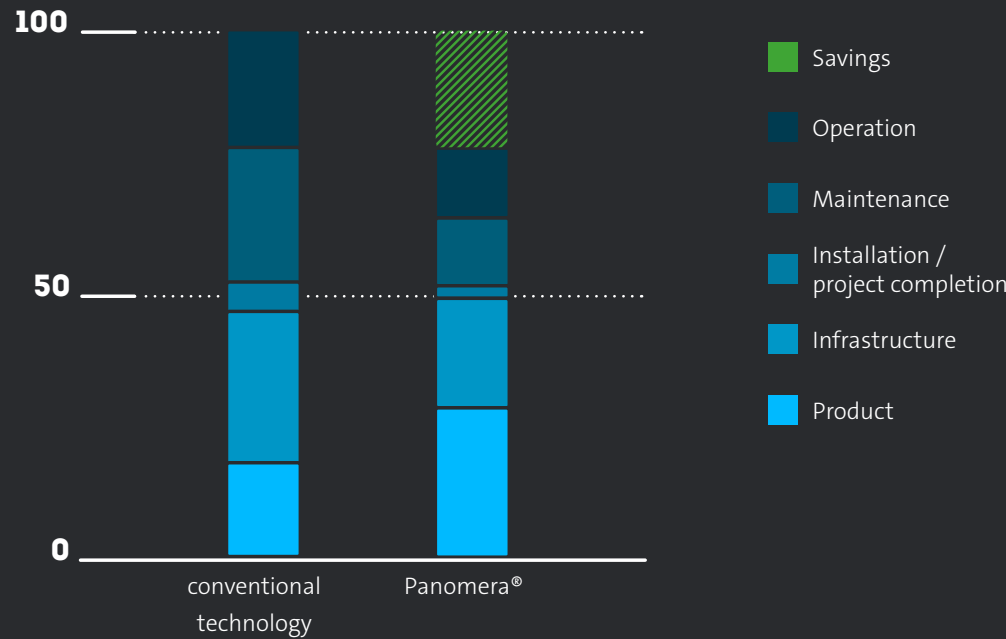


replace **53x** Mpx cameras

... AND LOWER COSTS

IT'S NOT (ONLY) ABOUT THE CAMERA

Panomera®-based solutions require significantly fewer camera systems than conventional approaches. This leads to considerable savings in infrastructure and operating costs, from the purchase of masts, groundwork and cabling to reduced personnel requirements due to better overview and operability.



Only
2
installation points

Minimum
250 px
per metre

Area of
8,800 m²
fully covered

MAKING YOUR OPERATOR MORE EFFICIENT

EVERYTHING IN FOCUS

MULTIUSER CAPABILITY

Unlike PTZ cameras, Panomera® allows any number of operators to navigate the entire scene independently of each other. Although all operators connect to the same camera, each operator can select their view individually and zoom in and out as they wish.

INTO THE PAST WITH VIRTUAL PTZ

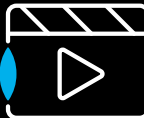
This eliminates the need for time-consuming and confusing switching between camera angles and unnecessary searching on maps of buildings and their surroundings. The number of cameras required and the number of screens to be observed is reduced many times over. This significantly simplifies the work of the operators.

EFFECTIVE IMAGE DIVISION – INDIVIDUAL ASPECT RATIO

With the multifocal sensor technology, the aspect ratio can be individually adjusted and is not tied to fixed formats such as 16:9 or 4:3. Formats such as 3:5 to 7:1 are possible. This means that Panomera® can be adapted for every area of application.

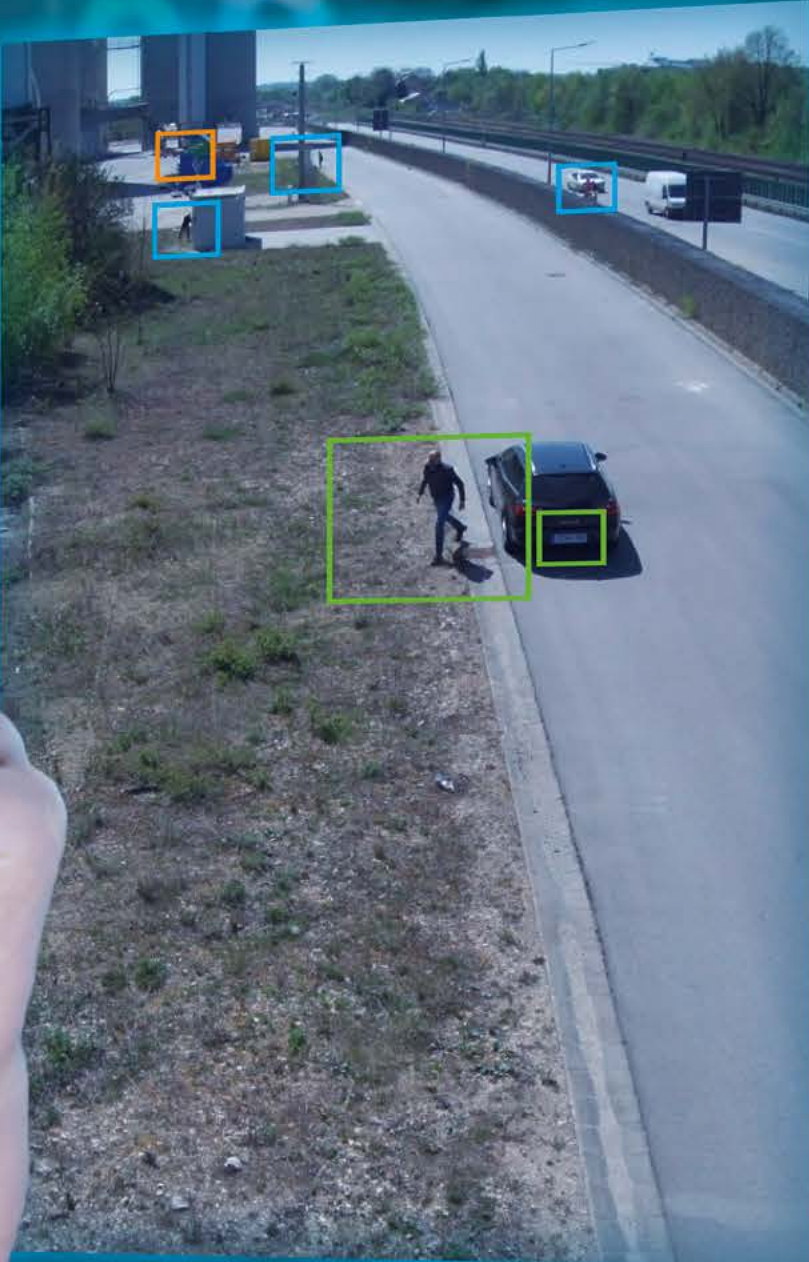
SITUATIONAL AWARENESS AND FORENSICS

All submodules are recorded in high resolution, so that any zoom can be carried out with high resolution in all detailed areas of the overall event, even retrospectively in the backup. This function is not possible with conventional solutions and is very helpful, e.g. in complex situations or for a successful forensic evaluation.



LIVE AND PLAYBACK SIMULTANEOUSLY

With Panomera®, the same scene can be viewed simultaneously in both live and playback mode.

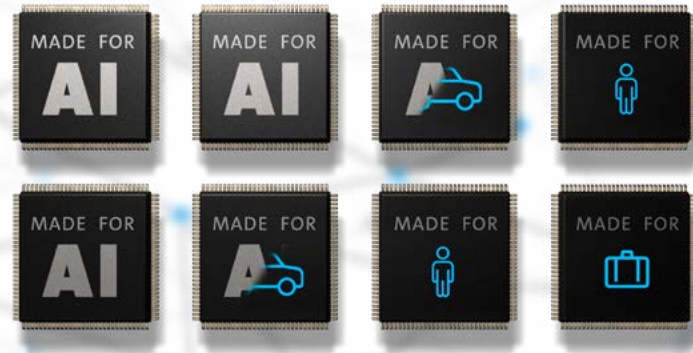


8X AI POWER

ADD VALUE WITH YOUR IMAGES

The Panomera® is equipped with an intensively trained neural network that analyses the captured images in high resolution and classifies defined objects in real time. Dallmeier provides a wide selection of apps for almost every purpose.

And if a special application is not available from Dallmeier, video analytic solutions from our technology partners can be integrated additionally. These in turn benefit from the excellent image quality of the Panomera® – Quality In, Quality Out.

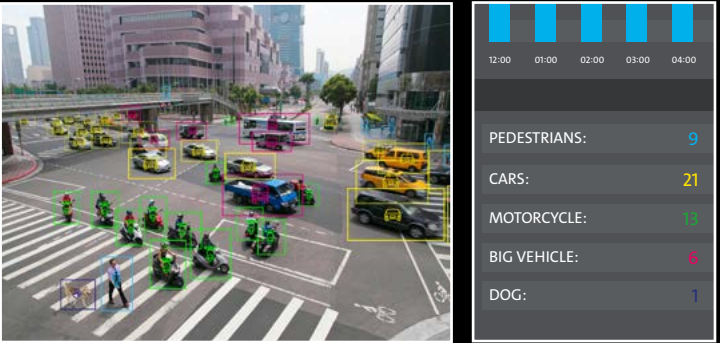
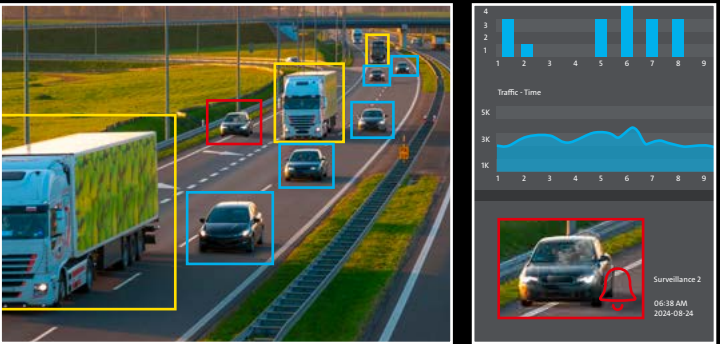


70 TOPS

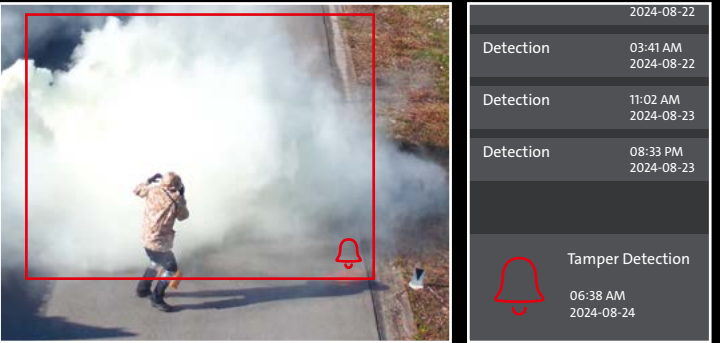
combined AI Power

COUNTLESS

application possibilities



KNOW WHAT HAPPENS
Counting objects, people and contexts



RECOGNISING TRICKS AND DECEPTION
AI-based detection of tampering attempts

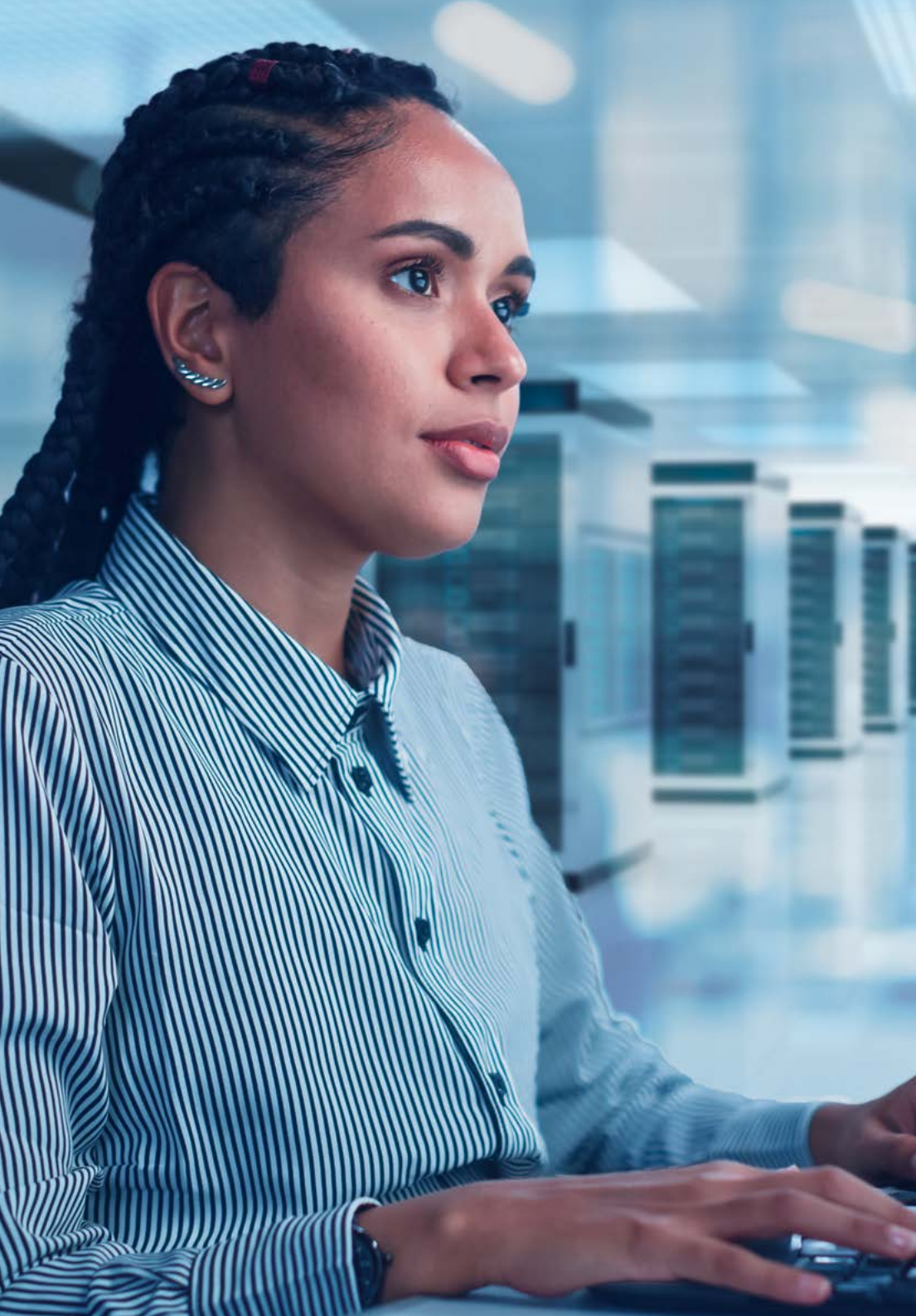


and many more

CUSTOMISED SOLUTIONS

AND WHICH ANALYTICAL APPLICATION SOLVES YOUR PROBLEM?

- VEHICLE SEARCH
- FENCE GUARD
- NO-PARKING ZONES
- LOITERING GUARD
- MOTION GUARD
- CAMERA-BASED PEOPLE COUNTING
- LICENSE PLATE VERIFIER
- WRONG WAY DETECTION "SMALL"
- "TRIPWIRE" FUNCTIONALITY
- SMART MOTION DETECTION
- OBJECT ANALYTICS
- PERIMETER PROTECTION
- "ACTIVE ALARM" WITH VOICE MESSAGE



INTEGRATION IN PARTNER SYSTEMS

OPEN FOR “BEST OF BREED”

VIDEO MANAGEMENT: THE END CUSTOMER DECIDES

Dallmeier offers software solutions for various applications. However, we understand that many customers already have a preferred VMS solution or are considering one. Panomera® is therefore seamlessly integrated into an increasing number of VMS systems. This means that the full Panomera® functionality is also available to their users. These currently include systems from advancis, Milestone and Genetec.

Panomera® can also be integrated into any video management (VMS) or PSIM system that supports the ONVIF specification profiles M, S and T as well as RTSP. The images from the sensors are each treated as a separate stream. This means that the full resolution density is available for forensics and live observation, albeit as individual streams.

ANALYTIC & MORE: IT'S ALL ABOUT THE BEST POSSIBLE SOLUTION

The possible applications of video analytics are almost limitless. In addition to a whole range of already integrated analytical functions, the Panomera® systems therefore offer a multitude of possibilities through close integration with leading analytical systems such as Briefcam, IKARA or SAIMOS.

Further partnerships and integrations exist with a large number of manufacturers, e.g. of radar systems, network components, light technology and numerous specific industry solutions.

Integrated in   

ONVIF |   

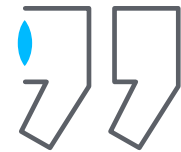
AN OPEN SYSTEM

WITH STRONG TECHNOLOGY PARTNERS



PIONEERING VIDEO TECHNOLOGY FROM GERMANY

IT'S NOT JUST ABOUT DECIDING ON A GOOD CAMERA



“With the Panomera® we are setting a new standard: where previously several cameras, complex infrastructure and time-consuming analyses were necessary, a single system is now sufficient.”

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

GDPR AND CYBERSECURITY

Cybersecurity and data protection are playing an increasingly important role in today's investment decisions. Dallmeier systems fulfil the highest data protection standards and have all state-of-the-art cybersecurity features. One of the ways we ensure this is through regular, standardised safety tests by external experts. Development, production and support are carried out under 100% constitutional and democratic political conditions.

GREEN GLOBAL SECURITY



Dallmeier has long been an ISO 50001-certified company for energy efficiency and ISO 14001-certified for sustainable environmental management. In the spirit of “Green Global Security”, waste avoidance and low energy consumption in the production process are just as much a part of our corporate philosophy as long life cycles and the high energy efficiency of our products.

MADE IN GERMANY

Panomera® is developed and manufactured 100% at our company headquarters in Regensburg. This means that we control the entire supply and development chain. Only high-quality components and materials are used. Together with the retrofittability of the systems and high energy efficiency, this ensures economical and sustainable operation – far beyond the normal utilisation cycles.

 **MADE IN GERMANY**



LONG DISTANCES, LARGE AREAS, 360° OVERVIEW

INTRODUCING THE PANOMERA® S-SERIES AND W-SERIES



PANOMERA® W SERIES: 360° OVERVIEW WITHOUT GAPS

The Panomera® 360° multifocal sensor system was designed with a special focus on the protection of large rooms from a single location. The innovative lens-sensor concept of the Panomera® in combination with a high-resolution fisheye lens enables the unique recording of a complete half-space (half-sphere) without blind spots, i.e. 360° horizontally and 90° vertically.

PANOMERA® S SERIES: HIGHEST RESOLUTION OVER DISTANCE AND AREA

The patented Panomera® technology combines several lenses and sensors with different focal lengths in one optical unit. Panomera® cameras with multifocal sensor technology also capture rear and centre image areas with the same high resolution as scenes in the foreground. With unique advantages for video observation, video surveillance and video analytics.

INNOVATIONS

ASSEMBLY, ADDITIONAL FUNCTIONS, DATA PROTECTION



MOUNTERA®

- **MOUNTERA®** ceiling / wall bracket with internal cable routing
- **MOUNTERA®** connection technology
- **MOUNTERA®** box for cabling and connections



AIRBLAST

- Consistent safety – even in rain or dust
- No cleaning effort and wear



PRIVACY SHIELD

- Minimal effort thanks to remote controllability
- Video surveillance is clearly deactivated



PANOMERA®
S8 Area Serie



LONG DISTANCES OR
WIDE AREAS ...

The Panomera® S8 Area series is optimised to cover an area with great depth. This ensures consistently high image quality from near to far. Different models allow you to choose between maximum range and maximum aperture angle.

S8 304/22



106 m 212 m 427 m



Field of view:	22° horizontal / 63° vertical
Resolution:	304 effective Megapixels
Frame rate:	up to 30 fps

S8 192/30



80 m 159 m 320 m



Field of view:	30° horizontal / 53° vertical
Resolution:	192 effective Megapixels
Frame rate:	up to 30 fps

S8 145/45



53 m 105 m 212 m



Field of view:	45° horizontal / 60° vertical
Resolution:	145 effective Megapixels
Frame rate:	up to 30 fps

S8 74/90



36 m 71 m 144 m



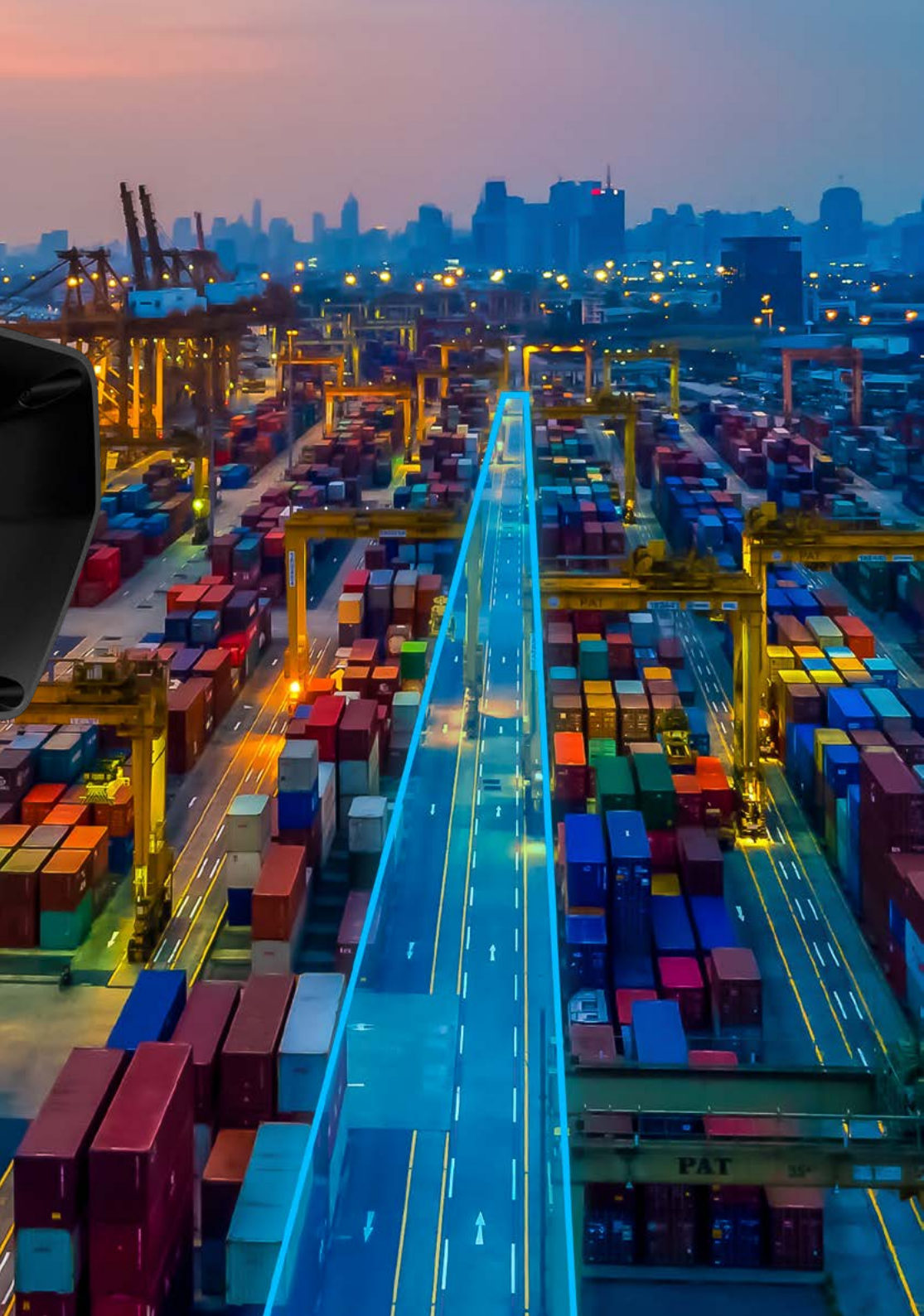
Field of view:	90° horizontal / 33° vertical
Resolution:	74 effective Megapixels
Frame rate:	up to 30 fps

PANOMERA®
S4 Area Serie



THE LONG-DISTANCE RUNNER

The Panomera® S4 Area series is optimised for long, narrow corridors. With opening angles of up to 30 degrees, maximum ranges can be achieved with a minimum blind spot. The use of only 4 modules makes it a particularly cost-efficient variant.



S4 70/15



97 m 194 m 392 m



Field of view: 15° horizontal / 26° vertical

Resolution: 70 effective Megapixels

Frame rate: up to 30 fps

S4 70/30



48 m 97 m 195 m



Field of view: 30° horizontal / 51° vertical

Resolution: 70 effective Megapixels

Frame rate: up to 30 fps

PANOMERA®

W4/8 Area Serie



REVOLUTIONARY 360° PERSPECTIVE

The W4/8 Area series offers a 180° / 360° all-round view without any blind spots. The systems therefore allow a completely new type of control over spatial relationships. Movements and processes can be tracked seamlessly at high resolution, even at long distances.



W8 95/360



95 MPe

360°



8.6 m

17 m

34 m



232 m²
IDENTIFY
(250 PX/M)



929 m²
RECOGNISE
(125 PX/M)



3,778 m²
OBSERVE
(62.5 PX/M)

Field of view: 360° horizontal / 90° vertical
Resolution: 95 effective Megapixels
Frame rate: up to 30 fps

W4 45/180



45 MPe

180°



17 m

34 m



464 m²
RECOGNISE
(125 PX/M)



1,889 m²
OBSERVE
(62.5 PX/M)

Field of view: 180° horizontal / 90° vertical
Resolution: 45 effective Megapixels
Frame rate: up to 30 fps

PANOMERA®

S4 Perimeter



PERIMETER AI + SUPERIOR OPTICS

With the Panomera® S4 Perimeter, we are setting a new standard in perimeter protection: where previously several cameras, complex infrastructure and elaborate analyses were necessary, a single system is now sufficient. Equipped with a neural network that has been specially trained for perimeter scenarios, combined with the patented Panomera® multifocal sensor technology, the result is one of the most powerful perimeter protection systems in the industry.

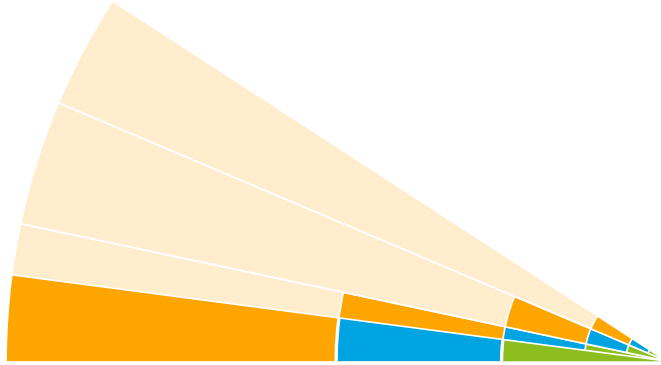


S4 200/33 SL

200 MPe

33°

4:5



400 m

200 m

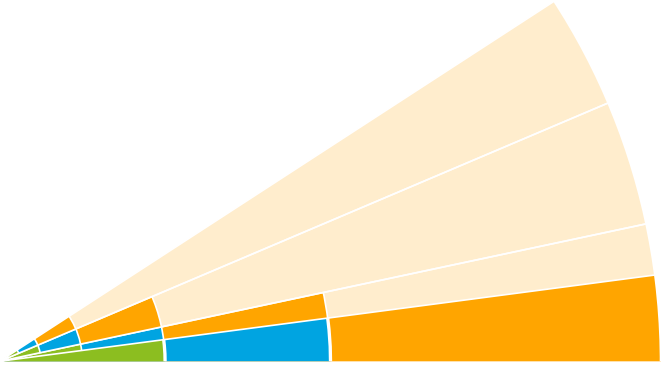
100 m

14,400 m²
OBSERVE
(62.5 PX/M)

3,600 m²
RECOGNISE
(125 PX/M)

900 m²
IDENTIFY
(250 PX/M)

S4 200/33 SR



100 m

200 m

400 m

Field of view: 33° horizontal / 39° vertical
Resolution: 200 effective Megapixels
Frame rate: up to 30 fps

PANOMERA®

S8 Runway



ONLY ONE SYSTEM FOR ONE COMPLETE RUNWAY

With the combination of the two Panomera® S8 Runway systems, for example, a runway can be completely secured from a single location. A total of sixteen 4K sensors combined in a single overview provide enough resolution to track movements live along the entire route or to clarify incidents in the recording.



S8 190/78 L

 380 MPe

 78°

 7:1



424 m

212 m

106 m



36,000 m²
OBSERVE
(62.5 PX/M)



9,000 m²
RECOGNISE
(125 PX/M)



2,250 m²
IDENTIFY
(250 PX/M)

S8 190/78 R



106 m

212 m

424 m

Field of view:

78° horizontal / 11° vertical

Resolution:

380 effective Megapixels

Frame rate:

up to 30 fps

PANOMERA®
S4/8 Stadium



10,000 SEATS WITH ONLY
ONE CAMERA

With the S4/8 Stadium series, grandstands in particular can be covered over a large area. The system, which is optimised for stadiums, captures a large grandstand area in an overall view and simultaneously allows high-resolution detail zooming by multiple users – live and in the recording. This enables successful interventions and the collection of usable evidence.



S8 66/13

66 MPe 13° 5:3



162 m 325 m 656 m



2,325 m²
IDENTIFY
(250 PX/M)



9,300 m²
RECOGNISE
(125 PX/M)



37,200 m²
OBSERVE
(62.5 PX/M)

Resolution: 66 effective Megapixel (S8)
33 effective Megapixel (S4)

Frame rate: up to 30 fps

MODEL	FIELD OF VIEW		RANGE		
	HORIZONTAL	VERTICAL	250 PX/M	125 PX/M	62.5 PX/M
S8 66/13	13.1°	7.9 °	162 m	325 m	656 m
S8 66/20	20.2°	12.1°	105 m	211 m	427 m
S8 66/29	29.3°	17.4°	73 m	146 m	294 m
S8 66/30	30.0°	7.8°	105 m	211 m	426 m
S8 66/41	41.2°	24.5°	51 m	103 m	209 m
S8 66/45	45.0°	11.7°	70 m	140 m	293 m
S8 66/61	61.1°	16.0°	51 m	102 m	206 m
S4 33/12	13.1°	3.5°	162 m	325 m	656 m
S4 33/13	13.1°	7.8°	105 m	211 m	426 m
S4 33/19	19.7°	11.7°	70 m	140 m	293 m
S4 33/20	20.2°	5.4°	105 m	211 m	427 m
S4 33/27	27.0°	16.0°	51 m	102 m	206 m
S4 33/29	29.3°	7.8°	73 m	146 m	294 m
S4 33/41	41.2°	11.0°	51 m	103 m	209 m

ACCESSORIES

MODULAR – PRACTICAL – COST-EFFECTIVE

PANOMERA® Extensions	
	Sun Shield
	Panomera® Privacy Shield
	Panomera® Air Blast Charger 4
	Panomera® Edge LTE Solution

MOUNTERA® Accessories	
	Mountera® Box with PSU
	Mountera® Box with SRS Edge
	Mountera® Wall Bracket
	Mountera® Ceiling Bracket



Let's talk about your project!
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