



Multifocal sensor system

PANOMERA®



VIDEO TECHNOLOGY FOR LARGE AREAS
STADIUM





THE LATEST TECHNOLOGY FOR THE security in stadiums



UNIFORM RESOLUTION AND CONSISTENT DEPTH OF FOCUS

Unlike single sensor cameras, multifocal sensor technology utilises several sensors, each of which has a different focal length. Consequently, more distant areas can also be displayed with the same image quality as for objects close to the camera.

EFFECTIVE SCREEN SPLITTING – CUSTOMISED ASPECT RATIO

With multifocal sensor technology, the aspect ratio can be adapted individually: it is not bound to fixed formats such as 16:9 or 4:3. Formats such as 11:5, 4:4 or 8:1 are also possible. This is one of the features that enables Panomera® to be adapted perfectly to any operational area, so that it is suitable for large stadiums as well as smaller ones.

CASCADABILITY

Multiple Panomera® cameras can be cascaded (up to 360°) and combined to deliver a single image. For the operator, this image always behaves as if it were captured by a single camera.

MULTIUSER CAPABILITY

In contrast to PTZ cameras, with which only one operator can control the camera, with Panomera®, an unlimited number of operators can navigate across the entire scene independently of each other. Although all operators are connected with the same camera, each of the individual users can select their view individually and zoom or pan as they desire.

SIMULTANEOUS LIVE AND PLAYBACK

With Panomera®, the same scene can be viewed in live and playback modes at the same time.

BANDWIDTH ECONOMY

Panomera® uses H.264 compression and multicast capability for extremely economical bandwidth use (e.g., Panomera® with 15 sensors: 6 Mb/s per stream, that is to say a total of just 90 Mb/s). Connection may be assured with copper or glass fibre cables.

TRANSMISSION TO MOBILE END DEVICES

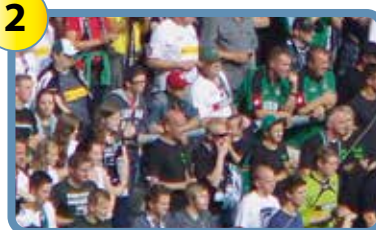
1



ZOOM RIGHT DOWN TO THE SMALLEST DETAIL

Zoom with the highest resolution – thus the minute details are identifiable from far distances.

2



PERMANENT RECORDING OF THE ENTIRE IMAGE AND ALL DETAILS

Detail with approx. 340 pix/m (104 pix/ft) – distance 100 m (328 ft).



THE PANOMERA® EFFECT

Highest detail resolution at every distance



The mobile solution delivers unsurpassed flexibility and rapid response times via the Panamera® Mobile Communicator. The pictures from the Panamera® can be displayed on an iPhone or iPad, for example, so images of suspicious individuals can be sent immediately to the handheld devices of security personnel in the stadium.

HIGH DEGREE OF AVAILABILITY OF RECORDINGS

The hallmarks of Dallmeier recording systems are supreme quality and reliability. The highest possible degree of availability is guaranteed by RAID 6 and redundant power supply units. The LGC Forensics certification (formerly Kalagate) ensures that the image material is admissible as evidence in a court of law.



HIGHEST IMAGE QUALITY IN ALL RANGES

Each sensor defines its own **contrast, white balance, exposure, sharpness** and **focus**. This enables the system to deliver a considerably more **effective dynamic response**, and the highest possible image quality for the entire scene.



Recording in sunlight



Recording in shade



3a

3b



THE PANOMERA® EFFECT

Highest detail resolution at every distance

The multifocal sensor system Panomera® stands out due to its completely new lens and sensor concept: The resolution never falls below the specified parameters, not even in the most distant areas of the image. Therefore the Panomera® effect guarantees a uniform resolution over the entire scene. This way, even objects that are farther away can be displayed with the same resolution quality as objects in the foreground of the picture.

The Panomera® effect begins where conventional HD and megapixel cameras reach their limits.

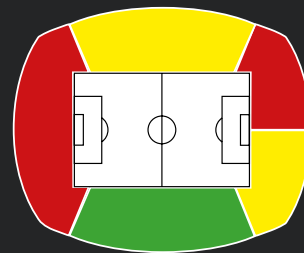
Prioritisation of critical areas

Individual adjustment of the surveillance system to your stadium

With the Panomera® system you can select areas of the stadium and give them a higher monitoring priority, according to your requirements. You can, for example, choose a higher resolution for recording certain sections of the crowd. Likewise, a lower resolution can be chosen for areas that do not require closer monitoring.

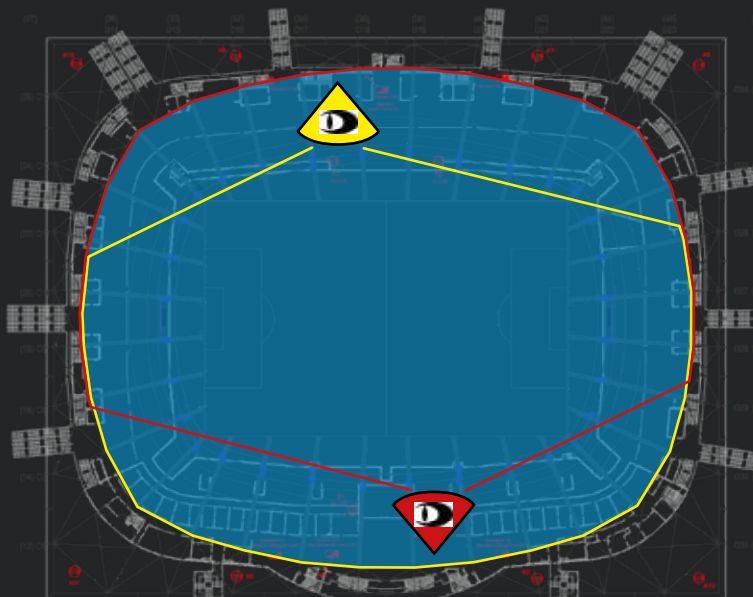
Prioritisation of critical areas


- Standing area
- Guest area
- Critical fan areas
- VIP area



- Priority:
- 1
 - 2
 - 3

Specific example of the installation of the Panomera® systems



 Recording area of the Panomera® camera system