LOGIPIX

www.logipix.com
logipix@smp.hu

CASE STUDY

Újpest FC, Szusza Ferenc Stadium, Hungary

LOGIPIX
Complete Security and Surveillance Systems

REFERENCES

Stadium Video Surveillance

Bozsik Stadium, Hungary

Haladás Stadium, Hungary

Szusza Ferenc Stadium, Hungary

DVTK Stadium, Hungary

Széktói Stadium, Hungary

Győri ETO Stadium, Hungary

Pancho Arena, Hungary

Borisov Stadium - FC BATE Barysaw, Belarus

Bath Rugby Stadium, UK

Olympic Stadium, Cairo

Albert Flórián Stadium, Hungary

PMFC Stadium, Hungary

Fehérvári úti Stadium, Hungary

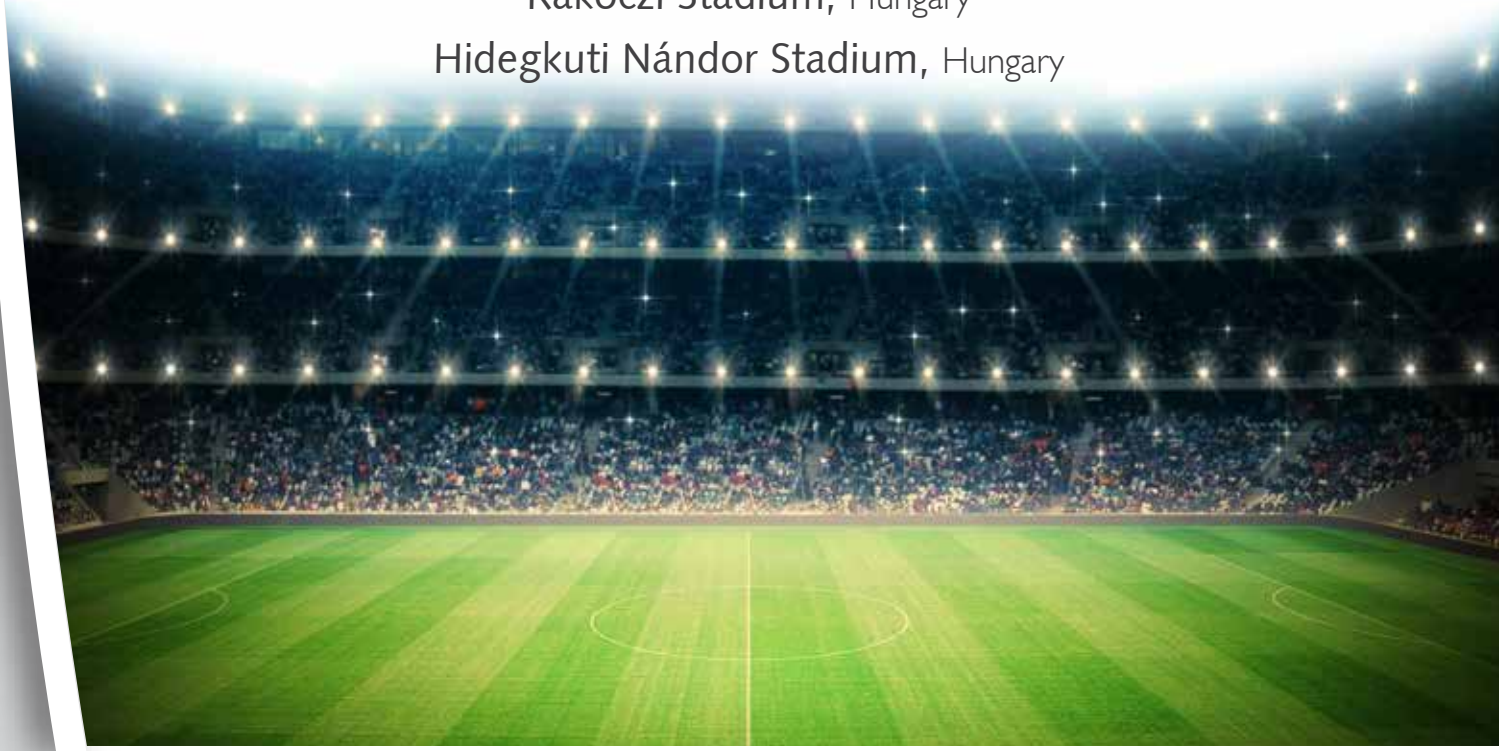
ZTE Arena, Hungary

Currently under installation

Perutz Stadium, Hungary

Rákóczi Stadium, Hungary

Hidegkuti Nándor Stadium, Hungary



LOGIPIX
Complete Security and Surveillance Systems

The LOGIPIX Video Surveillance System for Stadiums

For Safe Football Match Experiences

Background

Football matches are one of the most crowded community events in the world. With thousands of people gathered together in one place, stadiums have the potential to become extremely high risk environments. The Hungarian Football Association MLSZ, decided to upgrade the security systems in their Premier League Stadiums. They wanted to install a reliable surveillance system that would help authorities prevent any incidents, and should a situation escalate, a system that would ensure prosecutions are made where necessary.

Requirement

We were asked to provide the latest generation security technology, a complex yet user-friendly system that would efficiently cover and monitor all areas of the stadiums with high resolution images allowing face recognition at every seat of the bowl.

Approach

The upgrade to the LOGIPIX system is being implemented in stages. Initially, the system was installed in six stadiums across Hungary. In 2014, the second stage has begun, with the goal to install the LOGIPIX System in seven more stadiums in Hungary to provide a safer environment for everyone visiting.

www.logipix.com
logipix@smp.hu

LOGIPIX
Complete Security and Surveillance Systems

The Szusza Ferenc Stadium

One of the most important stadiums in the project is the Újpest FC, Szusza Ferenc Stadium. This stadium is well known because of the frequent number of violent incidents that have taken place there. In the Szusza Ferenc stadium, thirty 15MP LOGIPIX cameras now monitor the 13,488 seating area, providing 250 pixels/meter.

Operators in the control room work on four workstations with 23" Full HD monitors. The images of the cameras are stitched together to create four panoramic images. This ensures that the entire area is covered, so that the security teams are able to effectively monitor the interior of the building. Additionally, seven 9MP and two Full HD PTZ LOGIPIX cameras were installed to monitor the stadium entrances and exists.

If an incident occurs at the seats, operators can quickly retrieve high resolution (1000 pixel/meter) optically zoomed images from special zoom windows. Therefore any necessary actions that need to be taken can be done without delay in order to prevent further crowd outbursts, serious injuries and significant damage in the stadium.

The integrated eight 2MP PTZ cameras work together with the multi-megapixel panoramic system. In this stadium it was necessary to install four LOGIPIX Network Video Recorders (LNVR) in order to record and store the security footage on a total of 32 HDDs with VRM fail-safe file system. The built-in LPoE routers supply power to the cameras which significantly reduced the installation cost. Using the JPEG2000 compression standard also improves the efficiency of the system as it means that high resolution images can be sent over a low bandwidth.

www.logipix.com
logipix@smp.hu

LOGIPIX
Complete Security and Surveillance Systems

Control Center

Solution

Each stadium is equipped with several individual 15MP LOGIPIX cameras forming a panoramic system and with additional FULL HD PTZ cameras that can be controlled on the panoramic images by pointing desired picture areas. The Control Center is able to display visual information of the transmitted camera images where the original combined resolution can be greater than 1 Gigapixel. It uses the computers' GPU through an OpenGL to combine the images of even sixteen cameras, where the combined size of the image is that of 200 megapixels. The Control Center is able to show five of these images at one time.

The LOGIPIX system uses the JPEG2000 standard for image compression. By making use of the embedded multi-stream of the JPEG2000, we developed a function called the LogiZoom. This hardware side zoom function significantly increases the efficiency of the system. Whilst by using the MultiZoom function several high resolution zoomed areas can be viewed on a single stitched image, both in live and archived video streams.

www.logipix.com
logipix@smp.hu

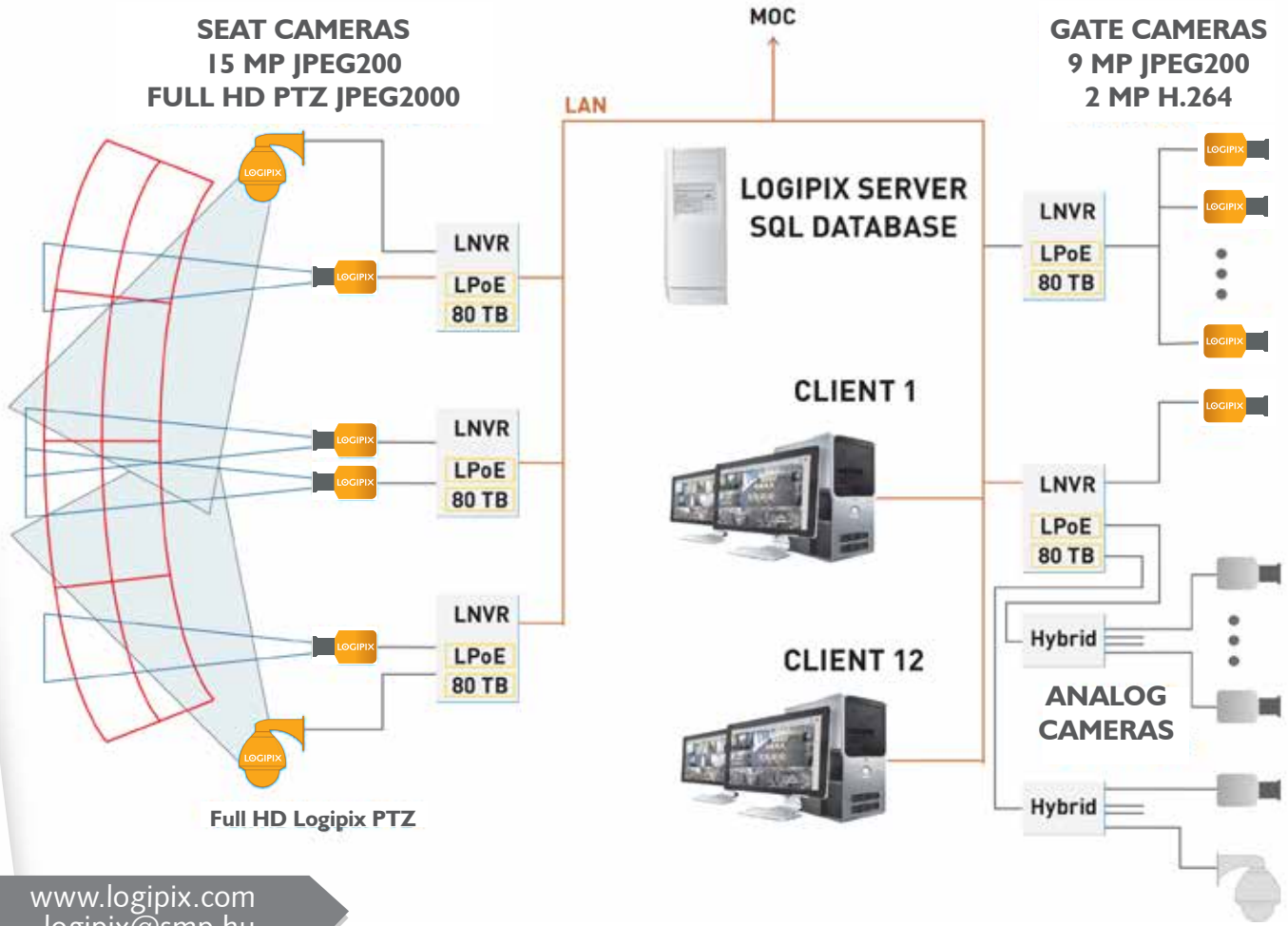
LOGIPIX
Complete Security and Surveillance Systems

The Benefits

The Control Center is capable of managing an unlimited number of multi-megapixel, HD or analogue cameras. It is thanks to the high quality image processors that such large areas can be monitored. By having their images stitched together to create panoramic images, several individual 15MP cameras can be used to cover the entire grounds. As all the cameras in the panoramic camera system are installed individually, we can provide a flexible service, and although a complex system, the Control Center software is extremely user friendly which saves on staff training time.

MLSZ replaced several hundred traditional VGA cameras with our multi-megapixel LOGIPIX cameras which significantly reduced the cost of the installation and maintenance. LOGIPIX Full HD PTZ cameras were integrated into a LOGIPIX multi-megapixel panoramic video system. Together they form an effective and complete surveillance system, that fully utilizes the advantages of the HD PTZ cameras and the multi-megapixel camera system. PTZ cameras can be controlled interactively with the Management Software by selecting an exact area on the panoramic image, the appropriate PTZ camera then turns to the desired direction and zooms in. These high-quality images can provide valuable information not only for the stadium security teams but also for the relevant authorities as well.

Stadium Video System



www.logipix.com
logipix@smp.hu

LOGIPIX
Complete Security and Surveillance Systems

LOGIPIX for A Safe Football Experience

The LOGIPIX video surveillance system helps to create a safer environment in sport stadiums. As the image quality is high enough for face recognition at every seat, the security staff can flag and monitor potential criminals and respond to any incidents efficiently and effectively. Thanks to its design the system can provide a clear picture in all weather conditions. Fewer cameras mean reduced installation and operation costs, and reliable storage and a seamless search back function ensure videos can be obtained quickly, whilst conforming to local law.

Potential perpetrators know that the new security surveillance system can identify them with unmatched accuracy. Since the stadiums have been upgraded to the LOGIPIX System, vandalism and critical incidents have diminished.

www.logipix.com
logipix@smp.hu

Products are distributed by:

SMP Kft.
1139 Fiastyúk utca 71. Hungary
logipix@smp.hu