

## CUSTOMER

The Alltech FEI World Equestrian Games attracted more than half a million people over 16 days (September 25-October 10) to watch the largest sporting event in the United States in 2010. Held at the Kentucky Horse Park in Lexington, Kentucky, there were 632 athletes and 758 horses representing 58 countries competing in world championship competitions for eight equestrian disciplines. The elite devotees attending the games included members of royal families, heads of state and business and corporate leaders from around the world. Daily attendance peaked at 50,818 on October 2 for Eventing Cross Country. Other sold-out rounds of competition included reining, vaulting, dressage and para-dressage sessions. The games are held every four years and are governed by the Fédération Equestre Internationale (FEI). Alltech, an animal health and nutrition supplier, is the title sponsor.



## World-Class Megapixel Video Keeps Watch at World Equestrian Games

*Arecont Vision Cameras Among State-of-the-Art Technologies Used at International Event*



*The World Equestrian Games, the largest sporting event in the U.S. in 2010, used Arecont Vision's surveillance solution to clearly view all large areas in fine detail.*

## MEGAPIXEL SOLUTION

As the "Official Physical Security Solutions Provider," EMC Corp. led deployment of more than \$1 million in security industry products to protect the games, including EMC's CLARiiON network storage, which provided about 300 terabytes of storage for video and other security data. Arecont Vision

provided megapixel cameras, which were the core imaging component of the video surveillance system.

"As the second largest sporting event to take place in North America other than the Olympics, we are excited to be the official physical security solutions provider of digital surveillance for the World Equestrian Games," said

### AV5105 5 Megapixel IP Camera

#### Key Features

- 2592(H)x1944(V)
- 0.3 Lux @ F1.4
- H.264 (MPEG4, Part 10), Motion JPEG
- 1/2.5" CMOS Sensor
- Forensic Zooming
- Motion detection
- Motorized IR cut filter (DN Version)



## CHALLENGE

The scope of the security project for the World Equestrian Games posed significant challenges given the magnitude of the event. The surveillance solution needed to cover the entire 1,224-acre Kentucky Horse Park, a working horse farm, theme park and equine competition center. Also, each day of the event attracted tens of thousands of spectators. The security objective was to protect the event using as little manpower as possible while providing clear video of any occurrence, whether in real-time or as forensic video after the fact. Given the expansive event venue, the video surveillance system required cameras capable of clearly viewing large areas in fine detail.

“One of our largest challenges is the sheer size of attempting to secure 1,200 acres,” said Kevin Tyo, Director of Security and Safety Services, World Equestrian Games. “On any given day, we had a range of anywhere from 15,000 to probably 35,000 to 50,000 people on site.”

“We don’t know from day to day what people will be doing, where they will be going -- but we have hundreds of thousands of dollars worth of assets – not only physical assets, but the horses, the people, the things that are invaluable to us,” added Sharon Kingman, Director of Information Technologies, World Equestrian Games 2010. “So our greatest challenge is to make sure that everyone can do their job, they can protect themselves, they can protect their assets, and not think about it.”



**Arecont Vision 3 and 5 megapixel IP network surveillance cameras were installed throughout the Kentucky Horse Park to provide clear, detailed views of specific areas.**

Dick O’Leary, Senior Director of EMC’s Global Solutions. “The sheer size and scope of the event highlight the need for organizations to quickly analyze and respond to the vast amounts of captured security data.”

“The contribution EMC made toward the 2010 Games not only made the Games safe and successful for all visitors, but also has potential to enhance the Kentucky Horse Park as a world-class facility,” added Jamie Link, World Games 2010 Foundation CEO.

Orion Systems Group’s certified technicians designed, configured and installed the integrated solution for the World Equestrian Games using best-in-class hardware, security equipment, cameras, storage and video software. “The World Equestrian Games allowed us to highlight the best available technologies, implemented in an enterprise-class video surveillance system solution, to successfully monitor a large geographic area with little or no existing network infrastructure,” said Paul Garver, President, Orion Systems Group. “Our team showcased the latest advancements in megapixel imaging technology with Arecont Vision’s cameras.”

“*Their lenses, in conjunction with the other sponsors’ world class video surveillance products and services, provided the immediate, undistorted, clear images needed to ensure the security of World Equestrian Games participants and spectators.*”

Arecont Vision 3 and 5 megapixel IP network surveillance cameras were installed throughout the Kentucky Horse Park to provide clear, detailed views of specific areas. Arecont Vision’s AV5105DN is a 5 megapixel day/night camera provides 2,592 x 1,944-pixel images at 9 frames-per-second (fps). The

camera uses H.264 (MPEG 4, Part 10) compression to minimize system bandwidth and storage needs. The AV5105DN can also be used at lower resolutions for various frame rates up to full motion. The camera provides

full-motion progressive-scan 1280x1024 video at 30 fps, 1600x1200-pixel video at 24 fps or 2048x1536 at 15 fps. The camera incorporates Arecont Vision’s MegaVideo® image processing at 80 billion operations per second. Features include forensic zooming to zero in and view the details of a live or recorded image, motion detection and image cropping. The camera’s day/night version includes a motorized infrared (IR) cut filter. The camera can output multiple image formats, allowing the simultaneous viewing of the full-resolution field-of-view and regions of interest for high-definition forensic zooming.

Twenty Arecont Vision AV5105DN cameras



**Arecont Vision worked with EMC to customize the surveillance system for The World Equestrian Games.**

were outfitted with SY125M lenses from Theia Technologies. The SY125M ultra-wide-angle lenses provide a 135-degree field of view, along with digital and horizontal correction to eliminate fisheye distortion. The lenses complement the high-resolution and superior image clarity of Arecont Vision’s megapixel cameras.

“Theia lenses, in conjunction with the other sponsors’ world class video surveillance products and services, provided the immediate, undistorted, clear images needed to ensure the security of World Equestrian Games participants and spectators,” said Jeff Gohman, President and co-founder of Theia Technologies.

“We adapted a Theia lens to the Arecont megapixel camera, which gives us a 135-degree field of view, so instead of having to use five or six cameras, we can cover an entire area only using one or two,” said John McKenzie, Business Development Manager, EMC Physical Security Solutions.

Other Arecont Vision megapixel cameras used at the World Equestrian Games include the AV3105 Day/Night 3 megapixel cameras that provide 2048x1536-pixel images at 15 fps. The AV3105 uses a 1/2” CMOS sensor and Arecont Vision’s Mega-Video® image processing at 80 billion operations per second.

The day/night version has a motorized infrared (IR) cut filter. Additional features include motion detection, image cropping, region-of-interest viewing and the ability to zoom into an image after it is archived (forensic zooming).

Verint Systems provided the Nextiva IP-based video software platform as well as wireless bridges to transmit video across the vast area of the Kentucky Horse Park. A dedicated security network, based on a fiber backbone, was installed to handle access control, intrusion detection and video surveillance. All the video was fed back to the security command center to IP-based, off-the-shelf servers running the Nextiva video management platform. Nextiva software combines open architecture with simple, point-and-click technology. Video feeds are monitored 24 hours a day and can be viewed from any workstation anywhere in the park. The video streams were saved, archived and managed on an EMC CLARiON storage-area network.

“Verint is pleased to partner with EMC, as well as Arecont Vision, Orion and Theia Technologies at the 2010 Alltech FEI World Equestrian Games,” said Elan Moriah, President, Verint Video Intelligence Solutions and Verint Witness Actionable Solutions. “We’re honored to take part in this historic event, leveraging our world-class networked IP video solutions to enhance awareness and the security of athletes and attendees.”

“This solution is really one of the most well-integrated solutions I have seen. We have best-in-class technologies from hardware, security equipment, cameras, storage and video software, so it’s a truly integrated system,” said Kirk Rhodes, Deputy Director of Physical Security, World Equestrian Games.

The system also can adapt to any changes dictated by a complex event such as the World Equestrian Games. “We can make a change literally within minutes if traffic flow or security requests dictate a transfer of one asset to another; it’s extremely easy, which makes us very happy,” said Kingman.

## **MEGAPIXEL BENEFIT**

Arecont Vision megapixel cameras enable close-up viewing of fine details using fewer cameras, providing a high return-on-investment (ROI) versus conventional imaging devices. Because megapixel cameras can cover an extremely wide field-of-view with high resolution, up to 50% fewer conventional cameras were required to cover the desired area. The application at the World Equestrian Games clearly demonstrated that megapixel cameras significantly reduce overall system cost and installation costs.

“Seven by 24, they are capturing every image that occurs within their view. So we have not only perfect vision at that time, but perfect vision post-occurrence so that we can go back and track anything and any view that may have happened in the park, wherever the cameras are covering. For us, having to do with less manpower, we are then allowed to have a path of retribution and recovery should assets go missing or should there be an occurrence,” said Kingman.

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As a result of their high resolution, Arecont Vision megapixel cameras meet the demanding needs for forensic video – and digitally recorded images from these cameras can be quickly viewed and analyzed, or shared with the authorities for investigation and prosecution. During the World Equestrian Games, the system was able to quickly access video images for any public safety agency that needed them.

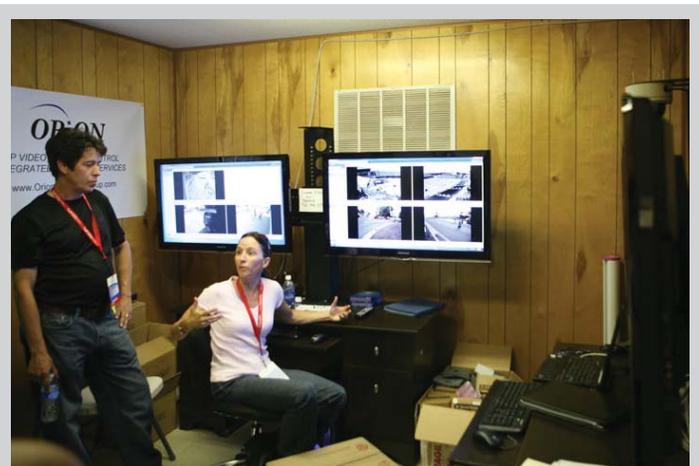
Digital pan-tilt-zoom (PTZ) capabilities provided organizers with extensive coverage of all event facilities. Whether viewing a parking lot or a crowded venue, a mechanical PTZ camera could only watch one of 10 fields-of-view it surveys at a time. That leaves nine fields-of-view without coverage. Covering the “missing” fields with additional cameras would have increased costs dramatically. Arecont Vision’s megapixel cameras captured the entire scene – all the time – and allowed users to digitally zoom-in on any area within the scene, live or on recorded video. The use of megapixel cameras also contributed to a reduction in guards and system operators during the World Equestrian Games, further improving ROI.

Arecont Vision cameras employ H.264 compression, which lowers bandwidth and storage requirements, and simplifies integra-

tion. The application at the Kentucky Horse Park also demonstrates that megapixel cameras can dramatically decrease costs related to other elements of a system, requiring fewer software licenses, fewer lenses and enabling a decrease in the man-hours needed to install a system.

The combination of performance benefits and lower system costs provided by megapixel cameras contributed to the successful implementation at the World Equestrian Games. Megapixel imaging provided a significant upgrade in system functionality.

“Arecont Vision frequently works with EMC on many large-scale projects that require megapixel imaging,” said Raul Calderon, Senior Vice President of Marketing at Arecont Vision. “When EMC asked if we wanted to join them as solutions sponsors for the WEG, we thought it was a great way to showcase our joint-solutions capabilities. Together with EMC, Orion, Theia Technologies and Verint, we at Arecont Vision are proud to be one of the technology sponsors of the games. An event of this magnitude, with high-profile guests and participants, needed a premier level of equipment for security solutions, and we are proud to have been a part of it.”



**Arecont Vision megapixel cameras significantly reduce overall system cost and enable close-up viewing of fine details using fewer cameras, providing a higher return-on-investment (ROI) versus conventional imaging devices.**

Arecont Vision is the leading manufacturer of high-performance megapixel IP cameras and associated software. Arecont Vision products are made in the USA and feature low-cost massively parallel image processing architectures MegaVideo® and SurroundVideo® that represent a drastic departure from traditional analog and network camera designs. All-in-one products such as the MegaDome®, MegaView™, and D4F/D4S series provide installer friendly solutions. Compact JPEG and H.264 series of cameras address cost sensitive applications. These innovative technologies enable Arecont Vision to deliver multi-megapixel digital video at IP VGA camera price points.

 **Arecont Vision**  
megapixel technology...  
**beyond imagination**