

Leading the Way in Megapixel Video

Customer

Lupoli Companies, Lawrence, MA, U.S.A. operates Sal's Pizza, a 45-location-and-growing pizza shop chain with restaurants in Arizona, California and Florida. The company's headquarters is in a 3 million-square-foot, 100-year-old former mill building that was converted into a multi-tenant office park and garage. Lupoli Companies owns and occupies the office park, and leases additional space to other companies.

Customer

The Lupoli Companies' office park and headquarters are located in a high-crime area prone to break-ins and vandalism. The property is considered too large to be covered efficiently by roaming guards, and a high-resolution video system was needed to enable guards to watch the extensive facility. In order to meet the requirements of current tenants and to attract future tenants, a high-performance video system was needed to provide a more secure property.

Arecont Vision Megapixel Cameras Capture Details at Lupoli Companies' Headquarters and Corporate Park

Megapixel Video Helps Security Personnel Secure 4 Million Square Foot Facility



Lupoli Companies chose Arecont Vision IP megapixel cameras to secure its 3-million-square-foot headquarter complex.

MEGAPIXEL SOLUTION

The IP video system was a new installation – the building had never had cameras before, and the customer's only previous experience had been with analog video. The new video surveillance system was designed by Chris Nugent, an Integrated Security Consultant with American Alarm & Communications located in Arlington, MA, which is the largest family-owned security company in New England with 40 years of experience.

Mr. Nugent spent almost a year researching various technology options before specifying the final system design. He selected Arecont Vision cameras for

their exceptional resolution and H.264 compression which minimizes bandwidth and storage needs. Mr. Nugent worked closely through the process with John MacDonald, IT Director of Lupoli Companies.

After a detailed assessment of the facility to determine camera locations, Arecont Vision megapixel cameras were deployed throughout the office park and parking area. A variety of megapixel cameras were specified depending on the viewing parameters of each site, including Arecont Vision's 20-megapixel panoramic camera, 5-megapixel outdoor bullet-style cameras, 5-megapixel domes and 8-megapixel panoramic

SurroundVideo®

20 Megapixel IP Camera

AV20185DN

- 3.5 fps @ Full Resolution
- 0 Lux, IR Sensitive (Day/Night Model)
- 0.3 Lux @ F1.8 (Color Model)
- 4 x 5MP, 1/2.5" CMOS Sensor
- Over 6 Billion Operations Per Second
- Forensic Zooming
- Region-of-Interest (ROI)
- Image Cropping
- On Camera Motion Detection



AV20185DN

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cameras. The cameras were positioned to cover all the parking lots, entry and egress points and interior hallways.

All of the cameras incorporate Arecont Vision's MegaVideo® image processing which calculates billions of operations per second. The cameras feature forensic zooming to zero-in and view details of a live or recorded image, motion detection and image cropping. The cameras also output multiple image formats, allowing simultaneous viewing of the full-resolution field-of-view and regions of interest.

To cover the parking lot, the Lupoli Companies' office park employs Arecont Vision MegaDome® AV5155DN cameras. The 5-megapixel day/night all-in-one integrated domes provide 2592 x 1944-pixel images at 9 frames per second (fps). Light sensitivity is 0.3 lux at F1.4 in color mode and 0 lux (IR-sensitive) in day/night mode using a motorized infrared (IR) cut filter. Each camera is housed in an IP66-rated dome housing capable of withstanding environmental conditions such as dust and water. The AV5155DN is also used indoors to cover a long hallway inside the building.

The 5-megapixel MegaView® bullet camera is the Arecont Vision AV5125IR, an all-in-one IR camera enclosed in an IP66-rated and vandal-resistant housing that incorporates IR LED illuminators.

Exterior walkways are covered by an Arecont Vision AV8185DN-HD, a SurroundVideo® 180-degree panoramic day/night 8-megapixel H.264 camera with a heater/blower to enable operation despite extreme temperatures. The cost-effective camera is designed for applications where mechanical pan-tilt-zoom (PTZ) devices might otherwise be used or where multiple cameras would be needed to view expansive areas. Each SurroundVideo® camera incorporates an IP66-rated environmental chassis and a 5.5-inch polycarbonate dome that needs no external housing.



Arecont Vision megapixel cameras are a better way to provide situational awareness and be able to zoom in for details.

Arecont Vision Model AV8185DN incorporates four 2-megapixel CMOS image sensors that can be switched between day and night modes manually or automatically to provide 6400x1200-pixel panoramic images at 5.5 frames-per-second (fps). Low-light sensitivity is 0.2 lux at F2.0 in color mode and 0 lux (IR-sensitive) in day/night mode. The 180-degree panoramic camera can substitute for many analog cameras. An Arecont Vision 180-degree panoramic camera is also used to capture low-light areas in the garage.

Covering the general entryway into the office park is an Arecont Vision SurroundVideo® AV20185DN-HB camera with a heater/blower to offset cold temperatures. The 20-megapixel, all-in-one day/night panoramic camera provides a 180-degree field-of-view. The higher resolution panoramic view can be used to replace multiple conventional cameras. Four high-sensitivity 5-megapixel sensors each deliver a 2592x1944-pixel view at 11.5fps, for a total image area of 10,368 x 1944 pixels at 2.8fps. The AV20185DN uses dual H.264 and MJPEG encoders and can be binned to 1.25 megapixels per sensor to increase light sensitivity from 0.3 lux color at F1.8 (non-binned) to 0.15 lux at

F1.8 (binned). Day/night mode light sensitivity is 0 lux (IR sensitive).

Video from every camera is controlled and managed using ExacqVision video management software (VMS), with recording provided by two Exacq Technologies RAID 5 servers which feature 16 terabytes of storage. Video signals travel along fiber-optic cabling. The system is monitored locally, and office park tenants have a "buy-in" option to obtain access.

MEGAPIXEL BENEFIT

A major benefit of megapixel cameras is the ability to cover larger areas with fewer cameras. A single Arecont Vision camera can be used in lieu of many analog or standard network cameras while maintaining resolution to enable close-up viewing of details in the video. Using fewer cameras contributes to

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system Return on Investment (ROI) because there are fewer infrastructure costs (cables, mounts, housings, VMS licensing fees, etc.)

According to Mr. Nugent, the Arecont Vision megapixel cameras provide better overall performance, power and value, which he also attributes to features like built-in lenses and PoE (Power over Ethernet) that add value for less cost when compared to other brands.

The detailed megapixel images were a big benefit for the Lupoli Companies installation. An operator can zoom in on specific areas of a megapixel video frame, and critical details can be viewed and recorded to provide useful evidence for police investigations and court prosecutions.

When compared to standard-resolution cameras, megapixel imaging represents a significant upgrade in system functionality. Megapixel cameras can dramatically decrease costs related to other elements of a system, such as fewer software licenses, fewer lenses and a decrease in man-hours needed to install and manage the system.

The Arecont Vision megapixel video system contributes to ROI by providing the operational benefit of being able to closely monitor the use of reserve parking. Tenants pay for reserved spaces, and the video system provides an additional way to enforce restricted parking areas and unauthorized use of reserved spaces.

Lupoli Companies has been impressed with the potential for 5-megapixel cameras to boost the surveillance at Sal's Pizza locations. Although the company has invested heavily in existing analog systems and digital video recorders (DVRs), they have realized how limiting analog video surveillance systems can be in comparison to IP megapixel systems.

A recent demonstration of megapixel video convinced Lupoli Companies management to transition to the higher resolution surveillance solution for Sal's Pizza locations. Mr. Nugent says Arecont Vision has been very responsive to his needs and especially mentions Robert Peach of REP Marketing Solutions, Inc., Arecont Vision's local manufacturer's representative. "Arecont Vision's local rep is the best in our region," said Mr. Nugent.



Arecont Vision is the leading manufacturer of high-performance megapixel IP cameras. 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®, MegaBall®, MicroDome™ and D4F/D4S/D4SO series provide installer friendly solutions. True Wide Dynamic Range (WDR) and remote focus/remote zoom enhance camera utility. 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.

