

Family-Owned Commercial Printer in Slovenia Values Megapixel Quality

The Need to Identify Intruders
Prompted Upgrade from
VGA Resolution



Customer

Tiskarna Kostomaj in Celje, Slovenia, is a family-owned and operated commercial printer. Five years ago, the company moved into a new two-story office building which includes additional facilities and a parking lot.

Challenge

The first attempt by Tiskarna Kostomaj to provide video surveillance for their new building using inexpensive network cameras was not successful. The first break-in at the printing business showed the cameras, which were standard definition VGA resolution with built-in infrared (IR) illuminators, were ineffective. The company also tried a 640x480-pixel camera from a major manufacturer, but it became evident that this low resolution camera did not meet the company's need for surveillance. The inexpensive cameras were also not dependable and ceased functioning within two years of their installation. Tiskarna Kostomaj ultimately concluded that a surveillance system would only be useful to them if it was able to recognize a person or vehicle within the camera field of view (FOV).



AV5100DN MegaView® IP Camera

- Superior Low Light Performance: 1/2.5" CMOS Sensor
- Fast MegaPixel Image Rates: 9 fps
- Full or 1/4 Resolution
- Bit Rate Control
- Multi-Streaming
- Forensic Zooming
- Cost Efficiency
- PoE & Auxiliary Power: 15-48 VDC



AV3130 MegaView® IP Camera

- Dual Sensor: 1.3 MP B/W and 3 MP Color
- Superior Low Light Performance: 1/2" CMOS Sensor
- Fast MegaPixel Image Rates: 15 fps @ 3MP and 32 fps @ 1.3MP
- Full or 1/4 Resolution
- Bit Rate Control
- Multi-Streaming
- Forensic Zooming
- Cost Efficiency
- PoE & Auxiliary Power: 15-48 VDC



AV1300 MegaView® IP Camera

- Superior Low Light Performance: 1/2" CMOS Sensor
- Fast MegaPixel Image Rates: 32 fps
- Full or 1/4 Resolution
- Bit Rate Control
- Multi-Streaming
- Forensic Zooming
- Cost Efficiency
- PoE & Auxiliary Power: 15-48 VDC

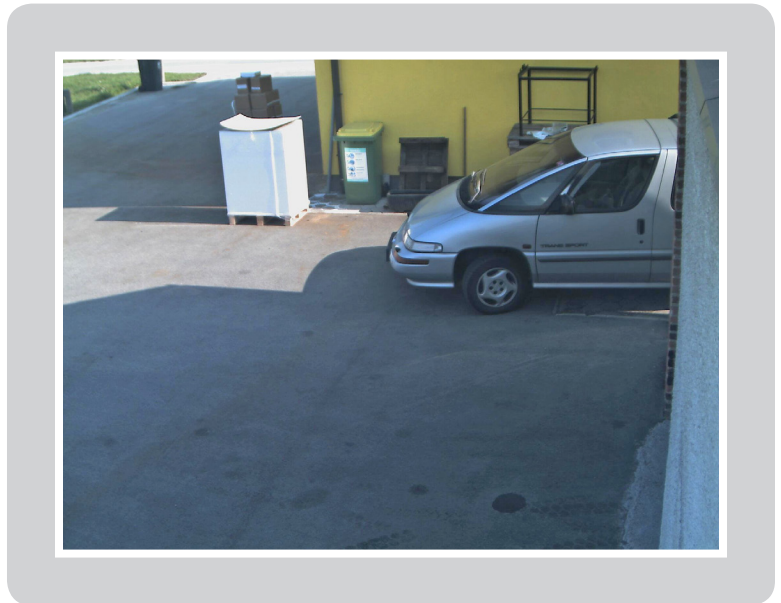
Megapixel Solution

The new megapixel video surveillance system was designed entirely in-house, with installation completed in cooperation with a local security company and a local electrician, according to Marjan Kostomaj, chief information officer of Tiskarna Kostomaj. The company did not consider analog cameras for a number of reasons. Whereas an analog camera can detect an intruder, IP-based megapixel cameras provide video image quality that makes it possible to also recognize the intruder. IP cameras use progressive scan which avoids flickering and provides critical detail in a moving image. Finally, megapixel cameras provide a good price/performance ratio.



The commercial printer now uses a combination of Arecont Vision IP-based megapixel cameras outside to cover the drive-in, parking area and entrance, and indoors for the office area. All cameras are powered through the Ethernet connection (PoE).

For highest resolution needs, Tiskarna Kostomaj uses the Arecont Vision AV5100DN, a 5 megapixel MJPEG camera providing 2,492 x 1,944-pixel resolution at 9 frames per second (fps). It delivers light sensitivity of 0.3 lux at F1.4. MegaVideo® image processing involves more than 6 million operations per second. The camera offers simultaneous full field-of-view and region-of-interest (ROI) video, and image cropping allows streaming of full-density partial images. A motorized IR cut filter is used with the day/night (DN) version.



To provide better night vision, Arecont Vision's AV3130 series is a unique dual-sensor, day/night 3/1.3-megapixel IP camera that delivers up to 15 frames per second (fps) at 2,048x1,536 pixels of high-definition color resolution using a CMOS color sensor. It is a robust, all-weather camera suited to variable 24-hour lighting conditions. In low-light conditions, the AV3130 changes from color to black-and-white mode (using a separate 1.3-megapixel CMOS sensor), and the camera's frame rate increases to a maximum of 30 fps at 1280x1024 pixels. Light sensitivity is 0.02 lux at F1.4. The AV3130 provides superior night vision at Tiskarna Kostomaj compared to a competitive camera also tested. Model AV3130 also offers on-camera motion detection.

Arecont Vision Model AV1300 captures 1280x1024-pixel video at 32 frames per second and has light sensitivity of 0.1 lux at F1.4. It also features forensic zooming, region-of-interest (ROI), image cropping and motion detection. The AI version used by Tiskarna Kostomaj includes an auto-iris lens.

Video management software for the system is provided by Luxriot and video is monitored locally. All cameras are connected to a PoE switch using a separate virtual local area network (VLAN) and to a dedicated Gigabit server network interface controller (NIC). The server uses Windows with Luxriot and monitoring employs local and/or remote clients.

Megapixel Benefits

The system has performed very well so far. The cameras provide the perfect combination of high resolution and night vision capability that the user needs.

Arecont Vision cameras' higher resolutions enable customers to minimize the number of cameras they use without compromising coverage. This brings a number of advantages to the user. The ability of fewer megapixel cameras to take the place of many more standard-resolution network cameras or analog cameras contributes to an overall lower system cost. The use of fewer cameras also requires less labor and cabling while providing high resolution. Using fewer cameras to cover larger areas also translates into cost savings related to infrastructure (cables, mounts, housings, etc.), which makes it easier to realize a system return-on-investment (ROI). Also, the availability of higher-resolution images can provide prosecutable forensic evidence.

Arecont Vision cameras, made in the USA, employ the company's MegaVideo® technology to create the world's fastest multi-megapixel network cameras supporting full-motion video frame rates. The Arecont Vision 3.0 megapixel camera provides up to ten times the resolution of an analog camera, while the 5.0 megapixel camera provides up to 15 times the resolution of an analog camera. The ability of these cameras to be connected to an existing network provides installation flexibility and keeps costs low.

About Arecont Vision

Arecont Vision's camera line ranges in image resolution from 1.3 to 20 megapixels and includes cameras providing advanced capabilities such as dual day/night and panoramic viewing. 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 cameras address cost-sensitive applications. These innovative technologies enable Arecont Vision to deliver multi-megapixel digital video at IP VGA camera price points.