

Case Study:

VideolQ iCVR Powered by Pixim[®] Enables Champions Auto Ferry to Run a Tight Ship



Pixim-powered video security camera with built-in digital recording meets the needs of auto ferry company in difficult environmental and lighting conditions.

VideoIQ is the inventor of the world's first intelligent security cameras and encoders with built-in video recording. The VideoIQ iCVR combines automated event detection, a built-in DVR and integrated video management into a single solution – all driven by next-generation video analytics.

VideoIQ is a Pixim Brand Partner dedicated to producing industry-leading enterprise video capture solutions based on Pixim's award-winning Digital Pixel System® technology.



Challenges

With departures every 15 minutes, the sheer volume of passengers and cars posed a challenge for Champions staff to track and manage. Additionally the small staff wanted to ensure the comfort and security of their passengers at all times. Champions also needed a video surveillance system for another crucial reason. Because of Harsens Island's proximity to the Canadian border, many Canadians routinely visit the island as well as mainland Michigan. Unfortunately, passengers have also included non-Canadians seeking illegal entry into the United States. Bryson said, "There is no official port of entry into the U.S. close to Harsens Island. Once we became aware that unauthorized people could be entering the U.S via our ferries we wanted to do what we could to help minimize the situation. Being able to capture the images of everyone traveling on the boats and provide this footage to the authorities if needed was of paramount importance to us."

Solution

Champions already had a legacy surveillance system in place. It was an outdated VHS system recording with old black and white cameras. It had obvious draw backs—poor image quality, unreliable VHS tapes, and poor field-of-view coverage. Champions needed something that provided high-resolution images in an outdoor, day/night environment.

Solutions integrator Data Consultants recommended to Champions the VideoIQ iCVR, the world's first and only intelligent video surveillance camera with built-in digital recording. The iCVR is powered by Pixim's Digital Pixel System® technology which delivers unprecedented image quality in all lighting conditions. Whether the day is cloudy or bright or whether the cameras are used indoors or out, Pixim's technology delivers the image quality Champions needs. The iCVR powered by Pixim's specialized image processing chipsets significantly enhance security through the following capabilities:

- Widest dynamic range: Captures highlight and shadow detail – including backlit faces – in the same scene.
- High resolution: Full 4CIF video capture makes it easy to distinguish target image features and details, even in highly variable lighting conditions.
- Superior color rendering: Accurately displays color even in difficult lighting such as mixed indoor/outdoor scenes, glare, and fluorescent lighting.

- No "camera blindness": Eliminates the vertical smear, pixel blooming, and other image artifacts commonly encountered in high-contrast scenes.

The iCVR also has the ability to automatically capture critical events at the highest frame rate and quality while continuously recording everything at a lesser resolution and frame rate to maximize storage. Even when the iCVR is recording at its highest frame rate, it still offers a compression advantage. Pixim-powered cameras, like the iCVR, produce noise-free, clean images which require less hard drive space to store video content—this gain in compression has been validated through independent testing. The minimal bandwidth and storage requirements of the iCVR made it a great choice for Champions particularly because of their need to record 24 hours a day and operate the cameras on a wireless mesh network. Because the iCVR stores all video at the edge and the analytics are performed at the camera itself, it was possible for Champions to have cameras on both the mainland and island while providing room for growth for additional cameras and systems on the wireless network.

Summary

Once the cameras were up and running, Champions was quickly impressed with the iCVR's powerful event detection capabilities that instantly notify them of any potential threats including intruders or vehicles on the property. Additionally, the iCVR allows Champions staff to easily find transactions or activities that took place during a specific day or period of time.

"VideoIQ has made things much more efficient for us," said Bryson. "With the iCVR search function, we can easily go back and audit our daily activities or examine any incident that warrants a closer look."

In the future, Champions plans to deploy a special iCVR application that automatically counts and reports to the network the number of vehicles traveling on the ferries which will save Champions considerable time, energy and expense in their daily auditing procedures. Champions also intends to install more iCVRs on all of its ferries and on the property, providing a comprehensive surveillance solution that protects them 24 hours a day, 7 days a week, across the entire company.

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