

Customer Profile:



The Grand Canyon Skywalk is a vista destination on the Western edge of Arizona's Grand Canyon. It's essentially a glass bridge shaped like a horseshoe which is suspended 4,000 feet above the Colorado River on the edge of the Grand Canyon. The bridge can withstand the weight of 71 fully loaded Boeing 747 airplanes or more than 71 million pounds. The structure is built from more than 1 million pounds of steel. Construction began in 2004, and the site opened in March of 2007. More than 250,000 people visit the Skywalk every year.

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Lano Mann
IT Consultant Grand Canyon
Skywalk, PC-Mann



DCS-1110 - 10/100 Fast Ethernet
PoE Internet Camera

- Monitor Your Home or Office over Internet from Your Web Browser
- PoE Support Gives You More Flexibility for Camera Installation
- Starts Recording and Sends E-mail Alerts Upon Motion Detection

Grand Canyon Skywalk Secures Spectacular Tourist Attraction via Satellite Connection with D-Link® IP Surveillance Solution

The Challenge

The Grand Canyon Skywalk needed a video surveillance solution to monitor visitors and retail operations at their Grand Canyon glass walkway. The location includes retail shops, gift shops, a photo department and ticketing facilities. The site would need to be monitored remotely from their operations center in Las Vegas, Nevada, which is approximately 260 miles away. The Las Vegas site would also require new cameras to monitor their data center.

"We had an analog CCTV [closed circuit television] system in place previously at the Las Vegas site," said Lano Mann, IT Consultant of Grand Canyon Skywalk. "But we needed more cameras, better coverage, and better picture quality for both the tourist location and our operations center. We could get by with the analog cameras, but their capabilities were limited, and it would have been very expensive to put in new cameras. And the quality wasn't that good anyway."

The remote nature of the installation at the Grand Canyon required a satellite Internet connection for monitoring via Las Vegas. This particular scenario would present some unique challenges for the Skywalk team. Since satellite has a built-in delay, it would be difficult to synchronize sound and video images, and their operating system (Windows Vista) would present transmission issues due to an account control security feature.

The Grand Canyon Skywalk IT team decided that IP cameras with Power over Ethernet (PoE) would achieve our objectives and fit their budget.

The Solution

The Skywalk team looked at some cameras from a D-Link® competitor but quickly dismissed the option because they lacked PoE capabilities. With PoE, you can place cameras anywhere you like, as long as you have access to Ethernet wiring. This eliminates the need for power outlets near the cameras. DBN One Computer Consultants, a D-Link VAR, recommended D-Link DCS-1110 cameras to Lano's team. The VAR previously installed these cameras at Las Vegas' McCarran airport, and reported excellent results.

Lano initially ordered 8 DCS-1110's for a trial at their Las Vegas location. The trial went well, so they ordered another 18 DCS-1110 cameras for the Grand Canyon and Las Vegas sites. "PoE made it really easy to mount the cameras exactly where we needed them," said Mann. "It's much more practical. They're so light weight, you can put them anywhere. The image quality is excellent, as well, and digital storage works out great for us." They capture 22 days of video then reuse the storage space. "It's also easy to drop in another camera quickly as our needs change."

The initial installation was simple. The cameras connect to a D-Link DES-1228P switch at the Skywalk site. At the tour office, the DES-1008PA PoE switch was used. And at the Skywalk office, the DES-3010PA PoE managed switch was used. The Skywalk team ran into some problems with the satellite Internet connection. When viewing the Grand Canyon camera feeds from Las Vegas, the monitoring screens were blank. With the help of D-Link technical support, the Skywalk team finally got everything figured out.



The Grand Canyon Skywalk is a tourist attraction along the Colorado River on the edge of the Grand Canyon (Grand Canyon West) in the U.S. state of Arizona. It is essentially a glass walkway shaped like a horse-shoe which is suspended 4,000 feet above the Colorado River on the edge of the Grand Canyon.

IP Surveillance Solutions



DES-1228P - Web Smart™ 24-Port PoE 10/100 + (4) 1000BASE-T Ports + 2 Combo Ports Switch

- 24 Ports IEEE 802.3af PoE
- Supports Industry Standards: 802.1p, 802.1Q, 802.1D
- CPU DoS Protection to Ensure Uptime
- Supports 802.1x User Authentication for Security



DES-3010PA - Managed 8-Port 10/100 PoE Switch + 1 Gigabit Port + 1 SFP Slot

- 5.6Gbps Switching capacity
- Bandwidth Control down to 64k
- PoE Power Management
- Secure Management through SSH, SSL, TACACS+ Authentication, and RADIUS



DES-1008PA - 8-Port 10/100 Desktop Switch with 4 PoE Ports

- Ultra-Quiet, Compact Design for Home and Office Use
- No Special Networking Cables Required
- Quick, Simple Plug-and-Play Installation

“Turning off the user account control was the key,” said Mann. “We were stuck, but then D-Link tech support came up with the idea of turning off the account control. It worked. Once we shut that down, the problem was solved.” The successful installation at the Grand Canyon site convinced them to purchase another 7 cameras for installation at the Las Vegas location. They bought the same model, DCS-1110, to monitor warehouse facilities, the data center and the tour company’s facilities.

The D-Link IP surveillance solution helps the Grand Canyon Skywalk monitor and review incidents with ease, clarity and accuracy. “We can go back and review the recordings to clear up claims, for example,” said Lano. The presence of cameras, which are in plain sight, prevents incidents, as well. The Skywalk also uses the cameras to count visitors coming through the facility.



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