

## Casino Gaming and Hospitality Challenges

The gaming industry has long used video surveillance as required by gaming commissions to reduce disputes over payouts and eliminate theft. Off the gaming floor, surveillance is used for general safety and security applications, including casino hospitality.

With the rising prices and declining availability of analog VCRs, several technologies have emerged to enhance surveillance capabilities as well as open the opportunity for video to be used in new ways that increase casino revenue. While digital video recorder (DVR)-based solutions certainly address some of the limitations of VCRs, they do pose their own challenges, forcing operator retraining as well as lacking the ability to take advantage of other technology innovations. Thus DVRs do not provide investment protection and will have to be replaced as part of a future system upgrade. IP-network-based solutions offer additional benefits in terms of integration with other business systems, greater access to video, and the use of video analytics for safety, customer satisfaction and greater operator productivity. However, many of these systems suffer issues with camera control latency and video quality, and are not designed to operate on a real-world IT-class network.

As a result, casinos have had a difficult choice: migrate to DVRs and deal with future upgrade problems and operator re-training, or migrate to IP-based products from vendors that may lack network expertise, create latency issues and in many cases require full operator re-training.

## Cisco Video Surveillance Portfolio

Cisco® offers high-quality, low-latency network-centric video surveillance software and hardware that provide a smooth migration from all analog to hybrid analog and digital to full network-based deployments, protecting your surveillance investments and enabling new capabilities. Supporting video monitoring, recording, playback, transmission, and management, Cisco Video Surveillance products deliver required performance and capability and use the power of an IP network to facilitate any-to-any multivendor device interoperability. Migrating to a Cisco solution does not force changes to the surveillance operator's workstation. The products can be integrated with other systems, such as point-of-sale (PoS) and third-party video analytics, and are deployed as part of Cisco's Intelligent Converged Environment vision and architecture for physical security applications.

## Example Deployment Scenarios

### Scenario 1—Hybrid: Legacy and Networked Digital Video Surveillance

Cisco Video Surveillance products work with existing CCTV systems (including matrix switches, cameras, keyboard controls, and displays) and enable new capabilities. Video can be event-tagged and integrated with PoS transactions for faster investigations. Digital recording reduces power and space needs (compared to tape-based VCRs and jukebox storage systems).

Cisco Video Surveillance hybrid solution components:

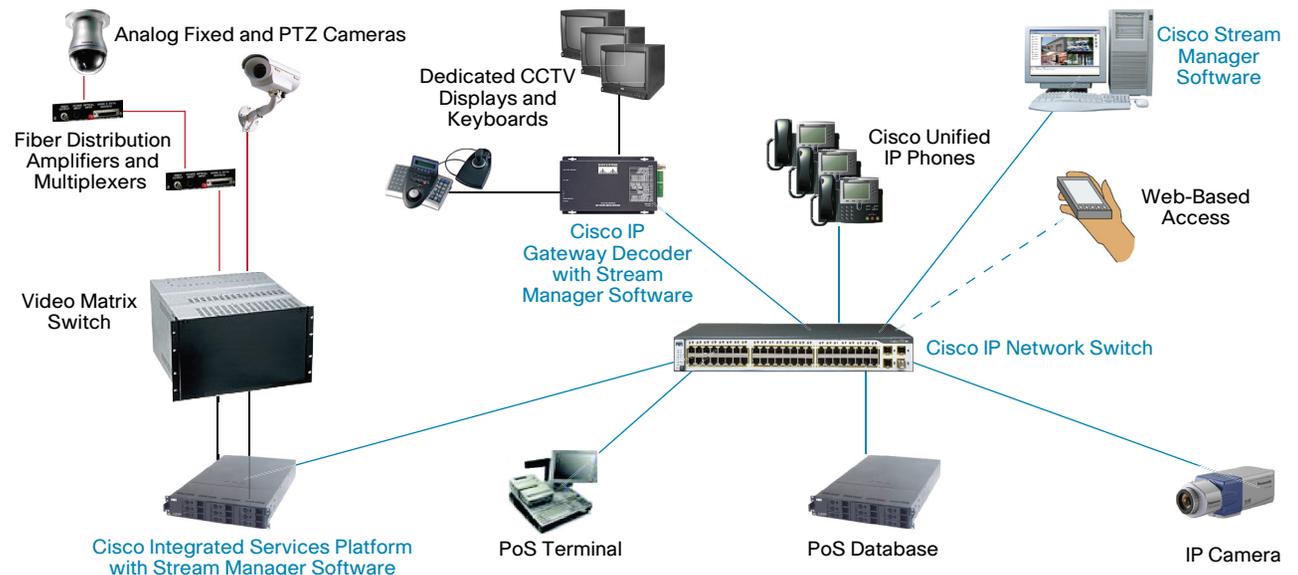
- Integrated Services Platform (ISP)—Provides event-tagged recording and storage of video, including low-cost, high-density (64 cameras per recorder) configurations that can be integrated with PoS systems and work with matrix switches. Also supports IP cameras via Ethernet connection.
- IP Gateway Decoder with Stream Manager Software—Interfaces with analog controls, displays, matrix switches, and the Cisco ISP for low-latency access to live or recorded video with freeze frame, zoom, and more using existing analog keyboard controls, regardless of the matrix switch vendor.

- Stream Manager PC Client Software (optional)—View live or recorded video using a PC
- Cisco IP network infrastructure—Supports secure policy-based access to video anywhere, anytime
- Optional third-party vendor video analytics
- Optional third-party vendor IP camera

### Scenario 2—Virtual Matrix Switching: Upgrade or New Deployment with Cisco Video Surveillance

Virtual matrix switching can either be your first or next phase of migrating to an all IP-based video surveillance operation. Cisco Video Surveillance products help to realize best-in-class, mix-and-match video surveillance deployments. By using the IP network for all video routing and switching, you eliminate the need for the matrix switch, freeing you to use many third-party brands of analog keyboard/joystick controls, displays, and cameras. You can access video from anywhere your IP network goes. As with Scenario 1, PoS transactions can be synchronized with an Integrated Services Platform or Services Platform.

Figure 1. Hybrid Legacy + IP-Based Video Surveillance Leverage Existing Investments and Enable New Capabilities



## Cisco Video Surveillance Virtual Matrix Switching Solution Components

- Cisco Integrated Services Platform or Services Platform— Provides event-tagged recording and storage of video that can be synchronized and integrated with PoS systems. Using an Ethernet port for all video inputs protects the investment.
- Cisco IP Gateway Encoders with Stream Manager Software— Interfaces with analog cameras; can be installed in high-density rack-mountable convergence chassis.
- Cisco IP Gateway Decoder with Stream Manager Software— Interfaces with third-party analog controls and displays, Cisco IP Gateway Encoders, and Cisco Services Platforms for low-latency access to live and recorded video.
- Cisco Stream Manager Gateway Software— Provides a distributed virtual matrix switching function (no single point of failure); uses the IP network infrastructure to direct video streams.
- Cisco Stream Manager PC Client Software (optional)— Displays live or recorded video via PC.
- Cisco IP network infrastructure— Supports policy-based access to video anywhere, anytime
- Optional third-party-vendor video analytics

## Cisco Video Surveillance System Benefits in Casino Gaming and Hospitality Scenarios

Deploying Cisco Video Surveillance products:

- Enables new capabilities to support faster response, investigation, and resolution of incidents
- Preserves your existing video surveillance system investment in displays, controls, cameras, and matrix switches (optional)
- Enables smooth migration from full analog to hybrid to all IP, and that is invisible to surveillance operators
- Eliminates operator retraining, allowing the use of existing analog keyboards and displays
- Increases productivity by accessing recorded video using the same analog control and display used for monitoring; this eliminates the cost and delay in using a separate, dedicated video workstation
- Facilitates faster investigations using digital features such as freeze frame, image export, and video clip export digital zoom on recorded video from legacy controls
- Retrieves recorded video from fault-tolerant storage with internal and external failover capabilities

- Provides a quick response to suspicious behavior; capture and sending still images from analog keyboard to the gaming floor makes it easier to identify unwelcome guests
- Integrates new applications such as PoS easily by using the network as a platform for adding new innovations; increases user collaboration
- Grant authorized user groups access to video more easily using the Cisco Stream Manager PC client
- Share valuable video (non-gaming floor) with other groups and management using new customer-assessment tools
- Helps optimize customer satisfaction and improve employee productivity (by redeploying idle desk clerks)— Allows managers to monitor length of customer queue and check-in/check-out time from a remote location customer
- Helps reduce capital expenses and proprietary system maintenance costs by eliminating redundant CCTV infrastructure (cabling, fiber distribution amplifiers, multiplexers, and matrix switch)
- Eases regulatory clearance and processing with gaming-commission-approved watermarked video that can be easily exported without requiring extra client software

With a Cisco Video Surveillance solution, casinos can build best-in-class video systems with a smooth "pay as you go" migration approach. The Cisco system meets gaming commission regulations, increases operator productivity, eliminates analog video recording, and addresses a wide range of hospitality-related functions to enhance the customer experience. Thus, video surveillance moves from a business expense to an investment that promotes new opportunities for sales growth and customer satisfaction.

## Cisco Expertise and Experience

Cisco technologies and convergence expertise help businesses improve their return on investment and lower their total cost of ownership. As a trusted advisor and networked physical security user, Cisco has helped forward-thinking organizations maximize the value of their systems, personnel, and applications for more than 20 years. With vast experience in digital video, including video surveillance, Cisco engineers understand how to use the power of an IP network to deliver new, innovative capabilities while reducing the cost of video surveillance systems in a highly scalable and secure manner.

**Figure 2. Casino Virtual Matrix Switching**  
Reduce Costs and Maximize Value by Supporting Future Innovations

