



## Retail Challenges

The retail industry has long used video surveillance for loss prevention (shoplifting, sweethearting, mis-scanning, bottom-of-the-basket under-ringing, and false slip-and-fall accusations) in order to reduce costs that affect the bottom line. Several technologies have emerged to enhance loss prevention capabilities as well as open the opportunity for video to be used in new ways that increase sales. The challenge is these products often require complete upgrades to existing physical security investments, do not support multivendor interoperability, and are not designed to operate on a real-world retail IP network.

## Cisco Video Surveillance Portfolio

To meet these challenges, Cisco® offers network-centric video surveillance software and hardware that provides video monitoring, recording, transmission, and management. Optimizing price, performance, and function, Cisco video surveillance products use the power of an IP network to facilitate any-to-any multivendor device interoperability that protects customers' existing investments in video surveillance systems. Further, they can be integrated with other systems, such as point-of-sale and third-party video analytics, and are deployed as part of Cisco's Intelligent Converged Environment (ICE) vision and architecture for physical security applications.

## 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.

## Example Deployment Scenarios

### Scenario 1—

#### Hybrid: Legacy and Cisco Video Surveillance

Cisco video surveillance products work with your existing CCTV system (including matrix switches, cameras, keyboard controls, and displays) and enable new capabilities via your IP network. Recorded video can be tagged with point of sale (PoS) transactions for faster investigations. Additionally, digital recording reduces power and space needs (compared to aging tape-based VCRs and jukebox storage systems).

Cisco Video Surveillance Hybrid Solution Components:

- Cisco Integrated Services Platform (ISP)—Provide 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
- Cisco IP Gateway Decoder with Stream Manager Software—Interfaces with analog controls and displays, matrix switches, and Cisco ISP for access to live or recorded video, regardless of the matrix switch vendor

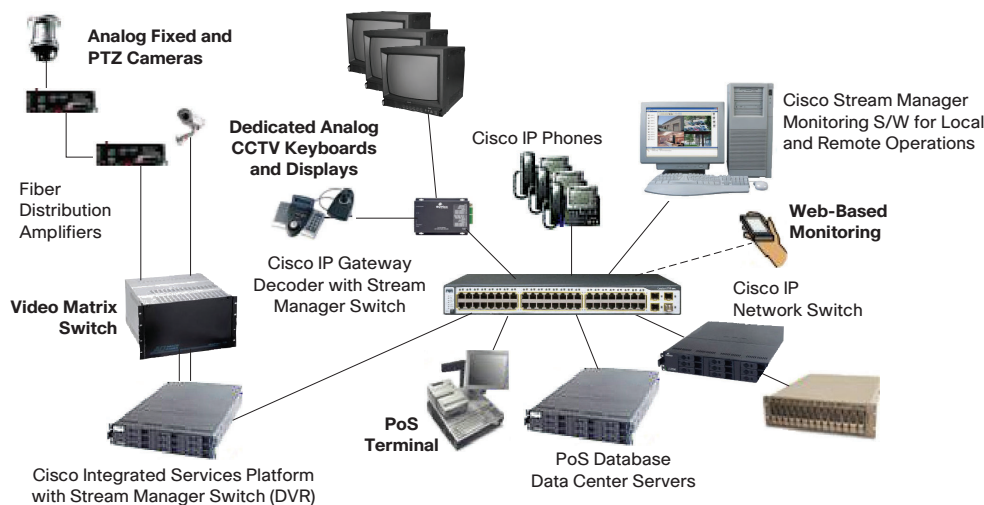
- Cisco Stream Manager PC Client Software (optional)—View live or recorded video via PC
- Cisco IP network infrastructure—Supports secure policy-based access to video anywhere, anytime
- Optional third-party-vendor, retail-focused video analytics

### Scenario 2—

#### Virtual Matrix Switching: Upgraded or New Deployment with Cisco Video Surveillance

Building on the preceding example, the Virtual Matrix Switching scenario 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. Point of sale transactions can be synchronized with a Cisco Services Platform network video recorder, which supports both local and off-site recording, even from a corporate data center.

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





## Cisco Video Surveillance Virtual Matrix Switching Solution Components:

- Cisco Services Platform Network Video Recorder (NVR)—Event-tagged recording and storage of video that can be synchronized and integrated with PoS systems
- Cisco IP Gateway Encoders with Stream Manager Software—Interfaces with analog cameras (optional “ring-and-string” switched encoders and high-density rack-mountable chassis encoders also available)
- Cisco IP Gateway Decoder with Stream Manager Software—Interfaces with third-party analog controls and displays, Cisco IP Gateway Encoders, and Cisco Services Platform for access to live and recorded video
- Cisco Stream Manager Gateway Software—Provides distributed (no single point of failure) virtual matrix switching function, which uses your IP network infrastructure to direct video streams
- Cisco Stream Manager PC Client Software (optional)—View live or recorded video via PC
- Cisco IP network infrastructure—Supports policy-based access to video anywhere, anytime
- Optional third-party-vendor, retail-focused video analytics

- Grant authorized user groups access to video more easily via Cisco Stream Manager PC client or Web-based browsing capability
- Share valuable live and recorded video with marketing and store management using new customer-assessment tools
- Optimize customer check-out time to increase customer satisfaction and improve employee productivity (through redeploying idle cashiers) by allowing store managers to monitor length of queue from a remote location
- Increase understanding of customer traffic and buying behaviors through noninvasive monitoring and third-party-vendor, retail-focused video analytics tools
- Preserve your existing video surveillance system investment in displays, controls, cameras, and matrix switches (optional)
- Eliminate or minimize operator retraining by using your current analog desktop controls, as desired
- Reduce capital expenses and proprietary system maintenance costs by eliminating redundant CCTV infrastructure (cabling, fiber distribution amplifiers, multiplexers, and matrix switch) (Virtual Matrix Switch solution)

- Maximize flexibility, paying as you migrate to a full IP Virtual Matrix Switching solution

As a result, retail businesses can build best-in-class video systems that reduce shrinkage, increase sales, and enhance the customer experience. Thus, video surveillance moves from a loss-avoidance business expense to an investment that promotes new opportunities for sales growth and customer satisfaction.

## Cisco Intelligent Converged Environment Ecosystem

The Cisco ICE ecosystem of consultants, physical security reseller partners and extended test solutions provides customers with additional confidence in using Cisco physical security products. As part of the Cisco Technology Developers Program, Cisco is working with a number of third-party vendors on tested solutions that can be deployed in a wide range of environments. Through the Cisco Advanced Technology Provider program, all Cisco reseller partners have the network training and physical security expertise needed to help ensure your business' success with a Cisco Video Surveillance solution.

## Cisco Video Surveillance System Benefits in Retail Scenarios

Deploying Cisco video surveillance products will help you to:

- Enable new loss-prevention capabilities with faster response, investigation, and resolution of incidents
- Get immediate access to live and recorded video from existing analog keyboard/display or PC, eliminating the need for and delay in using a separate, dedicated video workstation
- Investigate and resolve check-out incidents more quickly by integrating and synchronizing event-tagged digital recording with point-of-sale transactions
- Facilitate easier and faster investigations with digital zoom on recorded video
- Respond more quickly to suspicious behavior, snapping and sending still images from analog keyboard to the sales floor, for easier identification of shoplifters and more

### Virtual Matrix Switching Reduce Costs, Enable New Uses

