



# The easy path to network video

## Video encoders bring immediate benefits of IP-Surveillance

### 1. The easy path to network video

The introduction of network video has revolutionized video surveillance in many ways. IP-based video surveillance systems bring many important benefits, such as vastly improved image quality, better scalability, event management, intelligent video and – in many cases – lower cost of ownership. Nevertheless, it is too early to claim that this development has rendered all analog CCTV surveillance systems obsolete and useless.

The technology shift does not force security managers to immediately choose between either an IP-Surveillance system or an analog video surveillance system. It is in fact possible to combine the two, thereby not only making it possible to maintain existing investments, but also reap many advantages of IP-based technology and create a future-proof platform. The solution is video encoders.

#### 1.1 Technology shift

Video encoders, sometimes referred to as video servers, contain a compression chip and an operating system so that incoming analog video can be converted into digital video, transmitted and recorded over the computer network for easier accessibility and viewing. However, to ensure all the benefits of IP the demands on video encoders are – or should be – very high. If chosen with care, a video encoder can allow a system with analog CCTV cameras to provide many of the features and functionalities otherwise reserved for IP-based systems.

The industrial rationale for video encoders is strong. Approximately 95 percent of the estimated 40 million surveillance cameras installed in the world are analog. Considering that the average lifetime of an analog surveillance camera is five to seven years, many of them will serve for quite a while yet. But more important to some operators is the investment they have put in coaxial cable installations. In buildings with no Ethernet infrastructure, adding a modern network can be an investment that the user wants to avoid – or at least postpone.



**Figure 1.** A network video solution at hand: the AXIS Q7401 Video Encoder

Video encoders are a key component in the market conversion from analog to network video surveillance systems. The market saw a similar, albeit more limited, technology shift when the digital video recorder (DVR) replaced the video cassette recorder (VCR). With DVRs, the need to change tapes was removed, image quality became more consistent, and finding exact video sequences in stored material became less laborious.

The scope and functionalities of DVRs have evolved over the years. Nonetheless, they have never been able to deliver more than a handful of the benefits that can be provided by full-fledged network video systems. With DVRs, video is still stored on proprietary equipment, which makes integration with the fast-growing market of software applications for network and video management a challenge. DVRs also offer limited scalability.