

# Upgrading from Analog to IP Video Surveillance

December 2024

## The End of an Era

In May 2016, Bosch Security Systems announced the End of Life for its popular analog Allegiant Matrix Switch series. This marked the inevitable decline of analog video surveillance systems, leaving many facilities that had relied on their robust performance to confront the challenge of migrating to new technologies. Shortly thereafter, video recording devices with analog camera input capability stopped being manufactured as did encoders and other devices designed to help organizations migrate over time rather than having to upgrade the majority of the system at one time.

**The good news? We're here to help...**



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## Analog video surveillance systems have served the security industry well for decades

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The scarcity of replacement analog components and the increasing difficulty in manufacturing components have made the transition to IP-based video surveillance a necessity. The good news is that countless facilities have successfully migrated to IP solutions, paving the way for a smoother transition.



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## Every facility has unique security requirements, and the path to an IP solution will vary accordingly

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This transition can be complicated and should involve IT teams including cyber security, transport layer, and system administration.

### ***Migration Over Time***

This approach allows facilities to spread costs and labor over a longer period, however with the end of life of video encoding devices, there's no way to use an analog camera in a modern IP video system, so, if necessary, analog and IP-video systems can exist together as devices are migrated to the new system. Caution: this leaves the organization vulnerable should analog components fail unexpectedly, especially recording devices.

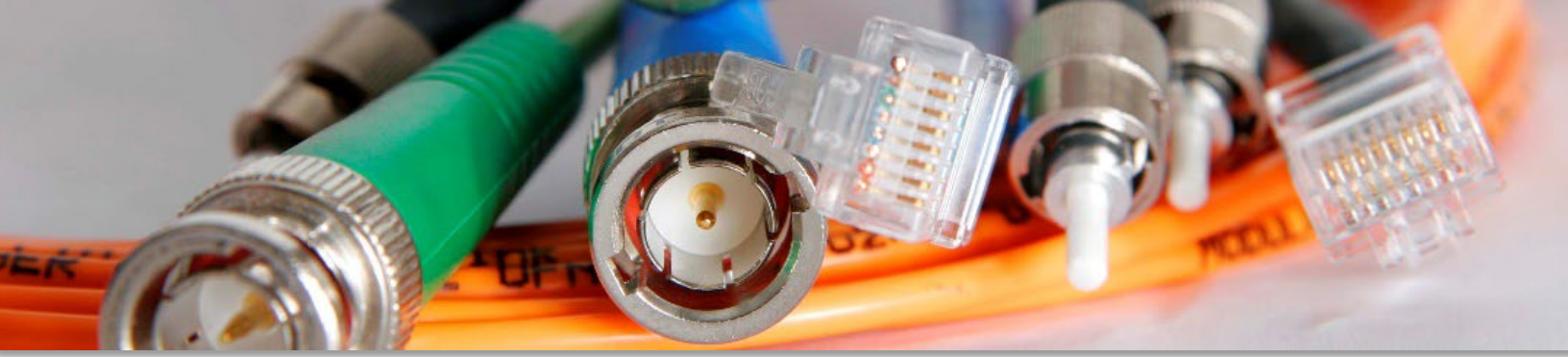
Legacy analog cameras are gradually replaced with IP cameras as older equipment fails or becomes obsolete.

### ***Immediate Upgrade***

Facilities prepared for an immediate switch can upgrade the entire system in days, minimizing downtime.

While this approach requires more upfront investment, it offers a seamless shift to the latest technology, and may frankly be the only realistic option for organizations who have delayed their inevitable technology migration.





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## One significant advantage of modern IP systems is their ability to integrate with existing infrastructure

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**Coaxial Cable:** Devices are available that convert coaxial cables to support IP data, avoiding the need to rewire the entire facility.

**Fiber Optics:** Existing fiber optic cables can also be repurposed for IP video transmission.

**Networking Flexibility:** IP systems enable easier addition and relocation of remote viewing stations, thanks to their reliance on network-based connections.



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## IP-based systems offer unparalleled advantages over legacy analog systems

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**Improved Resolution** - Analog cameras max out at 960H resolution. In contrast, IP cameras provide full HD (1080p) and even Ultra 4K resolution, delivering sharper, clearer images.

**Expanded Field of View** - Panoramic cameras (360/180 degrees) can provide a continuous view of large areas, reducing the need for multiple cameras or traditional pan-tilt-zoom (PTZ) models, depending on the application environment.

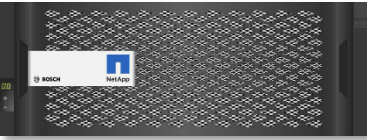




**Advanced Analytics** - Modern IP cameras come equipped with AI-enabled intelligent video analytics, enabling reliable real-time alerts and advanced forensic capabilities such as motion detection, loitering alerts, and crowd monitoring that dramatically reduce post-incident investigation time.



**Enhanced Storage Reliability** - IP systems use advanced storage technologies like iSCSI and RAID 6, ensuring video data remains accessible even during hardware failures.



**Flexible User Interfaces** - Operators can choose interfaces that suit their preferences, from joystick controls to dynamic site maps and smart alarming systems. Live and playback video can be accessed from smartphones, tablets, PC workstations, or dedicated monitor walls, offering unprecedented flexibility.



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Transitioning to an IP video surveillance system is not just a necessity, but an opportunity to leverage cutting-edge technology for enhanced security

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Whether through a phased approach or an immediate upgrade, facilities can achieve greater operational efficiency, improved video quality, and advanced analytics capabilities.

By embracing IP technology, organizations can future-proof their surveillance systems while maintaining the high standards of security their operations demand.

## Resources

- [Professional Services](#)
- [Leveraging Bosch VRM and iSCSI for a robust and IT-friendly solution at a lower cost](#)
- [BVMS introduction video](#)
- [BVMS Infographic](#)
- [Bosch EOL Allegiant Matrix Switch Letter 2016](#)
- [AMG Media Converters and Network Switches](#)