

Integrated Video Surveillance Solution

Bosch Security Systems and Dell



BOSCH

Invented for life



Solution summary

- ▶ Eliminates the need for video recording servers
- ▶ Allows for no single point of failure
- ▶ Supports hundreds of cameras and clients access
- ▶ Supports multi-site deployment
- ▶ Single infrastructure administration platform
- ▶ Provides an end-to-end technology solution including storage



Through this partnership, **Bosch and Dell** combine to offer a complete end-to-end IP video surveillance solution stack. This solution brings together the powerful IP video surveillance management features of the Bosch Video Management System (BVMS) and consolidated video recording capabilities of Bosch Video Recording Manager (VRM) and combines this on Dell's suite of infrastructure hardware.

Bosch VRM takes the direct-to-iSCSI recording capabilities of Bosch cameras and virtualizes the physical storage arrays to provide failover recording and load-balancing advantages. For mission critical applications, BVMS and VRM can be set up as part of a Disaster Recovery (DR) plan. Both the primary and DR facilities are then managed seamlessly through a single BVMS environment.

The Dell suite of infrastructure hardware offers a wide variety of server, workstation and IP network connectivity solutions. In addition, the Dell Powervault NX and Powervault MD storage arrays offer flexibility in design and deployment to enable scaling of storage capacity vertically or horizontally. Use of Dell's software suite further unifies and simplifies datacenter administration and management tasks.

The Bosch and Dell integrated solution is ideal for surveillance solutions that require maximum savings in total cost of ownership (TCO) without compromise in robustness and features.

Compatibility

DELL	Bosch devices
DELL Servers Tower Servers Rack Servers Blade Servers Shared Infrastructure PowerEdge C Servers Power Management Server Systems Management	All Bosch IP cameras, Bosch Video Management Software (BVMS) and Bosch Video Recording Manager (VRM) For a full list of devices refer to ipp.boschsecurity.com
DELL Storage Network Attached Storage Storage Area Network Direct Attached Storage Data Protection	
DELL Networking Fixed Port Ethernet Switches Wireless Networking Chassis Switches PowerEdge M-Series Blade Interconnects Server Network Adapters Network Management Fiber Channel SAN Switches	
DELL Firewall & Data Security Network Security SSL VPN Secure Mobile Access Centralized Management & Reporting Endpoint Security Email Security	

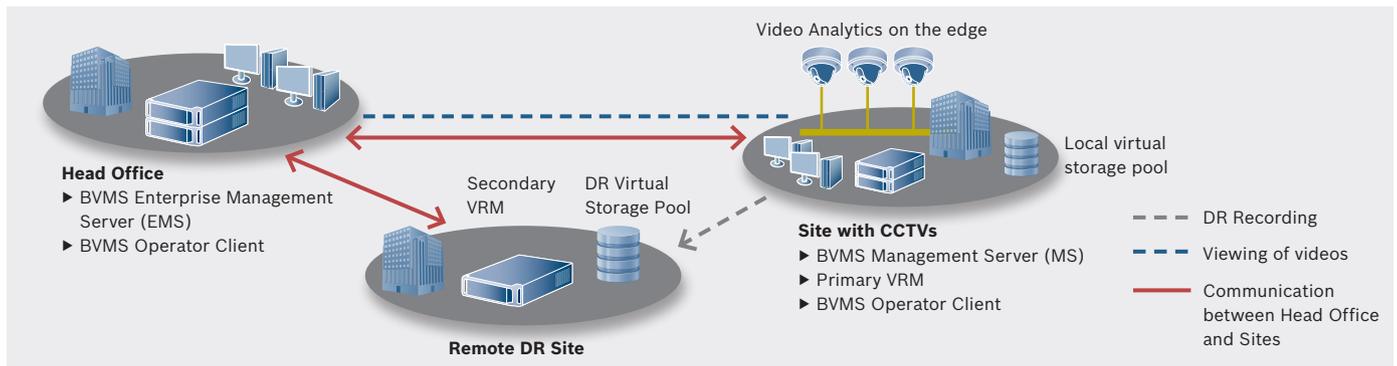
Applications / Vertical Markets



Key features from Bosch covered in the solution

Bosch 4K ultra HD	Delivers relevant ultra high definition IP images
Bosch Content Based Imaging Technology (CBIT)	Video images are tailored to the content of the scene resulting in best usable video surveillance images in every situation most cost effectively.
Bosch Dynamic Transcoding	Video stream is tailored to the available bandwidth. Easily look for suspicious events (movement). Press pause and HD details will appear. No aggressive compression needed, therefore no compromises on quality. Regardless of available bandwidth no compromises are made on frames per second (fps).
Bosch Intelligent Video Analysis (IVA)	Adds sense and structure to video surveillance images. Events based alarm triggering improves incident response time.
Bosch starlight technology	Delivers usable images where others fail. Captures moving objects in highest detail (up to 60 fps). Offers incredible multi megapixel details (5MP) even in low light. Provides superb back and front light compensation. Reducing bitrates up to 50% to minimize your storage costs and network strain.
Bosch Video Recording Manager (VRM)	Reduced system costs - no storage servers needed, simply add iSCSI storage device for expansion. Maximum reliability - no single point of failure through automatic re-routing. Low energy consumption – through reduced number of components. Easy set-up and maintenance.
Bosch VRM and Direct to iSCSI recording	Removes need for intermediate servers, thus lowering footprint
Software compatibility to Microsoft Active Directory	Improves security of credentials, leverages Microsoft Active Directory to incorporate relevant technologies i.e. Single-sign on, single point of access control.
Standard Microsoft based software	Eases burden of IT administration, no separate standard operating procedure

Configure and manage Bosch IP video devices through DELL solutions



Dell listens to customers and delivers innovative technology solutions and services that give them the power to do more. The company's broad portfolio of end-to-end IT solutions – enterprise solutions, end-user computing, software and services – support millions of customers in 180 countries around the globe, including 95 percent of global Fortune 500 companies, governments, educators, healthcare organizations, consumers and more than 10 million small-medium businesses. With more than 100,000 team members, 140,000+ channel partners, 60,000 retail locations around the world, and 120,000+ Dell systems shipped each day – more than 1 per second – Dell is a global leader in delivering customer-centric technology solutions for businesses and consumers. Today, Dell engages in 2 billion customer conversations each year – on the phone, in person, on Dell.com and through social media.

The Bosch division Security Systems is a leading global supplier of security, safety, and communications products, solutions and services. Protecting lives, buildings and assets is our aim. The product portfolio includes video surveillance, intrusion detection, fire detection and voice evacuation systems as well as access control and management systems. Professional audio and conference systems for communication of voice, sound and music complete the range. Bosch Security Systems develops and manufactures in its own plants across the world. Additional information can be accessed at www.boschsecurity.com

Visit ipp.boschsecurity.com for details on the Bosch Integration Partner Program

For more information, visit: <http://www.dell.com/us/business/>